1. ARITHMETIC

Directions :

Questions : *The following questions are based on simple arithmetic calculations. There are four alternatives given under each question. After identifying the right answer, indicate it as per the "Instructions".*

1. 99999 + 9999 + 999 + 99 = ? ( )

1) 11096 2) 111096
3) 111196 4) 110096

2. 778 + 64 – 214 – 128 + 174 = ? ( )

1) 705 2) 613 3) 694 4) 674

3. 13.141 + 31.417 – 27.118 = ? ( )

1) 16.441 2) 17.543
3) 17.490 4) 17.440

4. $\frac{x}{\sqrt{128}} = \frac{\sqrt{162}}{x}$**, x =** ( )

1) 12 2) 144 3) 14 4) 196

5. $?^3 \div 32 = 54$ ( )

1) 318 2) 12 3) 14 4) 16

6. $\sqrt{5^4} \times 14 - 6 \times 7 + 4^x = 18^2$**, x = ...** ( )

1) 1 2) 3 3) 4 4) 2

7. 496 ÷ 0.6 × 0.5 = ? (approximately) ( )

1) 413 2) 595 3) 148 4) 653

8. 151.011 – 419.999 + 649.991 = ? ( )

1) 381.003 2) 420.03
3) 358.3 4) 410.3

9. $\frac{9^2 + 8^2}{25} = ?$ ( )

1) 2.8 2) 4.8 3) 5.8 4) 6

10. 0.009 × 0.002 = ? ( )

1) 0.18 2) 0.00018
3) 0.0018 4) 0.000018

11. 159 ÷ ..... = 15900 ( )

1) 10. 0 2) 1. 0 3) 0. 001
4) 0. 01 5) 0. 1

12. (65 ÷ 100) × 7 ( )

1) 4. 55 2) 4. 05 3) 4. 5
4) 4. 65 5) 4. 75

13. $\frac{40 + (6 \times 0.04)}{8}$ ( )

1) 0. 503 2) 5. 3 3) 5. 003
4) 5. 13 5) 5. 03

14. $\frac{5x + 215}{3} = 4x + 60$**, then x = ?** ( )

1) 3 2) 4 3) 5
4) 2 5) 0.5

15. If 64 × 27 × 25 = $2^a \times 3^b \times 5^c$ **then a + b + c =?** ( )

1) 11 2) 10 3) 8
4) 7 5) 6

16. 4789 + ? = 6500 ( )

1) 1701 2) 1611 3) 1711
4) 1601 5) 2711

17. 55555 + 5555 + 555 = ? ( )

1) 60655 2) 61665 3) 60605
4) 61655 5) 61660

18. $(14 - 9)^3 = ?$ ( )

1) 124 2) 216 3) 64
4) 125 5) 196

19. $\sqrt{36} + \sqrt{x} = 14$ ( )

1) 64 2) 49 3) 36
4) 81 5) 60

20. 5678 - ? ..... = 4321 ( )

1) 1257 2) 1358 3) 1347
4) 1247 5) 1357

21. 15% of 90 = ? ( )

1) 12.5 2) 13.0 3) 14.0
4) 13.5 5) 14.5

MATHS 4 ALL

22. **0. 5 × 0. 0008 = ?** ( )

1) 0. 004 2) 0. 04 3) 0. 00004
4) 0. 0014 5) 0. 0004

23. $\frac{4}{7}$ **of 294 = ?** ( )

1) 168 2) 166 3) 158
4) 128 5) 188

24. **8.512 – 4.4011 = ?** ( )

1) 4.0109 2) 4.1119 3) 4.1109
4) 4.1110 5) 4.1100

25. **6464 ÷ 8 = ?** ( )

1) 818 2) 808 3) 880
4) 908 5) 828

26. **7894 + ? = 23100** ( )

1) 15106 2) 15200 3) 15026
4) 15206 5) 25206

27. **3 + 33 + 333 + 3333 = ?** ( )

1) 3702 2) 3701 3) 3700
4) 3999 5) 4702

28. $(13 - 9)^3 = ?$ ( )

1) 81 2) 125 3) 27
4) 216 5) 64

29. $\sqrt{25} + \sqrt{x} = 12; x = ?$ ( )

1) 25 2) 36 3) 49
4) 64 5) 16

30. **7654 - ..... = 1234** ( )

1) 6424 2) 6420 3) 6422
4) 5420 5) 5422

31. **20% of 80 = ?** ( )

1) 12 2) 20 3) 15
4) 16 5) 10

32. **0. 08 × 0. 009 = ?** ( )

1) 0. 0072 2) 0. 00072 3) 0. 000072
4) 0. 072 5) 0. 72

33. $\frac{726}{6} = ?$ ( )

1) 120 2) 122 3) 121
4) 201 5) 126

34. **9 - 6.4321 = ?** ( )

1) 2.5678 2) 2.5689 3) 2.4679
4) 3.5679 5) 2.5679

35. $\frac{64}{10000} = ?$ ( )

1) 0.0064 2) 0.064 3) 0.062
4) 0.64 5) 0.0164

36. **0.032 ÷100 .....** ( )

1) 3.2 2) 0.00032
3) 0.0032 4) 32 5) None

37. **Increase 5 by 40%** ( )

1) 2 2) 6 3) 7
4) 45 5) None

38. $\frac{5004}{139} - 6$ **?** ( )

1) 25 2) 27 3) 29
4) 30 5) None

39. $7500 + \frac{1250}{50}$ ( )

1) 7500 2) 7525 3) 7550
4) 7775 5) 7630

40. $\sqrt{41 - \sqrt{21 + \sqrt{19 - \sqrt{9}}}}$ ( )

1) 3 2) 4 3) 5
4) 6 5) 7

41. **28% of 450 + 45% of 280 = ?** ( )

1) 232 2) 242 3) 252
4) 262 5) 272

42. **0.07 × 0.003** ( )

1) 0.21 2) 0.021 3) 0.0021
4) 0.00021 5) 0.000021

MATHS 4 ALL

43. **7 + 7007 + 707 + 70007** ( )

1) 77728 2) 77777 3) 28777
4) 77077 5) 77735

44. **425 × ? = 170** ( )

1) $\frac{1}{2}$ 2) $\frac{2}{5}$ 3) $\frac{3}{5}$
4) $\frac{2}{3}$ 5) $\frac{5}{2}$

45. **? – 12345 = 41976** ( )

1) 54301 2) 50321 3) 54021
4) 54321 5) 55431

46. **4444 + 444 + 44 + 4 = ...** ( )

1) 4934 2) 4836 3) 4834
4) 4944 5) 4936

47. **45 × ? = 2025** ( )

1) 25 2) 35 3) 45
4) 55 5) 15

48. **120 ÷ 500 = ?** ( )

1) 0.24 2) 0.024 3) 24.0
4) 2.4 5) 0.4

49. $\sqrt{625}$ **– x = 10, x = ?** ( )

1) 10 2) 4 3) 15
4) 5 5) 6

50. **75 ÷ ..... = 75000** ( )

1) 1.01 2) 0.1 3) 0.0001
4) 0.001 5) 0.01

51. $\frac{75+6\times0.5}{6}$ **= ?** ( )

1) 37.5 2) 7.5 3) 75
4) 12 5) 13

52. **65, 430 – ..... = 11, 000** ( )

1) 54,030 2) 54,400 3) 54,430
4) 64,430 5) 55,430

53. **40% of 4200 = ?** ( )

1) 1680 2) 1600 3) 1480
4) 1580 5) 1640

54. $\frac{8^2+60}{2^2}$ **= .....** ( )

1) 30 2) 31 3) 28
4) 36 5) 32

55. **0.01 × 0.05 = ?** ( )

1) 1.005 2) 0.05 3) 0.000005
4) 0.0005 5) 0.00005

56. **406 × 5 + 8 = ?** ( )

1) 2030 2) 2038 3) 2033
4) 2031 5) 2131

57. **253 × 20 = ?** ( )

1) 5050 2) 5060 3) 4760
4) 4750 5) 4050

58. **98 + ... = 220** ( )

1) 230 2) 126 3) 122
4) 124 5) 118

59. **7.20 ÷ 4.8 = ?** ( )

1) 1.2 2) 15.0 3) 12.0
4) 0.12 5) 1.5

60. $(7)^3$ **= ?** ( )

1) 342 2) 343 3) 340
4) 349 5) 346

61. $\frac{5}{7}$ **of 245 = ?** ( )

1) 165 2) 175 3) 185
4) 207 5) 343

62. **125% of 32 = ?** ( )

1) 6 2) 12 3) 36
4) 52 5) 40

63. $\sqrt{196}$ **= ?** ( )

1) 14 2) 16 3) 24
4) 36 5) 98

64. $\frac{1344}{8}$ **= ?** ( )

1) 162 2) 164 3) 166
4) 168 5) 160

MATHS 4 ALL

65. 35 × ? = 1225 ( )

1) 25 2) 35 3) 30

4) 45 5) 15

66. 120 ÷ 500 = ? ( )

1) .24 2) .024 3) 24.0

4) 2. 4 5) .04

67. $\sqrt{225}$ – x = 10 ; x = ? ( )

1) 10 2) 4 3) 15

4) 5 5) 6

68. 75 ÷ ..... = 75000 ( )

1) 1.01 2) .1 3) .0001

4) .001 5) .01

69. $\frac{75 + 6 \times .5}{6}$ = ? ( )

1) 37.5 2) 7.5 3) 75

4) 12 5) 13

70. 65,430 – ..... = 11,000 ( )

1) 54030 2) 54,400 3) 54,430

4) 64,430 5) 55,430

71. 40% of 4200 = ... ( )

1) 1680 2) 1600 3) 1480

4) 1580 5) 1640

72. $\frac{8^2 + 60}{2^2}$ = ... ( )

1) 30 2) 31 3) 28

4) 36 5) 32

73. .01 × .005 = ? ( )

1) 1.0005 2) .005 3) .000005

4) .0005 5) .00005

74. 66666 + 6666 + 666 + 66 = ( )

1) 24064 2) 64604 3) 74064

4) 74604 5) 73634

75. 25 × ? = 625 ( )

1) 20 2) 15 3) 35

4) 125 5) 25

76. 75 ÷ 1000 = ? ( )

1) 7.5 2) 7.05 3) 75

4) 0.075 5) 0.0075

77. 8 + x = 12 – x ; x = ? ( )

1) –2 2) 6 3) 3

4) 2 5) 4

78. 121 ÷ ..... = 12100 ( )

1) 0.1 2) 1000 3) 0.001

4) 100 5) 0.01

79. $\frac{28 + 8 \times 0.5}{11 - 8}$ = ? ( )

1) 20.33 2) 6 3) 10.66

4) 56.6 5) 60.0

80. 9763 + ... = 12464 ( )

1) 2071 2) 2709 3) 2701

4) 3709 5) 3701

81. 60% of 420 = ? ( )

1) 70 2) 252 3) 70.6

4) 200 5) 220

82. $(8)^3$ = ? ( )

1) 128 2) 16 3) 256

4) 64 5) 512

83. 376.9 – 38.3 = ? ( )

1) 338.06 2) 328.6 3) 338.6

4) 346.8 5) 328.8

84. (205 × 4) + 2 = ? ( )

1) 820 2) 822 3) 821

4) 922 5) 824

MATHS 4 ALL

85. $(12 - 3)^2 - 9 = ?$ ( )

1) 71 2) 82 3) 81

4) 73 5) 72

86. $\sqrt{25} + x = 10; x = ?$ ( )

1) 5 2) 4 3) 3

4) 10 5) 2

87. $81 - (27 + 14) = ?$ ( )

1) 51 2) 50 3) 40

4) 41 5) 31

88. 7531 – ..... = 3120 ( )

1) 4311 2) 4410 3) 4411

4) 4419 5) 4319

89. $0.05 \times 0.001 = ?$ ( )

1) 0.0005 2) 0.00005 3) 0.005

4) 0.00001 5) 0.0001

90. 30% of 60 = ? ( )

1) 25 2) 15 3) 20

4) 18 5) 28

91. $\frac{4949}{7} = ?$ ( )

1) 707 2) 717 3) 770

4) 697 5) 727

92. $406 \times 5 + 1 = ?$ ( )

1) 2030 2) 2034 3) 2033

4) 2031 5) 2131

93. $(11 - 8)^3 = ?$ ( )

1) 49 2) 28 3) 27

4) 9 5) 16

94. $\sqrt{16} + \sqrt{x} = 20, \sqrt{x} = ?$ ( )

1) 10 2) 16 3) 6

4) 7 5) 8

95. 93 – (27 + 63) = ... ( )

1) 7 2) 5 3) 3

4) 8 5) 9

96. 7691 – ..... = 3481 ( )

1) 4212 2) 4211 3) 4310

4) 4410 5) 4210

97. $0.07 \times 0.008 = ?$ ( )

1) 0.00056 2) 0.056 3) 56

4) 0.0056 5) 5.6

98. 25% of 60 = ? ( )

1) 20 2) 15 3) 10

4) 30 5) 45

MATHS 4 ALL

WORKED OUT ANSWERS

1. (2)

Sol.

$$\begin{array}{r} 99999 \\ 9999 \\ 999 \\ 99 \\ \hline 111096 \\ \hline \end{array}$$

2. (4)

Sol.

$$\begin{array}{r} 778 \\ 64 \\ +\ 174 \\ \hline 1016 \\ \hline \end{array} \qquad \begin{array}{r} 214 \\ +\ 128 \\ \hline 342 \\ \hline \end{array} \qquad \begin{array}{r} 1016 \\ -\ 342 \\ \hline 674 \\ \hline \end{array}$$

3. (4)

Sol.

$$\begin{array}{r} 13.141 \\ +\ 31.417 \\ \hline 44.558 \\ (-)\ 27.118 \\ \hline 17.440 \\ \hline \end{array}$$

4. (1)

Sol. $\dfrac{x}{\sqrt{128}} = \dfrac{\sqrt{162}}{x}$

$\Rightarrow \dfrac{x}{\sqrt{8 \times 16}} = \dfrac{\sqrt{2 \times 81}}{x}$

$\Rightarrow \dfrac{x}{\sqrt{4 \times 2 \times 16}} = \dfrac{\sqrt{2 \times 81}}{x}$

$\Rightarrow \dfrac{x}{8\sqrt{2}} = \dfrac{9\sqrt{2}}{x}$

$\Rightarrow x^2 = 72 \times 2$

$x^2 = 144$

$x = 12$

5. (2)

Sol. $x^3 \div 32 = 54$

$x^3 = 54 \times 32$

$x^3 = 1728$

$x = \sqrt[3]{1728}$

$x = \sqrt[3]{12 \times 12 \times 12} = \left(12^3\right)^{\frac{1}{3}} = 12^{\cancel{3} \times \frac{1}{\cancel{3}}}$

$x = 12$

6. (4)

Sol. $\sqrt{5^4} \times 14 - 6 \times 7 + 4^x = 18^2$, $x = ?$

$\left(5^4\right)^{\frac{1}{2}} \times 14 - 42 + 4^x = 324$

$25 \times 14 - 42 + 4^x = 324$

$350 - 42 + 4^x = 324$

$4^x = 324 - 308$

$4^x = 16$

$4^x = 4^2$

$x = 2$

7. (1)

Sol. $496 \div 0.6 \times 0.5$ $\qquad (0.6 = \dfrac{6}{10})$

$= 496 \times \dfrac{10}{6} \times \dfrac{5}{10}$

$= 413.333$

$= 413$ (approximately)

8. (1)

Sol.

$$\begin{array}{r} 151.011 \\ (+)649.991 \\ \hline 801.002 \\ (-)\ 419.999 \\ \hline 381.003 \\ \hline \end{array}$$

9. (3)

Sol. $\dfrac{81 + 64}{25} = \dfrac{145}{25} = 5.8$

10. (4)

Sol. 0.009×0.002

$\Rightarrow 0.000018$

11. (4)

Sol. $159 \div x = 15900$

$x = \dfrac{159}{15900} = \dfrac{1}{100} = 0.01$

MATHS 4 ALL

12. **(1)**

Sol. $(65 \div 100) \times 7 = \frac{65}{100} \times 7$

$= 0.65 \times 7$

$= 4.55$

13. **(5)**

Sol. $\frac{40 + (6 \times 0.04)}{8} = \frac{40 + 0.24}{8}$

$= \frac{40.24}{8} = 5.03$

14. **(3)**

Sol. $\frac{5x + 215}{3} = 4x + 60$

$5x + 215 = 3(4x + 60)$

$= 12x + 180$

$215 - 180 = 12x - 5x$

$35 = 7x$

$x = \frac{35}{7} = 5$

15. **(1)**

Sol. $64 \times 27 \times 25 = 2^a \times 3^b \times 5^c$

$2^6 \times 3^3 \times 5^2 = 2^a \times 3^b \times 5^c$

$a = 6, b = 3, c = 2$

$a + b + c = 6 + 3 + 2 = 11$

16. **(3)**

Sol. $4789 + ? = 6500$

$? = 6500 - 4789$

$? = 1711$

17. **(2)**

Sol.

$$\begin{array}{r} 55555 \\ 5555 \\ 555 \\ \hline 61665 \\ \hline \end{array}$$

18. **(4)**

Sol. $(14 - 9)^3 = ?$

$(5)^3 = 125$

19. **(1)**

Sol. $\sqrt{36} + \sqrt{x} = 14$

$6 + \sqrt{x} = 14$

$\sqrt{x} = 14 - 6 = 8$

$\sqrt{x} = 8 \Rightarrow x = (8)^2$

$x = 64$

20. **(5)**

Sol. 5678 – ? ..... = 4321

5678 – 4321 = ?

1357 = ?

? = 1357

21. **(4)**

Sol. 15% of 90 = ?

$15 \times \frac{1}{100} \times 90 = ?$

$\frac{\cancel{15}^{3}}{\cancel{10}\,\cancel{0}_{2}} \times 9\cancel{0} = ?$

$\frac{3}{2} \times 9 = ?$

$\frac{27}{2} = ?$

? = 13.5

22. **(5)**

Sol. 0. 5 × 0. 0008 = ?

0. 5 × 0. 0008 = ?

$\frac{5}{10} \times \frac{8}{10000} = ?$

$\frac{40}{100000} = ?$

? = 0.0004

23. **(1)**

Sol. $\frac{4}{7}$ of 294 = ?

$\frac{4}{\cancel{7}} \times \cancel{294}^{42} = ?$

4 × 42 = ?

? = 168

MATHS 4 ALL

24. **(3)**

Sol. 8.512 – 4.4011 = ?

8.512 – 4.4011 = ?

```
  8. 5 1 2 10
– 4. 4 0 1 1
  ----------
  4. 1 1 0 9
```

25. **(2)** 6464 ÷ 8 = ?

$\frac{6464}{8}$ = ?

? = 808

26. **(4)** 15206

27. **(1)** 3702

28. **(5)** 64

29. **(3)** 49

30. **(2)** 6420

31. **(4)** 16

32. **(2)** 0. 00072

33. **(3)** 121

34. **(5)** 2.5679

35. **(1)** 0.0064

36. **(2)** 0.00032

37. **(3)** 7

38. **(4)** 30

39. **(2)** 7525

40. **(4)**

Sol. $\sqrt{41-\sqrt{21+\sqrt{19-\sqrt{9}}}}$

$= \sqrt{41-\sqrt{21+\sqrt{19-3}}}$

$= \sqrt{41-\sqrt{21+\sqrt{16}}}$

$= \sqrt{41-\sqrt{21+4}}$

$= \sqrt{41-\sqrt{25}} = \sqrt{41-5} = \sqrt{36} = 6$

41. **(3)** 252

42. **(4)** 0.00021

43. **(1)** 77728

44. **(2)** $\frac{2}{5}$

45. **(4)** 54321

46. **(5)**

Sol.
```
 4444
  444
   44
    4
 ----
 4936
```

47. **(3)**

Sol. 45 × ? = 2025

? = 2025 ÷ 45

? = 45

48. **(1)**

Sol. 120 ÷ 500 = 0.24

49. **(3)**

Sol. $\sqrt{625}$ – x = 10

25 – x = 10

x = 25 – 10

x = 15

50. **(4)** 0.001

51. **(5)** 13

52. **(3)** 54,430

53. **(1)**

Sol. $\frac{4200}{x} = \frac{100}{40}$

4200 = 2.5x

x = 1680

54. **(2)** 31

55. **(4)** 0.0005

56. **(2)** 2038

57. **(2)** 5060

58. **(3)** 122

59. **(5)** 1.5

60. **(2)** 343

61. **(2)** 175

62. **(5)** 40

MATHS 4 ALL

63. **(1)** 14

64. **(4)** 168

65. **(2)** 35) 1225 (35

$$\begin{array}{r} 105 \\ \hline 175 \\ 175 \\ \hline 0 \\ \hline \end{array}$$

66. **(1)** $\frac{12\cancel{0}}{50\cancel{0}} = \frac{12}{50} = .24$

67. **(4)** $\sqrt{225} - x = 10; x = ?$

$10 + x = \sqrt{225}; 10 + x = 15$

$x = 15 - 10 = 5$

68. **(4)** $\frac{75}{x} = 75000$

$x = \frac{75}{75000} = \frac{1}{1000} = 0.001$

69. **(5)** $\frac{75 + 6 \times 0.5}{6} = \frac{75 + (6 \times 0.5)}{6}$

$= \frac{75+3}{6} = \frac{78}{6} = 13$

70. **(3)** 65, 430 – x = 11000

x = 65430 – 11000 = 54430

71. **(1)** 40% of 4200

$\frac{42\cancel{00} \times 40}{1\cancel{00}} = 1680$

72. **(2)** $\frac{8^2 + 60}{2^2} = \frac{64+60}{4} = \frac{124}{4} = 31$

73. **(5)** 0.01 × 0.005 = .00005

$\frac{1}{100} \times \frac{5}{1000} = \frac{5}{100000} = 0.00005$

74. **(3)** 74064

75. **(5)** $\frac{625}{25} = 25$

76. **(4)** 8 + x = 12 – x

x + x = 12 – 8

2x = 4

$x = \frac{4}{2} = 2$

77. **(4)** 2

78. **(5)** $\frac{12100}{121} = 100.$

79. **(3)** $\frac{28 + 8 \times 0.5}{11 - 8} = \frac{28+4}{3}$

$= \frac{32}{3} = 10.66$ (8 × 0.524)

80. **(3)** 2701

81. **(2)** $\frac{420}{100} \times 60 = 252.$

82. **(5)** $8^3 = 8 \times 8 \times 8 = 512.$

83. **(3)**

$$\begin{array}{r} 376.9 \\ -\ 38.3 \\ \hline 338.6 \\ \hline \end{array}$$

84. **(2)** (205 × 4) + 2 = 820 + 2 = 822

85. **(5)** $(12 - 3)^2 - 9 = 9^2 - 9 = 81 - 9 = 72$

86. **(1)** $\sqrt{25} + x = 10; 5 + x = 10 \Rightarrow x = 10 - 5 = 5$

87. **(3)** 81 – (27 + 14) = 81 – 41 = 40

88. **(3)** 7531 – ..... = 3120

7531 – 3210 = 4411

89. **(2)** 0.05 × 0.001 = 0.00005

90. **(4)** 30% of 60 = $\frac{30}{100} \times 60 = 18$

91. **(1)** $\frac{4949}{7} = 707$

92. **(4)** 2031

93. **(3)** 27

94. **(2)** 16

95. **(3)** 3

96. **(5)** 4210

97. **(1)** 0.00056

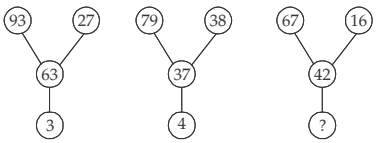
98. **(2)** 15

MATHS 4 ALL

2. MISSING CHARACTERS

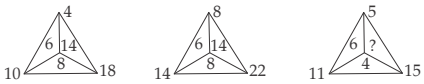
Directions :

Questions : *In each of the following questions, a set of figures carrying certain characters is given. Assuming that the characters in each set follow a similar pattern, find the missing character in each case.*

1. 

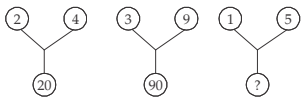
( )

1) 5 2) 6 3) 8 4) 9

2. 

( )

1) 8 2) 14 3) 10 4) 6

3. 

( )

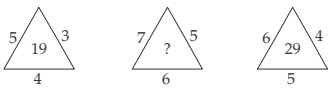
1) 20 2) 25 3) 26 4) 75

4.

27	22	50
13	12	26
9	2	?

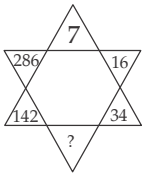
( )

1) 12 2) 39 3) 18 4) 24

5. 

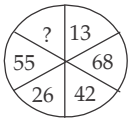
( )

1) 25 2) 47 3) 37 4) 41

6. 

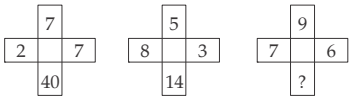
( )

1) 70 2) 68
3) 56 4) 92

7. 

( )

1) 41 2) 37 3) 29 4) 25

8. 

( )

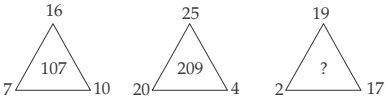
1) 72 2) 68 3) 82 4) 96

9.

42	(21)	22
78	(?)	84
162	(18)	99

( )

1) 12 2) 13 3) 60 4) 50

10. 

( )

1) 68 2) 93 3) 175 4) 217

11.

16	**28**	**29**
13	**12**	**16**
14	**10**	**15**
15	**30**	**?**

( )

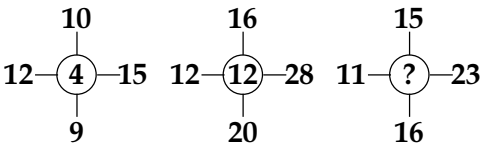
1) 60 2) 30 3) 20
4) 45 5) 15

12.

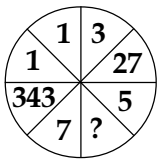
3	**15**	**4**
7	**38**	**5**
3	**?**	**5**

( )

1) 15 2) 19 3) 20
4) 18 5) 17

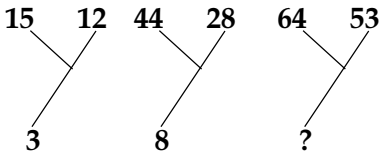
13. 

1) 11 2) 14 3) 10 ( )
4) 12 5) 13

14. 

( )

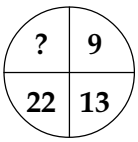
1) 125 2) 124 3) 120
4) 126 5) 130

15. 

( )

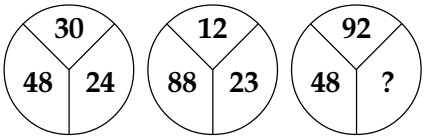
1) 30 2) 13 3) 70
4) 118 5) 16

MATHS 4 ALL

16. 

( )

1) 40 2) 38 3) 44
4) 39 5) 36

17. 

( )

1) 60 2) 46 3) 86
4) 75 5) 64

18.

O	V	H	M	E	T	D	N	X
17	10	24	18	26	11	26	16	?

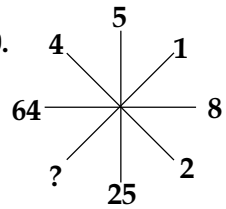
1) 5 2) 6 3) 4 ( )
4) 3 5) 8

19.

5			
32	?	44	7
6			

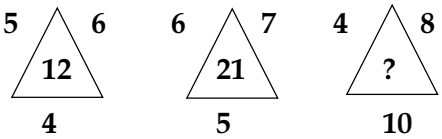
( )

1) 33 2) 38 3) 32
4) 37 5) 36

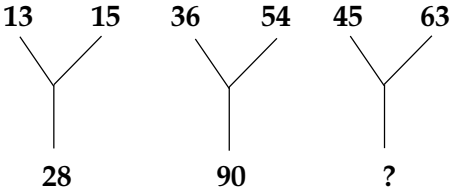
20. 

( )

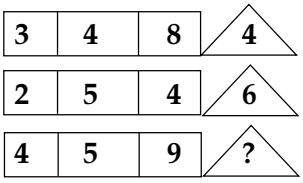
1) 1 2) 2 3) 3
4) 4 5) 5

21. 

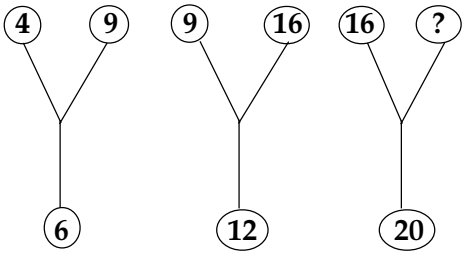
1) 14 2) 22 3) 32 ( )
4) 320 5) 46

22. 

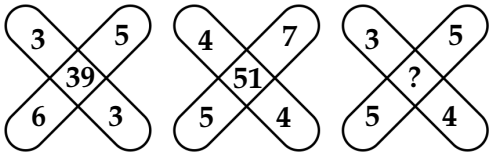
1) 18 2) 90 3) 108 ( )
4) 28 5) 42

23. 

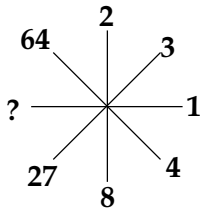
1) 8 2) 9 3) 10 ( )
4) 11 5) 12

24. 

1) 60 2) 50 3) 25 ( )
4) 21 5) 24

25. 

1) 47 2) 45 3) 37 ( )
4) 35 5) 55

26. 

( )

1) 125 2) 16 3) 9
4) 1 5) 4

27.

5			
32	?	44	7
6			

1) 33 2) 38 3) 32 ( )
4) 37 5) 36

28.

3	6	8
5	8	4
4	7	?

1) 6 2) 7 3) 8 ( )
4) 9 5) 10

MATHS 4 ALL

29.

	1			3			1	
3	510	5	2	650	4	0	?	2
	4			6			8	

1) 660 2) 670 3) 610 ( )
4) 690 5) 680

30.

7	2		9	1		5	-2	
42	3		18	2		?	-3	

( )

1) 13 2) 18 3) 30
4) - 30 5) - 18

31.

5	6	7
3	4	5
9	10	11
345	660	?

( )

1) 755 2) 775 3) 535
4) 477 5) 565

32.

	9			15				
4	58	8	9	?	8			
	10			10				

( )

1) 63 2) 78 3) 100
4) 117 5) 122

33.

4	6	3	8
2	8	4	4
6	5	?	10

1) 3 2) 6 3) 8 ( )
4) 10 5) 12

34.

2	3		5	1		4	3	
30	5		-5	-1		?	-1	

( )

1) 7 2) - 12 3) 12
4) 9 5) - 5

35.

1) 23 2) 19 3) 20 ( )
4) 22 5) 17

36.

51	63	29
26	14	48
5	8	?
410	680	588

1) 9 2) 6 3) 5 ( )
4) 7 5) 11

37.

1	2	3
4	5	6
7	8	9
27	38	?

1) 49 2) 50 3) 51 ( )
4) 52 5) 53

38.

28	60	48
5	6	7
14	39	27
7	?	16

1) 23 2) 24 3) 27 ( )
4) 18 5) 29

39.

3	5	7
4	9	8
2	3	?
5	11	10

1) 4 2) 6 3) 3 ( )
4) 5 5) 7

40.

11	2	18
5	2	?
12	5	14

( )

1) 3 2) 6 3) 9
4) 12 5) 16

41.

7	4		6	5		2	9		4	8	
2	8		3	0		1	8		3	?	

1) 2 2) 4 3) 6 ( )
4) 0 5) 7

42.

6	8		8	7		7	?	
7	5		4	2		9	2	

1) 8 2) 5 3) 4 ( )
4) 3 5) 2

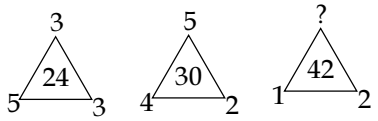
43.

	2			5			3	
4		7	5		9	1		2
6		1	11		?	5		9

( )

1) 7 2) 8 3) 9
4) 10 5) 11

MATHS 4 ALL

44. 

( )

1) 7 2) 8 3) 14
4) 15 5) 6

45.

3	11	19
5	?	23
7	17	29

( )

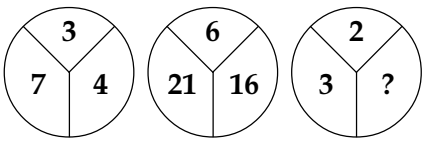
1) 9 2) 13 3) 15
4) 21 5) 25

46.

6	4	8	5	9	2
34		53		?	

( )

1) 74 2) 81 3) 29
4) 18 5) 46

47. 

( )

1) 1 2) 2 3) 8
4) 4 5) 5

48.

11	7	5
1	2	3
120	45	?

( )

1) 15 2) 60 3) 40
4) 20 5) 16

MATHS 4 ALL

WORKED OUT ANSWERS

1. (4)

Sol. 93 – (27 + 3) = 63

79 – (38 + 4) = 37

In the same way, 67 – (16 + x) = 42

x = 9

2. (3)

Sol. Observe sides 10 – 4 = 6, 18 – 4 = 14

14 – 8 = 6, 22 – 8 = 14

In the same manner

→ 11 – 5 = 6, 15 – 5 = 10

3. (3)

Sol. $2^2 + 4^2 = 4 + 16 = 20$

$3^2 + 9^2 = 9 + 81 = 90$

$1^2 + 5^2 = 1 + 25 = 26$

4. (1)

Sol. 27 + 22 + 1 = 50

13 + 12 + 1 = 26

9 + 2 + 1 = 12

5. (4)

Sol. 5 × 3 + 4 = 15 + 4 = 19

6 × 4 + 5 = 24 + 5 = 29

7 × 5 + 6 = 35 + 6 = **41**

6. (1)

Sol. Logic is all are added ie, 16 = 1 + 6 = 7

34 = 3 + 4 = 7

142 = 1+ 4 + 2 = 7

So, answer is 70 = 7 + 0 286 = 2 + 8 + 6

= 16

= 1 + 6 = 7

= 7

7. (3)

Sol. Difference between the opposite numbers

68 – 55 = 13

26 – 13 = 13

42 – x = 13 ; x = 29

So, answer is **29.**

8. (2)

Sol. $7^2 - (2 + 7) = 49 - 9 = 40$

$5^2 - (8 + 3) = 25 - 11 = 14$

$9^2 - (7 + 6) = 81 - 13 = 68$

9. (2)

Sol. HCF of 42, 22 = 2 ; 42 ÷ 2 = (21)

HCF of 162, 99 = 9 ; 162 ÷ 9 = (18)

In the same way

HCF of 78, 84 = 6 ; 78 ÷ 6 = (13)

10. (1)

Sol.

$= (16^2) - (7^2 + 10^2) =$ **107**

$= (25^2) - (20^2 + 4^2) =$ **209**

$= (19^2) - (17^2 + 2^2) =$ **68**

11. (2)

16	**28**	**29**
13	**12**	**16**
14	**10**	**15**
15	**30**	**30**

16 + 13 – 14 = 15

28 + 12 – 10 = 30

29 + 16 – 15 = 30

12. (4)

3 × 4 + 3 = 15

7 × 5 + 3 = 38

3 × 5 + 3 = 18

13. (1)

(10 + 15) – (12 + 9) = 4 ⇒ 25 – 21 = 4

(16 + 28) – (12 + 20) = 12 ⇒ 44 – 32 = 12

(15 + 23) – (11 + 16) = ? ⇒ 38 – 27 = 11

14. (1) $1^3, 3^3, 5^3$

15. (2) $\frac{64 + 53}{9} = 13$

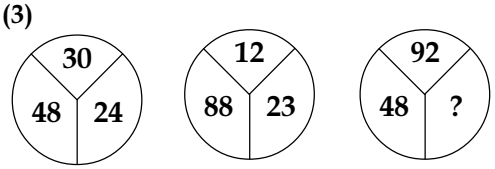
16. (2)

$3^2 = 9 + 4 = 13$

$13 + 3^2 = 22$

$22 + 4^2 = 38$

17. (3)



(30 – 24) × 8	(23 – 12) × 8	(92– ?)×8 = 48
6 × 8 = 48	11 × 8 = 88	92 – ? = 6
		? = 92 – 6
		= 86

18. (2)

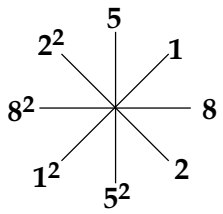
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7
			+ 3										+ 3						

			+ 3		
6	5	4	3	2	1
U	V	W	X	Y	Z
21	22	23	24	25	26

∴ x = 6

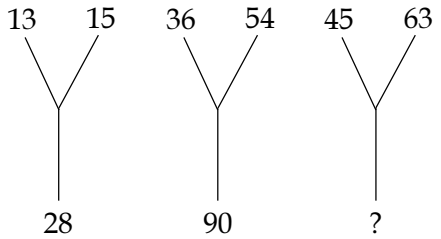
19. (4)

20. (1)



21. (3)

22. (3)



13 + 15 = 28 36 + 54 = 90 45 + 63 = **108**

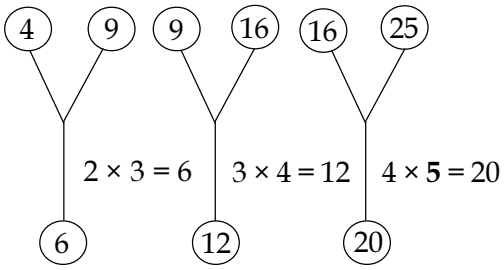
MATHS 4 ALL

23. **(4)** $3 \times 4 - 8 = 4$

$2 \times 5 - 4 = 6$

$4 \times 5 - 9 = 11$

24. **(3)**

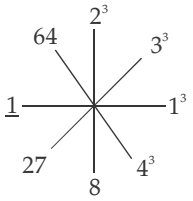


25. **(3)** $3 \times 3 + 5 \times 6 = 9 + 30 = 39$

$4 \times 4 + 7 \times 5 = 16 + 35 = 51$

$3 \times 4 + 5 \times 5 = 12 + 25 = 37$

26. **(4)**



27. **(4)** 37

28. **(1)** $3 + 6 + 8 = 17$

$5 + 8 + 4 = 17$

$4 + 7 + 6 = 17$

29. **(4)** $1^2 + 3^2 + 5^2 + 4^2 = 1 + 9 + 25 + 16$

$= 51$ '0'

$2^2 + 3^2 + 4^2 + 6^2 = 4 + 9 + 16 + 36$

$= 65$ '0'

$0^2 + 1^2 + 2^2 + 8^2 = 0 + 1 + 4 + 64$

$=$ **69 '0'**

30. **(3)**

Sol.

$7 \times 3 \times 2 = 42$

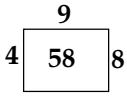
$9 \times 2 \times 1 = 18$

$5 \times -3 \times -2 = 30$

31. **(4)** 477

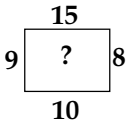
32. **(2)**

Sol.



$(9 \times 10) - (4 \times 8)$

$= 90 - 32 = 58$



$(15 \times 10) - (9 \times 8)$

$= 150 - 72 = 78$

$\therefore$ Required number = 78

33. **(1)** 3

34. **(2)**

Sol. 1st figure, $2 \times 3 \times 5 = 30$

2nd figure, $5 \times 1 \times -1 = -5$

3rd figure, $4 \times 3 \times -1 = -12$

$\therefore$ Required number is -12

35. **(1)**

Sol.

$15 + 16 = 22 + 9 = 31$

$13 + 7 = 11 + 9 = 20$

$21 + 15 = ? + 13 = 36$

$? = 36 - 13 = 23$

$\therefore$ Required number is 23

36. **(4)**

Sol. 1st column $(51 + 26 + 5) \times 5$

$= 82 \times 5 = 410$

2nd column $(63 + 14 + 8) \times 8$

$= 85 \times 8 = 680$

3rd column $(29 + 48 + x) \times x = 588$

$(77 + x)\, x = 588$

$77x + x^2 = 588$

$x^2 + 77x - 588 = 0$

$x^2 + 84x - 7x - 588 = 0$

$(x + 84)(x - 7) = 0$

$x = -84;\ x = 7$

$\therefore$ Required number is 7

MATHS 4 ALL

37. **(3)**

Sol. 1st column $(4 \times 7) - 1 = 28 - 1 = 27$

2nd column $(5 \times 8) - 2 = 40 - 2 = 38$

3rd column $(6 \times 9) - 3 = 54 - 3 = 51$

$\therefore$ Required number is 51

38. **(3)** 27

39. **(4)**

Sol. 1st column $3 + 4 - 2 = 7 - 2 = 5$

2nd column $5 + 9 - 3 = 14 - 3 = 11$

3rd column $7 + 8 - x = 10$

$x = 7 + 8 - 10$

$= 15 - 10 = 5$

40. **(2)**

$(11 - 2) \times 2 = 18$

$(5 - 2) \times 2 = 6$

$(12 - 5) \times 2 = 14$

41. **(1)**

7	4
2	8

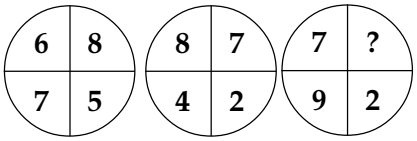
6	5
3	0

2	9
1	8

4	8
3	?

$7 \times 4 = 28$ $6 \times 5 = 30$ $2 \times 9 = 18$ $4 \times 8 = 32$

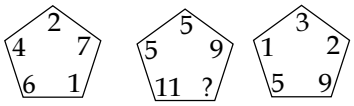
42. **(4)**



$7 \times 8 = 56$ $7 \times 4 = 28$ $9 \times ? = 27$

$? = 27/9 = 3$

43. **(4)**



Difference of 5, 2 = 3

5, 4 = 1

11, 6 = 5

9, 7 = 2

1, ? = 9

? = 10

44. **(3)**

$(5 + 3) \times 3 =$

$(4 + 2) \times 5 =$

$(1 + 2) \times 14 =$

45. **(2)**

3, 5, 7, 11, 13, 17, 19, 23, 29

All are prime numbers.

46. **(3)**

$(6 + 4) + (6 \times 4) = 34$

$(8 + 5) + (8 \times 5) = 53$

$(9 + 2) + (9 \times 2) = 29$

47. **(4)**

$6/3 = 2$

$21/7 = 3$

$16/4 = 4$

48. **(5)**

$11^2 - 1^2 = 121 - 1 = 120$

$7^2 - 2^2 = 49 - 4 = 45$

$5^2 - 3^2 = 25 - 9 = 16$

MATHS 4 ALL

3. WORD ANALOGY

Questions : *In each of the following questions, there are a certain relationship between two given words on one side of :: and one word is given on another side of ::, while another word is to be found from the given four alternatives, having the same relation with this word as the words of the given pair. Choose the correct alternatives.*

1. Burn : Ointment : : Grief : ? ( )
1) Sorrow 2) Adversity
3) Consolation 4) Pity

2. Pen : Stationery : : Chair : ? ( )
1) Wood 2) Rest
3) Room 4) Furniture

3. Dam : Water : : Godown : ? ( )
1) Sweets 2) Crab
3) Grain 4) Grass

4. Crime : Court : : Disease : ? ( )
1) Lawyer 2) Punishment
3) Hospital 4) Doctor

5. Millionaire : Wealth : : Genius:? ( )
1) Capability 2) Smartness
3) Intelligence 4) Awareness

6. Page : Book : : Brick : ? ( )
1) Heap 2) Building
3) Clay 4) Mason

7. Driving : Bus : : Flying : ? ( )
1) Air 2) Kite
3) Bird 4) Aeroplane

8. Bullet : Rifle : : Arrow : ? ( )
1) Archer 2) Bow
3) Target 4) Cord

9. House : Mason : : Furniture : ? ( )
1) Wood 2) Chair
3) Table 4) Carpenter

10. Needle : Thread : : Pen : ? ( )
1) Write 2) Ink
3) Cap 4) Paper

11. Car : Garage :: Aeroplane : ? ( )
1) Port 2) Depot
3) Hangar 4) Harbour
5) Busbay

12. Race : Fatigue :: Fast : ? ( )
1) Food 2) Appetite
3) Hunger 4) Weakness
5) Fever

13. Candle : Wax :: Paper : ? ( )
1) Wood 2) Tree 3) Bamboo
4) Pulp 5) Oil

14. Acting : Theatre :: Gambling : ? ( )
1) Casino 2) Club 3) Bar
4) Gym 5) Playground

15. Water : Convection :: Space : ? ( )
1) Conduction 2) Transference
3) Vacuum 4) Radiation
5) Evaluation

16. Growth : Death :: Increase : ? ( )
1) Ease 2) Decrease
3) Tease 4) Cease
5) Erase

17. Oxygen : Burn :: Carbondioxide : ?
1) Isolate 2) Foam ( )
3) Extinguish 4) Explode
5) Evaporate

18. Dog : Bark :: Goat : ? ( )
1) Bleat 2) Howl 3) Grunt
4) Bray 5) Slap

19. Planet : Orbit :: Projectile : ? ( )
1) Trajectory 2) Track
3) Milky way 4) Path
5) Universe

20. Oceans : Deserts :: Waves : ? ( )
1) Sea 2) Dust 3) Sand dunes
4) Ripples 5) Particles

MATHS 4 ALL

21. Boy : Man :: Girl : ? ( )

1) Mother 2) Father 3) Woman

4) Wife 5) Girl

22. Hand : Gloves :: Foot : ? ( )

1) Pant 2) Nail 3) Socks

4) Thumb 5) Finger

23. $\frac{A}{Z}$ **: 25 ::** $\frac{C}{T}$ **: ?** ( )

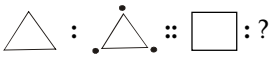
1) 17 2) 18 3) 20

4) 21 5) 23

24. **: ?** ( )

1) 2) 3)

4) 5)

25.  **: ?** ( )

1) 2) 3)

4) 5)

26. ABE : BCF :: MPU : ? ( )

1) NQV 2) PQW 3) NQW

4) PWQ 5) NVQ

27. PQR : ONM :: DEF : ?

1) BAC 2) CBA 3) CAB ( )

4) BCA 5) ABC

28. Pond : Water :: Library : ? ( )

1) Paper 2) Almirah

3) Book 4) Chair 5) Table

29. $\frac{2}{3}$ **: 8 ::** $\frac{4}{2}$ **: ?**

1) 12 2) 64 3) 8 ( )

4) 16 5) 18

30. DG : 47 :: BI : ?

1) 18 2) 28 3) 29 ( )

4) 19 5) 27

31. Moon : Satellite :: Earth : ? ( )

1) Sun 2) Planet

3) Solar system 4) Star

5) Asteroid

32. Melt : Liquid :: Freeze : ? ( )

1) Ice 2) Condense 3) Solid

4) Crystal 5) Gas

33. Bread : Bakery :: Brick : ? ( )

1) Mint 2) Kiln 3) Furnace

4) Mine 5) Burn

34. Soap : Wash :: Broom : ? ( )

1) Clean 2) Dust 3) Sweep

4) Floor 5) Wipe

35. Newspaper : Press :: Cloth : ? ( )

1) Tailor 2) Textile 3) Fibre

4) Factory 5) Mill

36. College : Dean :: Museum : ? ( )

1) Supervisor 2) Custodian

3) Warden 4) Curator

5) Manager

37. Cobbler : Leather :: Tailor : ? ( )

1) Thread 2) Cloth

3) Shirt 4) Needle

5) Scissor

38. Mason : Wall :: Carpenter : ? ( )

1) Glass 2) Pen 3) Chair

4) Book 5) Pipe

39. Tea : Leaves :: Coffee : ? ( )

1) Plant 2) Leaves

3) Stimulant 4) Flower

5) Seeds

40. House : Door :: Compound : ? ( )

1) Gate 2) Fence

3) Foundation 4) Wall

5) Window

MATHS 4 ALL

41. Crescograph : Jagdish Chandra Bose :: Theory of Evolution : ? ( )

1) Dr. Jayant V. Narlikar
2) Albert Einstein 3) S.S. Bhatnagar
4) C.R. Rao 5) Darwin

42. Maharashtra : Mumbai :: Rajasthan : ?

1) Udaipur 2) Jodhpur ( )
3) Jaipur 4) Gwalior
5) Bikaner

43. Moscow : Russia :: Phnom Penh : ?

1) Cambodia 2) Thailand ( )
3) Vietnam 4) North Korea
5) Mongolia

44. Flower : Rose :: Mammal : ? ( )

1) Hen 2) Sparrow 3) Cobra
4) Cow 5) Eagle

45. Food : Stomach :: Fuel : ? ( )

1) Car 2) Engine 3) Bus
4) Truck 5) Train

46. Satyajit Ray : Cinema :: R. K. Narayan : ?

1) Drama 2) Literature ( )
3) Business 4) Politics 5) Painting

47. Chennai : Tamil Nadu :: Ranchi : ?

1) Madhya pradesh ( )
2) Assam 3) Jharkhand
4) Chhattisgarh 5) Uttarakhand

48. Flowe : Fragrance :: Fruit : ?

1) Colour 2) Farmer 3) Plant ( )
4) Garden 5) Taste

49. Paris : France :: Bangkok : ? ( )

1) Vietnam 2) Indonesia
3) Malaysia 4) Thailand
5) Myanmar

50. Theory of Evolution : Darwin :: Theory of Relativity : ? ( )

1) Albert Einstein
2) Sir C. V. Raman
3) Sir Jagadish Chandra Vose
4) Dr. Subrahmanyan Chandrasekhar
5) Dr. Jayant V. Narlikar

51. School :: Study :: Temple : ? ( )

1) Pray 2) Sleep 3) Dance
4) Run 5) Play

52. West Bengal : Kolkatta :: Maharashtra : ? ( )

1) Delhi 2) Mumbai 3) Chennai
4) Darjeeling 5) Hyderabad

53. Karan Johar : Cinema :: Vijay Malya : ? ( )

1) Art 2) Literature 3) Business
4) Music 5) Painting

54. Radio : Listen :: Newspaper : ? ( )

1) Talk 2) Read 3) Sing
4) Play 5) Write

55. Clock : Time :: Mobile : ? ( )

1) Talk 2) Sleep 3) Pray
4) Eat 5) Dance

56. Fruit : Apple : : Mammal : ? ( )

1) Sparrow 2) Fish 3) Cow
4) Snake 5) Hen

57. Satyajit Ray : Cinema : : Ravishanker:

1) Music 2) Painting 3) Poetry ( )
4) Business 5) Dance

58. Cricket : Bat : : Badminton : ? ( )

1) Player 2) Field 3) Ball
4) Racket 5) Coach

MATHS 4 ALL

59. Cricket : Bat :: Hockey :? ( )

1) Stick 2) Field

3) Player 4) Ball

5) Team

60. Country : President : : State : ? ( )

1) Chief Secretary

2) Chief Minister

3) Citizen

4) Cabinet Minister

5) Governor

61. Temperature : Degrees :: Mass : ?( )

1) Litre 2) Watt 3) Kilogram

4) Seconds 5) Joule

62. Crop : Farmer :: Book : ? ( )

1) Printer 2) Editor 3) Poet

4) Author 5) Teacher

63. Carpenter : Saw :: Chef : ? ( )

1) Pen 2) Sword 3) Gun

4) Knife 5) Needle

64. Food : Stomach :: Fuel :? ( )

1) Plane 2) Truck

3) Car 4) Bus

5) Engine

65. Mango : Fruit :: Potato : ? ( )

1) Root 2) Fruit

3) Stem 4) Flower

5) Branch

66. Temple : Pooja :: School : ? ( )

1) Play 2) Friends 3) Teacher

4) Games 5) Study

67. Andhra Pradesh : Hyderabad :: Gujarat : ? ( )

1) Surat 2) Bhuvaneswar 3) Raipur

4) Bhopal 5) Ahmedabad

68. Ramgopal Varma : Cinema :: Anil Ambani : ? ( )

1) Industry

2) Literature

3) Music

4) Art

5) Painting

69. Bhagat Singh : Freedom struggle :: Raja Ram Mohan Roy : ? ( )

1) Poetry

2) Social Reforms

3) Literature

4) Politics

5) Administration

70. Ramayana : Valmiki :: Gitanjali :?

1) Ravindranath Tagore ( )

2) Sarat Chandra Bose

3) Prem Chand

4) Rajaji

5) K.M. Munshi

71. Mumbai : Maharastra :: Trivandrum: ?

1)Kolkata ( )

2)Gujarat

3) Kerala

4) Sikkim

5)Karnataka

MATHS 4 ALL

WORKED OUT ANSWERS

1. **(3)**

Sol. Second one is used for happening of first one.

2. **(4)**

Sol. First one is available in second one.

3. **(3)**

Sol. Second one is placed/ stored in first one.

4. **(3)**

Sol. Relief of first one is available in second one.

5. **(3)**

Sol. First one is related to second one or 1st one belonged to second one.

6. **(2)**

Sol. Book contains pages
Building is constructed with bricks

7. **(4)**

Sol. First is related to second.

8. **(2)**

Sol. First is placed in second.

9. **(4)**

Sol. First is prepared by second

10. **(2)**

Sol. Second is used with first one.

11. **(3)** Hangar

12. **(3)** Hunger

13. **(4)** Pulp

14. **(1)** Casino

15. **(4)** Radiation

16. **(4)** Cease

17. **(3)** Extinguish

18. **(1)** Bleat

19. **(1)** Trajectory

20. **(3)** Sand dunes

21. **(3)** Woman

22. **(3)** Socks

23. **(1)** 17

24. **(4)**

25. **(1)**

26. **(1)** NQV

27. **(2)** CBA

28. **(3)** Book

29. **(4)** 16

30. **(3)** 29

31. **(2)** Planet

32. **(3)** Solid

33. **(2)** Kiln

34. **(3)** Sweep

35. **(5)** Mill

36. **(4)** Curator

37. **(2)** Cloth

38. **(3)** Chair

39. **(5)** Seeds

40. **(1)** Gate

41. **(5)**

Sol. Theory of Evolution is related to Charles darwin.

42. **(3)**

Sol. Maharashtra state capital is Mumbai. Rajasthan state capital is Jaipur.

43. **(1)**

Sol. Moscow is the capital city of Russia. Phnom Penh is the capital city of Cambodia.

44. **(4)**

Sol. Cow is a Mammal and remaining all are Birds and animals which lay eggs.

45. **(2)**

Sol. Food is for stomach in the similar way fuel is for Engine.

MATHS 4 ALL

46. **(2)** Literature

47. **(3)** Jharkhand

48. **(5)** Taste

49. **(4)** Thailand

50. **(1)** Albert Einstein

51. **(1)** Pray

52. **(2)** Mumbai

53. **(3)** Business

54. **(2)** Read

55. **(1)** Talk

56. **(3)** Cow

57. **(1)** Music

58. **(4)** Racket

59. **(1)** Stick

60. **(5)** Governor

61. **(3)**

Sol. Temperature is measured in degrees. Mass is measured in kilograms.

62. **(4)**

Sol. Farmer grows crop like author writes book.

63. **(4)**

Sol. Carpenter uses saw like chef (cook master in big hotels) uses knife.

64. (5)

Sol. Food digests in stomach and converts into energy. Fuel heats in engine and converts into energy.

65. (1)

Sol. Mango is a fruit. Potato is a root.

66. **(5)** Study

67. **(5)** Ahmedabad

68. **(1)** Industry

69. **(2)** Social Reforms

70. **(1)** Ravindranath Tagore

71. **(3)**

Sol. Mumbai is the capital of Maha-rastra. Trivendrum is the capital of Kerala.

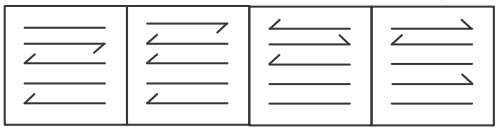
MATHS 4 ALL

4. ODD MAN OUT

Directions :

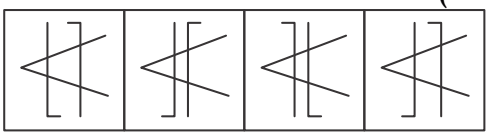
Questions : *In each of the following questions, there are 4 figures. Three of them are similar in a certain way but one is not like the other three. Find out, which one of the figures different from the others.*

1. ( )



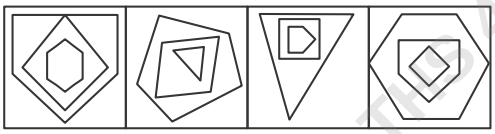
(1) (2) (3) (4)

2. ( )



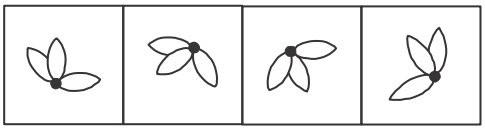
(1) (2) (3) (4)

3. ( )



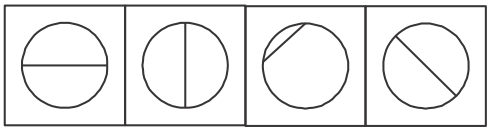
(1) (2) (3) (4)

4. ( )



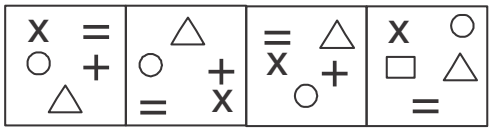
(1) (2) (3) (4)

5. ( )



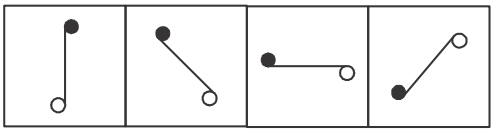
(1) (2) (3) (4)

6. ( )



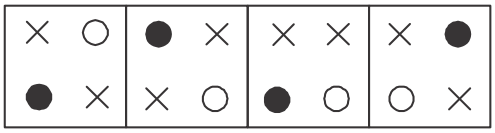
(1) (2) (3) (4)

7. ( )



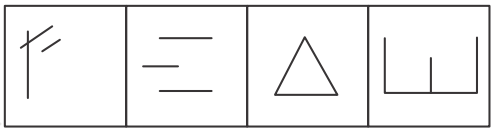
1) 1 2) 2 3) 3 4) 4

8. ( )



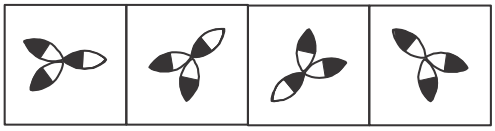
1) 1 2) 2 3) 3 4) 4

9. ( )



1) 1 2) 2 3) 3 4) 4

10. ( )

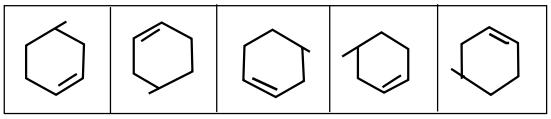


1) 1 2) 2 3) 3 4) 4

Directions :

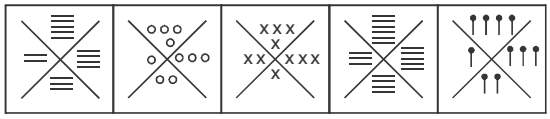
Questions : *In each of the following questions, there are five figures. Four of them are similar in a certain way but one is not like the other four. Find out, which are of the figure different from the others.*

11. ( )



(1) (2) (3) (4) (5)

12. ( )



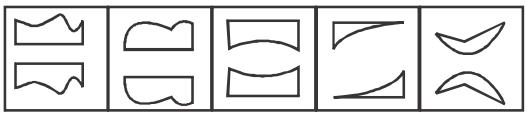
(1) (2) (3) (4) (5)

MATHS 4 ALL

13. ( )

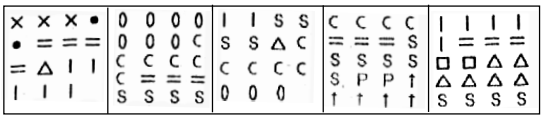
(1) (2) (3) (4) (5)

14. ( )



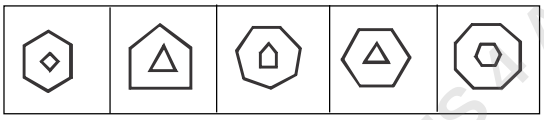
(1) (2) (3) (4) (5)

15. ( )



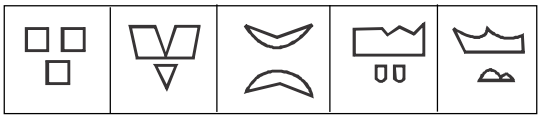
(1) (2) (3) (4) (5)

16. ( )



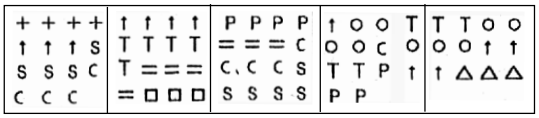
(1) (2) (3) (4) (5)

17. ( )



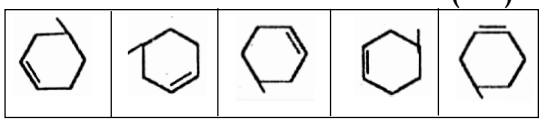
(1) (2) (3) (4) (5)

18. ( )



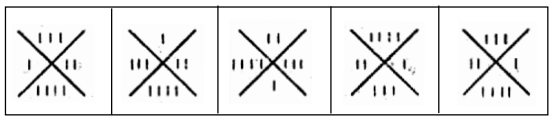
(1) (2) (3) (4) (5)

19. ( )



(1) (2) (3) (4) (5)

20. ( )

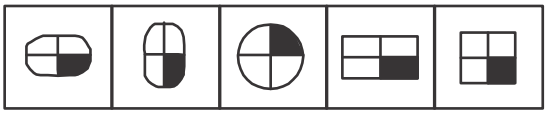


(1) (2) (3) (4) (5)

21. ( )

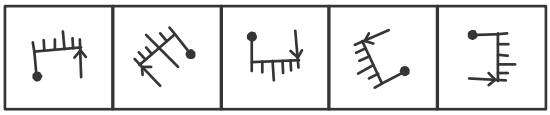
(1) (2) (3) (4) (5)

22. ( )



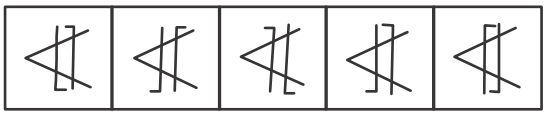
(1) (2) (3) (4) (5)

23. ( )



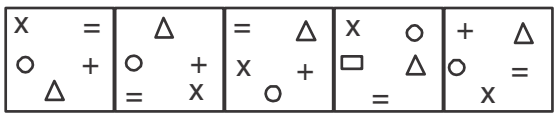
(1) (2) (3) (4) (5)

24. ( )



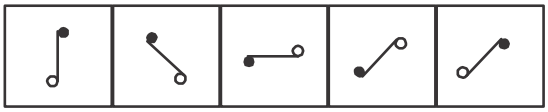
(1) (2) (3) (4) (5)

25. ( )



(1) (2) (3) (4) (5)

26. ( )



(1) (2) (3) (4) (5)

27. ( )

(1) (2) (3) (4) (5)

MATHS 4 ALL

28. ( )

(1) (2) (3) (4) (5)

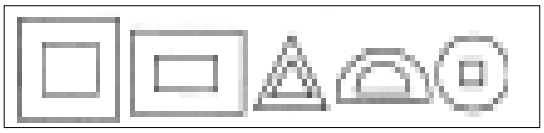
29. ( )

(1) (2) (3) (4) (5)

30. ( )

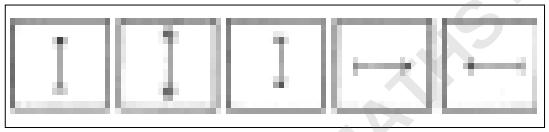
(1) (2) (3) (4) (5)

31. ( )



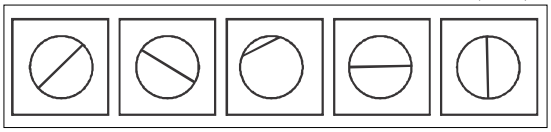
(1) (2) (3) (4) (5)

32. ( )



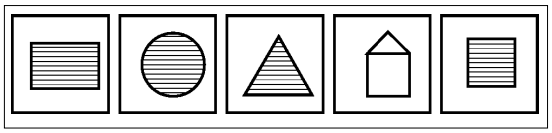
(1) (2) (3) (4) (5)

33. ( )



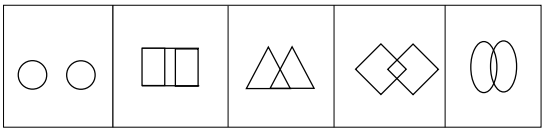
(1) (2) (3) (4) (5)

34. ( )



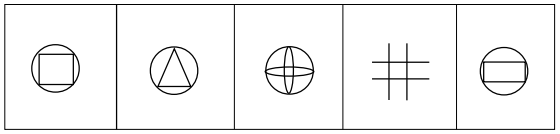
(1) (2) (3) (4) (5)

35. ( )



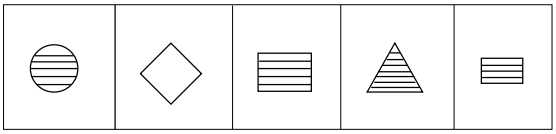
(1) (2) (3) (4) (5)

36. ( )



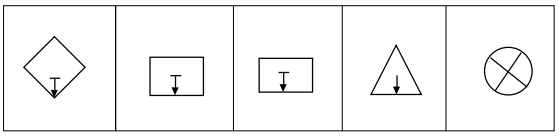
(1) (2) (3) (4) (5)

37. ( )



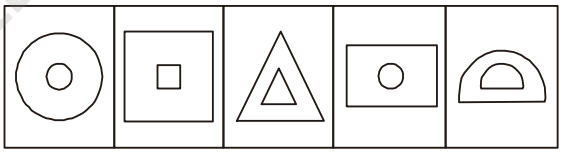
(1) (2) (3) (4) (5)

38. ( )



(1) (2) (3) (4) (5)

39. ( )



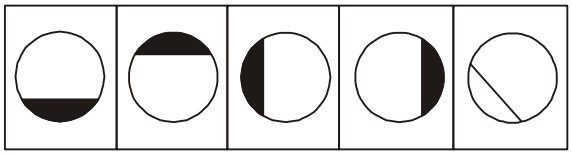
(1) (2) (3) (4) (5)

40. ( )

L	N	M	O	Z

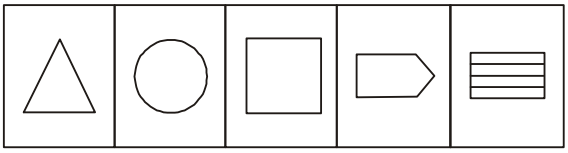
(1) (2) (3) (4) (5)

41. ( )



(1) (2) (3) (4) (5)

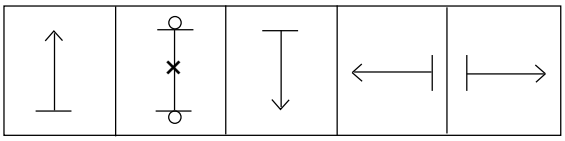
42. ( )



(1) (2) (3) (4) (5)

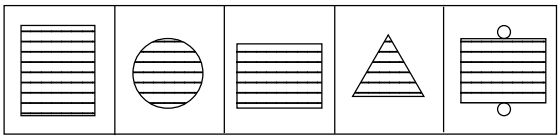
MATHS 4 ALL

43. ( )



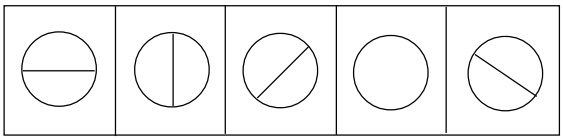
(1) (2) (3) (4) (5)

44. ( )



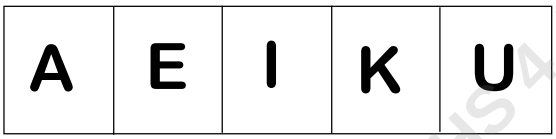
(1) (2) (3) (4) (5)

45. ( )



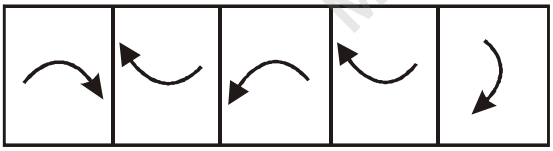
(1) (2) (3) (4) (5)

46. ( )



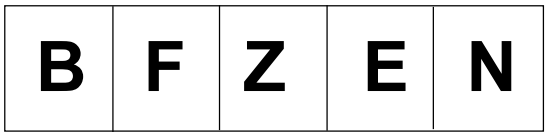
(1) (2) (3) (4) (5)

47. ( )



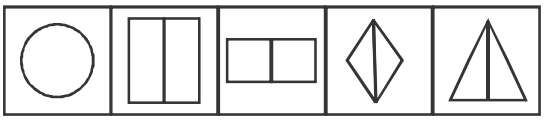
(1) (2) (3) (4) (5)

48. ( )



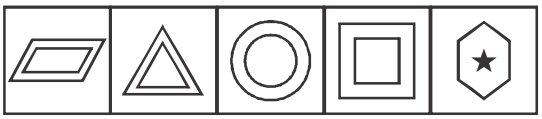
(1) (2) (3) (4) (5)

49. ( )



(1) (2) (3) (4) (5)

50. ( )

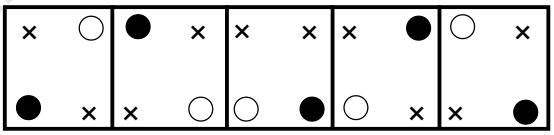


(1) (2) (3) (4) (5)

51. ( )

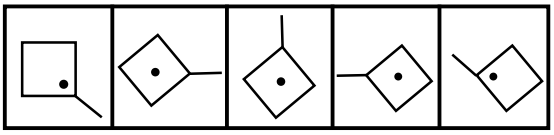
(1) (2) (3) (4) (5)

52. ( )



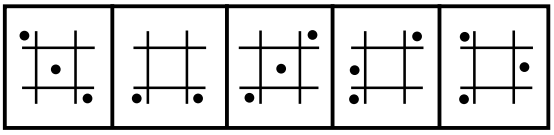
(1) (2) (3) (4) (5)

53. ( )



(1) (2) (3) (4) (5)

54. ( )



(1) (2) (3) (4) (5)

MATHS 4 ALL

WORKED OUT ANSWERS

1. **(4)**

Sol. Two lines on the extreme ends of all the figures, except figure (4) have same direction of arrows. In figure (4) the direction of arrows are different.

2. **(4)**

Sol. In figure (4) one line is in clockwise direction and another one is in anticlockwise direction.

3. **(1)**

Sol. Except in figure (1), in all figures the lines in shapes are increasing either from inner figure or from outer figure.

4. **(1)**

Sol. Except figure (1), all are moving with ½ place and 1 place in anticlockwise direction.

5. **(3)**

Sol. Except figure (3) all are divided into half.

6. **(4)**

Sol. In figure (4) ▭ is a new figure.

7. **(3)**

Sol. Empty circle is moving in clockwise direction in all figures except in figure (3).

8. **(3)**

Sol. Except figure (3) all the figures are having diagonally same elements.

9. **(4)**

Sol. Except figure (4), the remaining figures consist/ contain '3' lines.

10. **(4)**

Sol. In figure (4) shaded parts are ended in petals.

11. 5

12. 4

13. 4

14. 3

15. 2

16. 4

17. 2

18. 1

19. 5

20. 5

21. 1

22. **(3)**

Sol. Except option(3), the remaining are with straight lines (main figure)

23. 1

24. **(4)**

Sol. Except (4) all are in same directions i.e, either in clockwise or anti clockwise.

25. **(4)**

Sol. a new figure i.e, ▭ comes in figure '4'

26. **(3)**

27. **(4)**

Sol. Except option/figure (4), all are formed with three lines.

28. **(3)**

Sol. In figure (3) three dots are in outside where as in remaining figures three dots are in closed side. (base also observed.)

29. **(2)**

Sol. Except (2), all are mirror images

30. **(5)**

Sol. Except (5) in all other figures, two are in same side shape

31. 5

32. 2

33. 3

34. 4

35. 1

36. 4

37. 2

38. 5

39. 4

40. 4

41. 5

42. 5

43. 2

44. 5

45. 4

46. 4

Sol. AEIU are vowels. K is a consonant.

47. **(3)**

Sol. 1, 2, 4, 5 are moving in clockwise direction. 3 is moving in anti clockwise direction which is an odd figure.

48. **(1)**

Sol. Except B which is a closed figure, F, Z, E, N are open figures.

49. 1

50. 5

51. 2

52. 3

53. 5

54. 2

MATHS 4 ALL

5. SERIES

Directions :

Questions : *In the number series given below, one number is missing. Each series is followed by four alternatives (1), (2), (3), (4). One of them is the right answer. Indicate it as per the instructions.*

1. 380, 188, 92, ...?....., 20, 8, 2 ( )
1) 80 2) 60
3) 44 4) 72

2. 3, 7, 6, 5, 9, 3, 12, 1, 15, ...?..... ( )
1) 18 2) 13
3) –1 4) 72

3. 23, 21, 24, 19, 26, ...?..... ( )
1) 29 2) 28
3) 17 4) 15

4. 5, 12, 23, 50, 141, ...?..... ( )
1) 415 2) 430
3) 439 4) 488

5. 4, 11, 19, 41, ...?..... 161 ( )
1) 62 2) 108
3) 79 4) 90

6. 9, 5, 6, 10.5, 23, ...?..... ( )
1) 50 2) 65
3) 70 4) 60

7. 1, 20, 58, 134, 286, ...?..... ( )
1) 600 2) 590
3) 580 4) 570

8. 68, 117, 61, 124, 54, ...?..... ( )
1) 141 2) 121
3) 151 4) 131

9. 10, 5, 5, 10, 40, ...?..... ( )
1) 350 2) 320
3) 360 4) 370

10. 8, 7, 12, ...?....., 128, 635 ( )
1) 42 2) 24
3) 33 4) 26

11. 16, 33, 65, 131, ...?..... 523 ( )
1) 521 2) 613 3) 721
4) 261 5) 324

12. 0, 5, 8, 17, 24, 37 , ...?..... ( )
1) 64 2) 48 3) 56
4) 75 5) 58

13. 5, 11, 21, 43, 85, 171, 341, ...?... ( )
1) 570 2) 683 3) 596
4) 626 5) 356

14. 0, 3, 8, 15, 24, 35, ...?..... ( )
1) 46 2) 51 3) 48
4) 57 5) 45

15. 2, 5, 10, 17, 26, 37, ...?..... ( )
1) 50 2) 51 3) 46
4) 57 5) 39

16. 3, 6, 7, 14, 15, 30,
31, 62, 63, ...?....., ...?..... ( )
1) 128, 112 2) 119, 131
3) 127, 115 4) 126, 127
5) 135, 136

17. –2, 5, 24, 61, 122, ...?..... ( )
1) 163 2) 176 3) 213
4) 227 5) 264

18. 6, 12, 21, ...?...., 48 ( )
1) 40 2) 33 3) 45
4) 53 5) 56

19. 2460, 3750, 4680, ...?.... ( )
1) 8640 2) 5670 3) 5970
4) 5790 5) 8460

20. 1, 8, 27, 64, 125, ...?.... ( )
1) 216 2) 160 3) 148
4) 156 5) 210

MATHS 4 ALL

21. 1695, 1700, 1710, 1727, 1753, ... ( )

1) 1760 2) 1790 3) 1780
4) 1770 5) 1800

22. 55, 66, 187, 200, 369, 386, ... ( )

1) 675 2) 575 3) 475
4) 875 5) 975

23. 2, 12, 36, 80, 150, ... ( )

1) 242 2) 262 3) 252
4) 232 5) 272

24. 20, 141, 310, 599, 960, 1489, ... ( )

1) 2430 2) 2330 3) 2230
4) 2130 5) 2530

25. 0, 10, 34, 78, ... ( )

1) 135 2) 148 3) 156
4) 102 5) 124

26. 7, 31, 211, ... ( )

1) 2311 2) 2211 3) 2561
4) 2781 5) 2111

27. 24, 60, 96, 132, ... ( )

1) 126 2) 152 3) 144
4) 168 5) 135

28. 7, 6, 10, 27, 104, ... ( )

1) 520 2) 420 3) 515
4) 525 5) 456

29. 1, 5, 15, 34, 65, ... ( )

1) 111 2) 125 3) 117
4) 126 5) 105

30. 0, 7, 26, 63, 124, ... ( )

1) 126 2) 135 3) 215
4) 211 5) 256

31. 2, 3, 5, 7, 11, ?, 17 ( )

1) 12 2) 13 3) 14
4) 15 5) 16

32. 5, 11, 17, ?, 31, 41 ( )

1) 19 2) 21 3) 23
4) 25 5) 27

33. 7, 13, 21, ?, 43, 57 ( )

1) 27 2) 29 3) 31
4) 35 5) 41

34. 3, 15, 35, ?, 99, 143 ( )

1) 63 2) 69 3) 77
4) 81 5) 85

35. 2, 1, 2, 4, 4, 5, 6, 7, 8, 8, 10, 11, ? ( )

1) 9 2) 10 3) 11
4) 12 5) 13

36. 0, 7, 26, ?, 134, 215 ( )

1) 37 2) 51 3) 63
4) 88 5) 120

37. 1, 1, 8, ?, 27, 9, 64 ( )

1) 4 2) 6 3) 9
4) 16 5) 25

38. 2, 20, ?, 110, 182 ( )

1) 56 2) 72 3) 90
4) 96 5) 100

39. 3, 8, 35, 48, ?, 120 ( )

1) 64 2) 72 3) 80
4) 96 5) 99

40. 3, 6, 24, 30, 63, 72, ?, 132 ( )

1) 42 2) 58 3) 90
4) 110 5) 120

41. 36, 29, 22, 15, ... ( )

1) 6 2) 5 3) 8
4) 7 5) 4

42. 5, 6, 11, 17, ... ( )

1) 28 2) 23 3) 22
4) 39 5) 25

43. 3, 9, 21, 45, ... ( )

1) 135 2) 81 3) 69
4) 90 5) 93

44. 4, 12, 36, 108, ... ( )

1) 216 2) 324 3) 432
4) 160 5) 540

MATHS 4 ALL

45. 243, 81, ... , 9, 3. ( )
1) 18 2) 36 3) 45
4) 27 5) 54

46. 583, 463, 343, 223, ... ( )
1) 113 2) 103 3) 123
4) 93 5) 130

47. 115, 236, 357, 478, ... ( )
1) 589 2) 499 3) 699
4) 498 5) 599

48. 3, 6, 18, 72, ... ( )
1) 360 2) 350 3) 432
4) 216 5) 99

49. 7, 17, 37, 67, ... ( )
1) 106 2) 87 3) 973
4) 107 5) 117

50. 160, 115, 80, 55, ... ( )
1) 45 2) 35 3) 40
4) 30 5) 25

51. 3, 7, 10, 17, ...
1) 20 2) 24 3) 27 ( )
4) 29 5) 30

52. 31, 24, 17, 10, ...
1) 7 2) 9 3) 6 ( )
4) 5 5) 3

53. 2, 10, 26, 58, ...
1) 120 2) 122 3) 114 ( )
4) 84 5) 90

54. 3, 9, 27, 81, ...
1) 108 2) 246 3) 90 ( )
4) 243 5) 168

55. 48, 24, ... , 6, 3.
1) 20 2) 12 3) 16 ( )
4) 8 5) 9

56. 574, 463, 352, 241, ...
1) 130 2) 230 3) 131 ( )
4) 132 5) 140

57. 103, 223, 343, 463, ...
1) 573 2) 566 3) 686 ( )
4) 583 5) 483

58. 2, 4, 12, 48, ...
1) 60 2) 66 3) 64 ( )
4) 230 5) 240

59. 3, 13, 33, 73, ...
1) 106 2) 119 3) 153 ( )
4) 113 5) 122

60. 165, 110, 65, 30, ...
1) 5 2) 35 3) 25 ( )
4) 20 5) 15

61. 5, 10, 15 ,25, 40, ...
1) 45 2) 50 3) 65 ( )
4) 60 5) 55

62. 1, 2, 8, 9, 15, 16 .....
1) 20 2) 17 3) 18 ( )
4) 22 5) 19

63. 4, 10, 22, 46, ...
1) 94 2) 56 3) 66 ( )
4) 76 5) 86

64. 4, 5, 7, ..., 19
1) 56 2) 66 3) 11 ( )
4) 17 5) 14

65. 2, 6, 18, 54, ...,
1) 108 2) 72 3) 216 ( )
4) 162 5) 80

66. 128, 64, ..., 16, 8
1) 48 2) 80 3) 60 ( )
4) 24 5) 32

67. 125, 115, 105, 95, ...
1) 85 2) 80 3) 75 ( )
4) 90 5) 70

68. 678, 567, 456, 345, ...
1) 334 2) 234 3) 243 ( )
4) 235 5) 305

69. 3, 6, 18, 72, ...
1) 360 2) 144 3) 90 ( )
4) 432 5) 288

70. 12, 32, 72, 152, ..., 632 ( )
1) 515 2) 613 3) 312
4) 815 5) 413

MATHS 4 ALL

71. 4, 8, 16, 32, 64, ... ( )
1) 123 2) 128 3) 130
4) 132 5) 136

72. 5, 13, 29, ..., 125 ( )
1) 59 2) 61 3) 63
4) 53 5) 57

73. 8, 24, 48, 80, ... ( )
1) 160 2) 164 3) 156
4) 120 5) 116

74. 67, 56, 45, 34, ... ( )
1) 23 2) 24 3) 27
4) 25 5) 19

75. 84, 87, 91, 96, ... ( )
1) 103 2) 105 3) 102
4) 101 5) 104

76. 15, 18, 23, 30, ... ( )
1) 36 2) 34 3) 38
4) 33 5) 39

77. 4, 12, 36, 108, ... ( )
1) 320 2) 324 3) 216
4) 180 5) 112

78. 240, 120, 60, ..., 15 ( )
1) 40 2) 35 3) 50
4) 30 5) 25

79. 897, 786, 675, ..., 453 ( )
1) 564 2) 570 3) 575
4) 565 5) 664

80. 97, 76, ..., 34, 13 ( )
1) 45 2) 46 3) 55
4) 56 5) 47

81. 37, 43, 49, ..., 61 ( )
1) 45 2) 59 3) 55
4) 41 5) 53

82. 1, 4, 16, ..., 256 ( )
1) 32 2) 80 3) 48
4) 64 5) 28

83. 960, 480, 240, 120, ... ( )
1) 80 2) 60 3) 240
4) 40 5) 100

84. 3, 7, 10, 17, 27, ... ( )
1) 34 2) 41 3) 37
4) 44 5) 39

85. 27, 26, 23, 18, ... ( )
1) 9 2) 7 3) 11
4) 15 5) 13

86. 3, 6, 18, 72, 360, ... ( )
1) 1800 2) 2160 3) 1900
4) 720 5) 1440

87. 27, 37, 57, ... 127 ( )
1) 94 2) 67 3) 87
4) 63 5) 77

88. 9, 25, 49, ..., 121, 169 ( )
1) 100 2) 81 3) 64
4) 36 5) 16

89. 987, 876, ... 654, 543 ( )
1) 657 2) 756 3) 567
4) 675 5) 765

90. 847, 814, 781, 748, ... ( )
1) 715 2) 725 3) 781
4) 718 5) 735

91. 8, 11, 17, 26, ... ( )
1) 29 2) 35 3) 28
4) 38 5) 43

92. 80, 65, ..., 35, 20 ( )
1) 55 2) 60 3) 45
4) 40 5) 50

93. 3, 5, 9, 17, ... ( )
1) 25 2) 33 3) 23
4) 49 5) 21

94. 4, 20, 100, ..., 2500 ( )
1) 500 2) 400 3) 2000
4) 8000 5) 1000

95. 2, 5, 7, 12, 19, ... ( )
1) 26 2) 31 3) 24
4) 38 5) 36

96. 3, 6, 18, 72, ... ( )
1) 288 2) 432 3) 360
4) 216 5) 144

MATHS 4 ALL

97. 15, 25, 45, 75, ... ( )
1) 70 2) 120 3) 85
4) 105 5) 115

98. 3, 15, 60, 180, ... ( )
1) 360 2) 240 3) 540
4) 258 5) 280

99. 64, 32, 16, 8, ... ( )
1) 2 2) 3 3) 1
4) 4 5) 12

100. 3, 12, 21, 30, ... ( )
1) 33 2) 36 3) 39
4) 42 5) 45

101. 4, 5, 9, 14, ? ( )
1) 24 2) 20 3) 23
4) 28 5) 30

102. 35, 27, 19, 11, ? ( )
1) 3 2) 10 3) 7
4) 5 5) 2

103. 2, 3, 5, 8, 13, ? ( )
1) 17 2) 12 3) 21
4) 15 5) 13

104. 3, 15, 75, 375, ? ( )
1) 1860 2) 1875 3) 1975
4) 1775 5) 1675

105. 2, 4, 16, 96, ? ( )
1) 604 2) 768 3) 716
4) 702 5) 700

106. 7, 10, 16, 25, ? ( )
1) 37 2) 28 3) 35
4) 36 5) 26

107. 4, 9, 16, 25, ? ( )
1) 44 2) 30 3) 32
4) 36 5) 29

108. 8, 16, 32, 64, ? ( )
1) 122 2) 120 3) 123
4) 124 5) 128

109. 2, 5, 9, ?, 20, 27, ( )
1) 10 2) 12 3) 14
4) 16 5) 18

110. 125, 80, 45, 20, ? ( )
1) 5 2) 10 3) 15
4) 12 5) 6

111. 4, 9, 25 ....?....., 121, 169, 289, 361 ( )
1) 36 2) 49 3) 64
4) 81 5) 100

112. 7, 10, 8, 11, 9, 12 ....?..... ( )
1) 7 2) 9 3) 10
4) 12 5) 13

113. 3, 7, 15, 31, 63 .....?..... ( )
1) 81 2) 91 3) 107
4) 117 5) 127

114. 14, 28, 20, 40, 32, 64, ...?..... ( )
1) 52 2) 56 3) 80
4) 96 5) 128

115. 101, 98, 93, 86, 75 .....?..... ( )
1) 62 2) 64 3) 68
4) 71 5) 73

116. 4, 18, ...?..... 100, 180, 294, 448 ( )
1) 48 2) 50 3) 58
4) 60 5) 81

117. 1, 2, 6, 15, 31, ...?..... ( )
1) 42 2) 47 3) 56
4) 59 5) 61

118. 6, 12, 20, 30, 42, 56, ...?... ( )
1) 60 2) 64 3) 70
4) 72 5) 76

119. 6, 6, 12, 36, 144, 720, ...?.... ( )
1) 1440 2) 1760 3) 2150
4) 3560 5) 4320

120. 5, 7, 11, 17, 25, 35, ...?.... ( )
1) 37 2) 40 3) 42
4) 47 5) 50

MATHS 4 ALL

WORKED OUT ANSWERS

1. (3)

Sol. 380 188 92 44 20 8 2

-192 -96 -48 -24 -12 -6

×2 ×2 ×2 ×2 ×2

2. (3)

Sol. Here two series are there.

+3 +3 +3 +3

3 7 6 5 9 3 12 1 15 $\boxed{-1}$

–2 –2 –2

–2 + 1 = **–1**

3. (4)

Sol. 23 21 24 19 26 ___

–2 +3 –5 +7 –11

26 – 11 = **15**

Adding & Subtracting Prime numbers

4. (4)

Sol. 5 12 23 50 141 ___

+7 +11 +27 +91 +347

+4 +16 +64 +256

∴ 347 + 141

= **488**

5. (3)

Sol. 4 11 19 41 ___ 161

×2+3 ×2+3 ×2+3

79 × 2 + 3

= 158 + 3 = **161**

6. (4)

Sol. 9 × 0.5 + 0.5 = 5

5 × 1 + 1 = 6

6 × 1.5 + 1.5 = 10.5

10.5 × 2 + 2 = 23

23 × 2.5 + 2.5 = **60**

7. (2)

Sol. 1 20 58 134 286 ___

+19 +38 +76 +152 +304

×2 ×2 ×2 ×2

286 + 304 = **590**

8. (4)

–7 –7

Sol. 68 117 61 124 54 ___

+7 +7

Here two series

124 + 7 = **131**

9. (2)

Sol. 10 5 5 10 40 ___

$\times\frac{1}{2}$ ×1 ×2 ×4 ×8

40 × 8 = **320**

10. (3)

Sol. 8 × 1 – 1 = 7

7 × 2 – 2 = 12

12 × 3 – 3 = **33**

33 × 4 – 4 = 132 – 4 = 128

128 × 5 – 5 = 635

11. (4)

Sol. 16 × 2 + 1 = 33

33 × 2 – 1 = 65

65 × 2 + 1 = 131

131 × 2 – 1 = 261

261 × 2 + 1 = 523

12. (2)

Sol. $1^2 - 1 = 0$

$2^2 + 1 = 5$

$3^2 - 1 = 8$

$4^2 + 1 = 17$

$5^2 - 1 = 24$

$6^2 + 1 = 37$

$7^2 - 1 = 48$

MATHS 4 ALL

13. (2)

Sol. $3 \times 2 - 1 = 5$

$5 \times 2 + 1 = 11$

$11 \times 2 - 1 = 21$

$21 \times 2 + 1 = 43$

$43 \times 2 - 1 = 85$

$85 \times 2 + 1 = 171$

$171 \times 2 - 1 = 341$

$341 \times 2 + 1 = 683$

14. (3)

Sol. $1 \times 1 - 1 = 0$

$2 \times 2 - 1 = 3$

$3 \times 3 - 1 = 8$

$4 \times 4 - 1 = 15$

$5 \times 5 - 1 = 24$

$6 \times 6 - 1 = 35$

$7 \times 7 - 1 = 48$

15. (1)

Sol. $1^2 + 1 = 2$

$2^2 + 1 = 5$

$3^2 + 1 = 10$

$4^2 + 1 = 17$

$5^2 + 1 = 26$

$6^2 + 1 = 37$

$7^2 + 1 = 50$

16. (4)

Sol. $\underline{2}, \underline{3} \times 2 = 6$

$\underline{6}, \underline{7} \times 2 = 14$

$\underline{14}, \underline{15} \times 2 = 30$

$\underline{30}, \underline{31} \times 2 = 62$

$\underline{62}, \underline{63} \times 2 = 126$

126, 127

17. (3)

Sol. $1^3 - 3 = -2$

$2^3 - 3 = 5$

$3^3 - 3 = 24$

$4^3 - 3 = 61$

$5^3 - 3 = 122$

$6^3 - 3 = 213$

18. (2)

Sol. 6, 12, 21, –, 48

6 9 12 15

The pattern is +6, +9, +12, +15

So, the missing term is 21 + 12 = 33

19. (4)

20. (1)

Sol. $1^3 = 1$

$2^3 = 8$

$3^3 = 27$

$4^3 = 64$

$5^3 = 125$

$6^3 = 216$

21. (2)

Sol. 1695 1700 1710 1727 1753 **1790**

5 10 17 26 37

5 7 9 11

1753 + 37 = 1790

22. (1)

Sol. 55 66 187 200 369 386 **675**

11 121 13 169 17 289

11^2 13^2 17^2

386 + 289 = 675

23. (3)

Sol. 2 12 36 80 150 **252**

10 24 44 70 102

14 20 26 32

6 6 6

150 + 102 = 252

24. (2)

Sol. 20 141 310 599 960 1489 **2330**

121 169 289 361 529 841

11^2 13^2 17^2 19^2 23^2 29^2

1489 + 841 = 2330 ($\because$ Squares of prime numbers)

25. (2)

Sol. 0 10 34 78 **148**

10 24 44 70

14 20 26

6 6

78 + 70 = 148

MATHS 4 ALL

26. **(1)** 2311

27. **(4)**

Sol. 24 60 96 132 **168**

36 36 36 36

132 + 36 = 168

28. **(3)**

Sol. 7 6 10 27 104 **515**

×1-1 ×2-2 ×3-3 ×4-4 ×5-5

7 × 1 - 1 = 6, 6 × 2 - 2 = 10,

10 × 3 - 3 = 27, 27 × 4 - 4 = 104,

104 × 5 - 5 = 515

29. **(1)**

Sol. 1 5 15 34 65 **111**

4 10 19 31 46

2^2 3^2+1 4^2+3 5^2+6 6^2+10

65 + 46 = 111

30. **(3)**

Sol. 0 7 26 63 124 **215**

+7 +19 37 61 91

12 18 24 30

6 6 6

124 + 91 = **215**

31. **(2)**

Sol. 2, 3, 5, 7, 11, ?, 17 are prime numbers.

∴ Required number is 13

32. **(3)**

Sol. Prime numbers between 5 and 41

= 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41

∴ Given series is alternate prime number series 5,11, 17, 23, 31, 41

Required number is 23

33. **(3)**

Sol. 7, 13, 21, ?, 43, 57

= 7, 7 + 6, 13 + 8, 21 +10, 31 +12, 43 +14

Required number is 21 + 10 = 31

34. **(1)**

Sol. 3, 15, 35, ?, 99, 143 = 3, 3 + 12,

15 + 20, 35 + 28, 63 + 36, 99 + 44

Required number is 35 + 28 = 63

35. **(4)**

Sol. 2, 1, 2, 4, 4, 5, 6, 7, 8, 8, 10, 11, ...

Required number in the series is 12

36. **(3)** 63

37. **(1)**

Sol. 1, 1, 8, ?, 27, 9, 64

= $1^3, 1^2, 2^3, 2^2, 3^3, 3^2, 4^3$

38. **(1)**

Sol. 2, 2+ 18, 20 + (2 × 18), 56 + (3 × 18),

110 + (4 × 18) = 2, 20, 56, 110, 182

39. **(5)**

Sol. 8 - 3 = 5, 48 - 35 = 13, 120, ?

difference 13 + 8 = 21.

Required number is 120 - 21 = 99

40. **(5)**

Sol. 3 × 1, 3 × 2, 3 × 8, 3 × 10, 3 × 21,

3 × 24, -, 3 × 44 = 3 × 1, 3(1+1), 3 × 8,

3 × (8 + 2), 3 × 21, 3 × (21 + 3), -,

3 × (40 + 44)

Required number is 3 × 40 = 120.

41. **(3)**

Sol. (-7) (-7) (-7)

36, 29, 15, 8

Numbers are decreasing by 7 in the given series.

8.

42. **(1)** 5, 6, 11, 17 28 .....

+ + +

Sol. Addition of first two numbers gives third number

Addition of second & third numbers gives the fourth number

Addition of third & fourth numbers gives the fifth number

28.

43. **(5)** 3 × 2 = 6 + 3, 9 × 2 = 18 + 3

Sol. 21 × 2 = 42 + 3, 45 × 2 = 90 + 3

(×2+3) (×2+3) (×2+3) (×2+3)

3, 9, 21, 45, 93

By multiplying with 2 and adding 3 to the given series.

93.

MATHS 4 ALL

44. **(2)** 4, 12, 36, 108, <u>324</u>
(×3) (×3) (×3) (×3)

Sol. In this series numbers are multiplied by 3

324.

45. **(4)** 243, 81, <u>27</u>, 9, 3
3^5 3^4 3^3 3^2 3^1

Sol. The given series can be written as $3^5, 3^4, 3^3, 3^2, 3^1$

27.

46. **(2)** (–120) (–120) (–120) (–120)
Sol. 583, 463, 343, 223, <u>103</u>

The given series is decreasing by (–120) .....

103.

47. **(5)** (+121) (+121) (+121) (+121)
115, 236, 357, 478, <u>599</u>

The given series is increasing by (+121) .....

599.

48. **(1)** 3, 6, 18, 72, <u>360</u>
(×2) (×3) (×4) (×5)

Sol. In the given series numbers are multiplying by 2, 3, 4, 5 .....

360.

49. **(4)** +10 +20 +30 +40
Sol. 7, 17, 37, 67, <u>107</u>

The given series is increasing by 10, 20, 30, 40 .....

107.

50. **(3)** –45 –35 –25 –15
Sol. 160, 115, 80, 55, <u>40</u>

In the given series numbers are decreasing by 45, 35, 25, 15

40.

51. **(3)** 27
52. **(5)** 3
53. **(2)** 122
54. **(4)** 243
55. **(2)** 12
56. **(1)** 130
57. **(4)** 583
58. **(5)** 240
59. **(3)** 153
60. **(1)** 5
61. **(3)** 65
62. **(4)** 22
63. **(1)** 94
64. **(3)** 11
65. **(4)** 162
66. **(5)** 32
67. **(1)** 85
68. **(2)** 234
69. **(1)** 360
70. **(3)** 312
71. **(2)**

Sol. 4 × 2 = 8; 8 ×2 = 16; 16×2 = 32;
32 × 2 = 64; 64 × 2 = **128**

72. **(4)**

Sol. 5 + 8 (1 × 8) = 13
13 +16 (2 × 8) = 29
29 + 24 (3 × 8) = 53
53 + 32 (4 × 8) = 85
85 + 4 (5 × 8) = 125

73. **(4)**

Sol. $\mathbf{3^2} - 1 = 8$ $\mathbf{5^2} - 1 = 24$
$\mathbf{7^2} - 1 = 48$ $\mathbf{9^2} - 1 = 80$
$\mathbf{11^2} - 1 = 120$

74. **(1)**

Sol. 67 – 11 = **56** **56** – 11 = 45
45 – 11 = 34 **34** – 11 = 23

75. **(3)**

Sol. 84 + **3** = 87 **87** + 4 = 91
91 + **5** = 96 96 + **6** = 102

MATHS 4 ALL

76. **(5)**

Sol. 15 + **3** = 18 18 + **5** = 23

23 + **7** = 30 30 + **9** = 39

77. **(2)**

Sol. 4 × 3 = 12 12 × 3 = 36

36 × 3 = 108 108 × 3 = 324

78. **(4)**

Sol. $\frac{240}{2} = 120$ $\frac{120}{2} = 60$

$\frac{60}{2} = 30$ $\frac{30}{2} = 15$

79. **(1)**

Sol. 897 – 111 = 786; 786 – 111 = 675;
675 – 111 = 564; 564 – 111 = 453.

80. **(3)**

Sol. 97 – 21 = 76; 76 – 21 = 55;

55 – 21 = 34; 34 – 21 = 13.

81. **(3)**

Sol. 37+6 = 43, 43 + 6 = 49,
49 + 6 = **55**

82. **(4)**

Sol. 1 × 4 = 4; 4 × 4 = 16,
16× 4 = **64**; 64 × 4 = 256

83. **(2)**

Sol. Half of 960 = 480, half of 480 is 240, half of 240 = 120.
so half of 120 is **60**.

84. **(4)**

Sol. 3 + 7 = 10, 7 + 10 = 17,
10 + 17 = 27, 17 + 27 = **44**.
(The earler two numbers are added and fresh number is generated)

85. **(3)**

Sol. Every number in the series is made deducting odd number beginning from 1.

27 - 1 = 26, 26 -3 = 23,
23 - 5 = 18.
So 7 is to be deducted to 18.
18 - 7 = **11.**

86. **(2)** 2160

87. **(3)** 87

88. **(2)**

Sol. $3^2 = 9$, $5^2 = 25$, $7^2 = 49$, $9^2 =$ **81**,
$11^2 = 121$, $13^2 = 169$ .....
The square roots of odd number series.

89. **(5)** 765

90. **(1)** The numbers in the series are generated deducting 33 to the earlier number.
847 - 33 = 814; 814 - 31 = 781;
781 - 33 = 748; 748 - 33 = 715

91. **(4)**

Sol. $\underbrace{8, 11}_{+3}, \underbrace{17}_{+6}, \underbrace{26}_{+9}\ \underbrace{38}_{+12}$

(**Hint :** 3 × 1, 3 × 2, 3 × 3, 3 × 4)

92. **(5)**

Sol. $\underbrace{80}_{-15}, \underbrace{65}_{-15}, \underbrace{50}_{-15}, \underbrace{35}_{-15}, 20$

(Hint : Reducing 15)

93. **(2)**

Sol. $\underbrace{3, 5}_{+2}, \underbrace{9}_{+4}, \underbrace{17}_{+8}\ \underbrace{33}_{+16}$

(**Hint :** 2, 2^2, 2^3, 2^4)

94. **(1)**

Sol. 4, 20, 100, 500, 2500

(Multiplying with 5)

95. **(2)**

Sol. 2, 5, 7, 12, 19, 31
2 + 5 = 7; 5 + 7 = 12;
7 + 12 = 19; 12 + 19 = 31

96. **(3)**

Sol. 3, 6, 18, 72, 360
3 × **2** = 6; 6 × **3** = 18;
18 × 4 = 72; 72 × 5 = 360

97. **(5)**

Sol. 15, 25, 45, 75, 115
15 + **10** = 25; 25 + **20** = 45;
45 + **30** = 75; 75 + 40 = 115

MATHS 4 ALL

98. **(1)**

Sol. 3, 15, 60, 180

$3 \times 5 = 15$; $15 \times \mathbf{4} = 60$;

$60 \times 3 = 180$; $180 \times 2 = 360$

99. **(4)**

Sol. 64, 32, 16, 8, 4

$\frac{64}{2} = 32$; $\frac{32}{2} = 16$;

$\frac{16}{2} = 8$; $\frac{8}{2} = 4$

100. **(3)**

Sol. 3, 12, 21, 30, 39

$3 + \mathbf{9} = 12$; $12 + \mathbf{9} = 21$;

$21 + \mathbf{9} = 30$; $30 + 9 = 39$

101. **(3)**

Sol. 4, 5, 9, 14, 23

$4 + 5 = 9$

$5 + 9 = 14$

$9 + 14 = 23$

102. **(1)**

Sol. 35 27 19 11 3

−8 −8 −8 −8

103. **(3)**

Sol. 2 3 5 8 13 21

$2 + 3 \rightarrow 5$

$3 + 5 \rightarrow 8$

$5 + 8 \rightarrow 13$

$8 + 13 \rightarrow 21$

104. **(2)**

Sol. 3 15 75 375 1875

× 5 × 5 × 5 × 5

105. **(2)**

Sol. 2 4 16 96 768

× 2 × 4 × 6 × 8

106. **(1)**

Sol. 7 10 16 25 37

+3 +6 +9 +12

107. **(4)**

Sol. 2^2, 3^2, 4^2, 5^2, 6^2

108. **(5)**

Sol. 8 16 32 64 128

× 2 × 2 × 2 × 2

109. **(3)**

Sol. 2 5 9 14 20 27

+3 +4 +5 +6 +7

110. **(1)**

Sol. 125 80 45 20 5

−45 −35 −25 −15

111. **(2)**

Sol. 2^2, 3^2, 5^2, 7^2, 11^2, 13^2, 17^2, 19^2

All are squares of prime numbers

112. **(3)**

Sol. 7, 10, 8, 11, 9, 12, _

Two series are there

7, 8, 9, 10, ...

10, 11, 12, 13, ...

So, answer is 10

113. **(5)**

Sol. $1 \times 2 + 1 = 3$ series

$3 \times 2 + 1 = 7$

$7 \times 2 + 1 = 15$

$15 \times 2 + 1 = 31$

$31 \times 2 + 1 = 63$

$63 \times 2 + 1 = 127$

114. **(2)**

Sol. 14, 28, 20, 40, 32, 64, ___

×2 −8 ×2 −8 ×2 −8

$64 - 8 = 56$

115. **(1)**

Sol. 101, 98, 93, 86, 75, ___

−3 −5 −7 −11 −13

(Subtraction of prime numbers)

$= 75 - 13 = 62$

MATHS 4 ALL

116. **(1)**

Sol. The pattern is

$4 = 1 \times 2^2$

$18 = 2 \times 3^2$

$\boxed{48 = 3 \times 4^2} \longrightarrow$ Answer

$100 = 4 \times 5^2$

$180 = 5 \times 6^2$ and so on .....

117. **(3)**

Sol.

1,	2,	6,	15,	31,	—
+1	+4	+9	+16	+25	
1^2	2^2	3^2	4^2	5^2	

31 + 25 = 56

118. **(4)**

Sol.

6	12	20	30	42	56	—
+6	+8	+10	+12	+14	+16	

56 + 16 = 72

119. **(5)**

Sol.

6	6	12	36	144	720	—
×1	×2	×3	×4	×5	×6	

720 × 6 = 4320

120. **(4)**

Sol.

5	7	11	17	25	35	—
+2	+4	+6	+8	+10	+12	

35 + 12 = 47

MATHS 4 ALL

6. DOT SITUATION

Directions :

Questions : *From amongst the figures marked (1), (2), (3), (4); select the figure, which satisfies the same conditions of placement of the dots as in figure X.*

1.

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

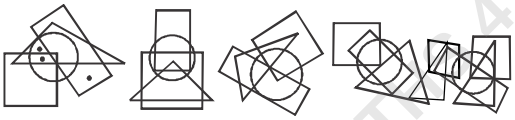
2.

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

3.



(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

4.

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

5.

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

6.

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

7.

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

8.

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

9.

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

10.

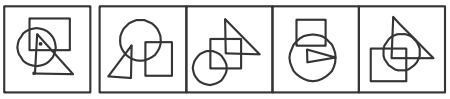
(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

MATHS 4 ALL

11.



(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

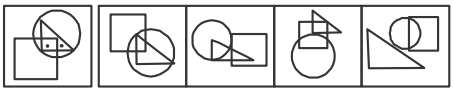
12.

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

13.



(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

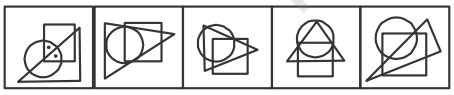
14.

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

15.



(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

16.

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

17.

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

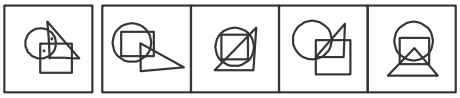
18.

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

19.

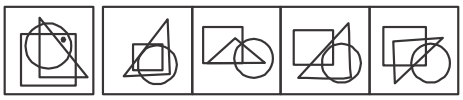


(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

20.



(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

MATHS 4 ALL

KEY

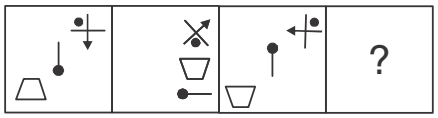
1. 4	**2.** 3	**3.** 2	**4.** 2	**5.** 3	**6.** 1	**7.** 4	**8.** 3	**9.** 1	**10.** 2
11. 4	**12.** 3	**13.** 1	**14.** 3	**15.** 4	**16.** 1	**17.** 4	**18.** 1	**19.** 2	**20.** 4

7. ANALOGY

Directions :

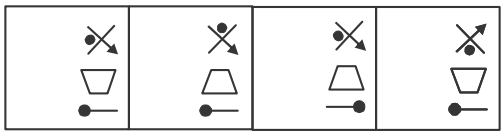
In each of the following questions , the second figure in the first unit of the problem figure bears a certain relationship to the first figure. Similarly one of the answer figure bears the same relationship of the first figure of the second unit of the problem figure. You have to therefore locate the figure, which would fit the question mark.

1. Problem Figures ( )



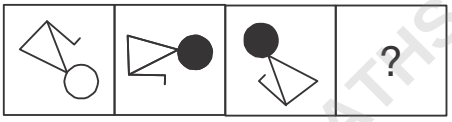
(A) (B) (C) (D)

Answer figures



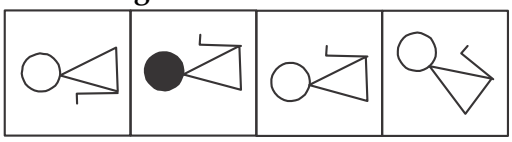
(1) (2) (3) (4)

2. Problem Figures ( )



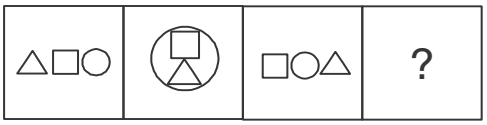
(A) (B) (C) (D)

Answer figures



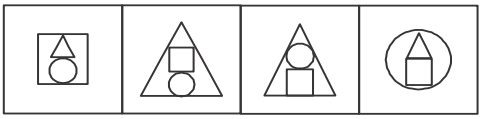
(1) (2) (3) (4)

3. Problem Figures ( )



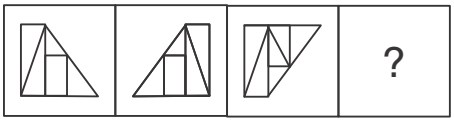
(A) (B) (C) (D)

Answer figures



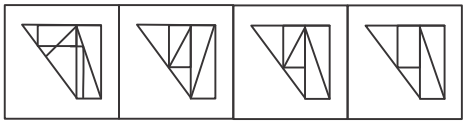
(1) (2) (3) (4)

4. Problem Figures ( )



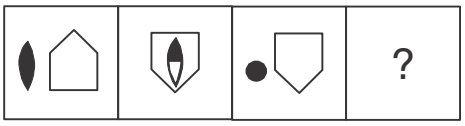
(A) (B) (C) (D)

Answer figures



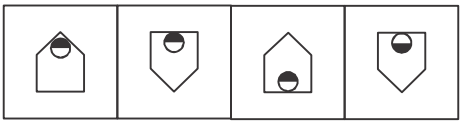
(1) (2) (3) (4)

5. Problem Figures ( )



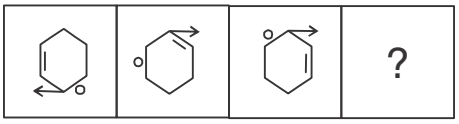
(A) (B) (C) (D)

Answer figures



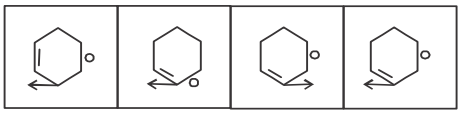
(1) (2) (3) (4)

6. Problem Figures ( )



(A) (B) (C) (D)

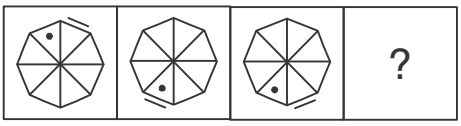
Answer figures



(1) (2) (3) (4)

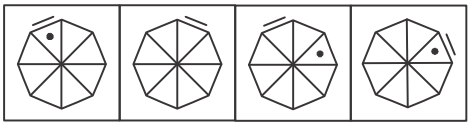
MATHS 4 ALL

7. **Problem Figures** ( )



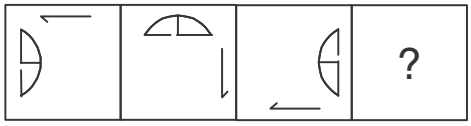
(A) (B) (C) (D)

Answer figures



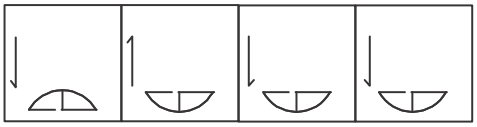
(1) (2) (3) (4)

8. **Problem Figures** ( )



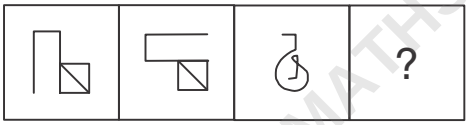
(A) (B) (C) (D)

Answer figures



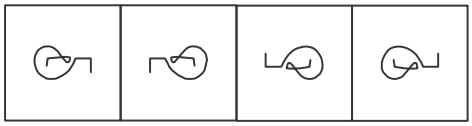
(1) (2) (3) (4)

9. **Problem Figures** ( )



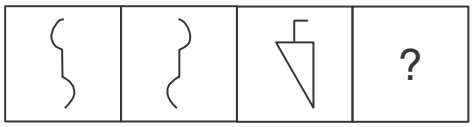
(A) (B) (C) (D)

Answer figures



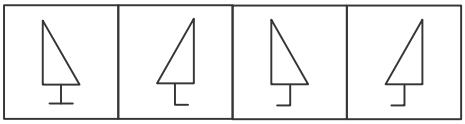
(1) (2) (3) (4)

10. **Problem Figures** ( )



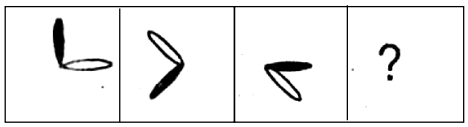
(A) (B) (C) (D)

Answer figures



(1) (2) (3) (4)

11. **Problem Figures** ( )

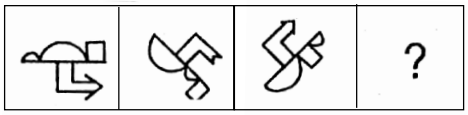


(A) (B) (C) (D)

Answer Figures

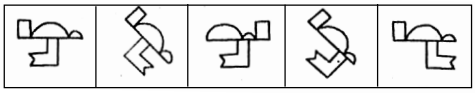
(1) (2) (3) (4) (5)

12. **Problem Figures** ( )



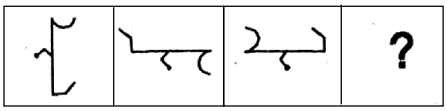
(A) (B) (C) (D)

Answer Figures



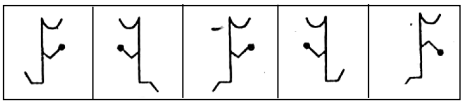
(1) (2) (3) (4) (5)

13. **Problem Figures** ( )



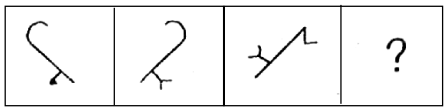
(A) (B) (C) (D)

Answer Figures



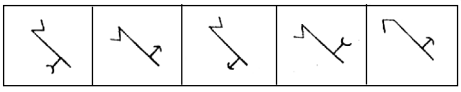
(1) (2) (3) (4) (5)

14. **Problem Figures** ( )



(A) (B) (C) (D)

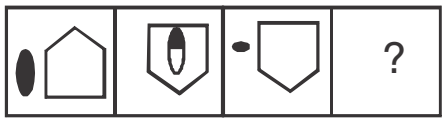
Answer Figures



(1) (2) (3) (4) (5)

MATHS 4 ALL

15. **Problem Figures** ( )

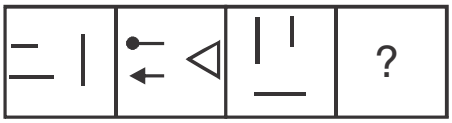


(A) (B) (C) (D)

Answer Figures

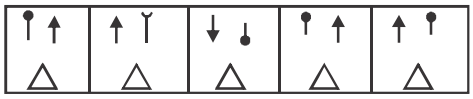
(1) (2) (3) (4) (5)

16. **Problem Figures** ( )



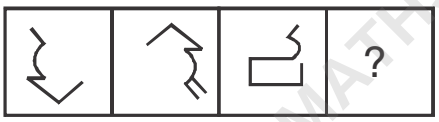
(A) (B) (C) (D)

Answer Figures



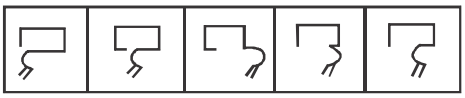
(1) (2) (3) (4) (5)

17. **Problem Figures** ( )



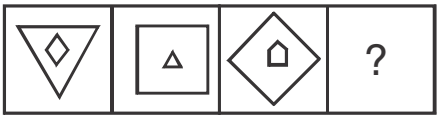
(A) (B) (C) (D)

Answer Figures



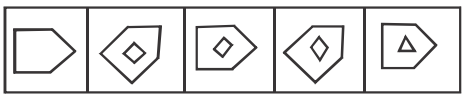
(1) (2) (3) (4) (5)

18. **Problem Figures** ( )



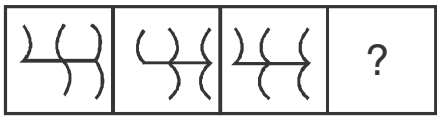
(A) (B) (C) (D)

Answer Figures



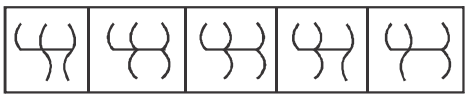
(1) (2) (3) (4) (5)

19. **Problem Figures** ( )



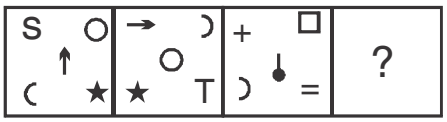
(A) (B) (C) (D)

Answer Figures



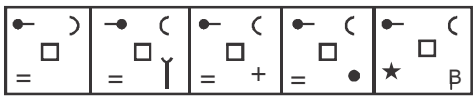
(1) (2) (3) (4) (5)

20. **Problem Figures** ( )



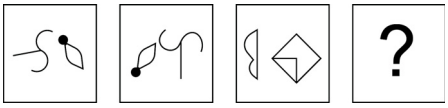
(A) (B) (C) (D)

Answer Figures



(1) (2) (3) (4) (5)

21. **Problem Figures** ( )

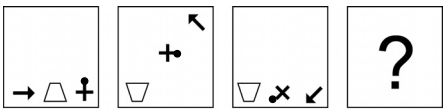


(A) (B) (C) (D)

Answer Figures

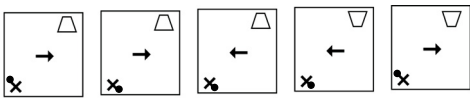
(1) (2) (3) (4) (5)

22. **Problem Figures** ( )



(A) (B) (C) (D)

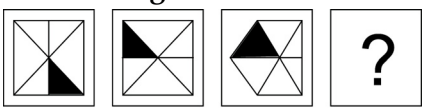
Answer Figures



(1) (2) (3) (4) (5)

MATHS 4 ALL

23. Problem Figures ( )

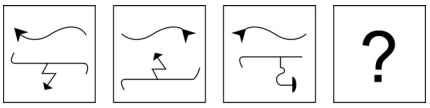


(A) (B) (C) (D)

Answer Figures

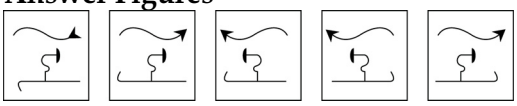
(1) (2) (3) (4) (5)

24. Problem Figures ( )



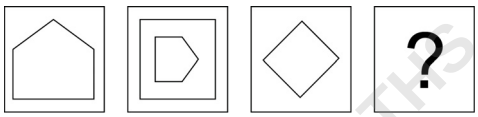
(A) (B) (C) (D)

Answer Figures



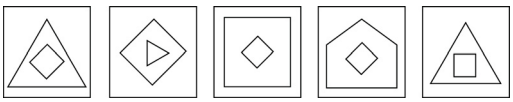
(1) (2) (3) (4) (5)

25. Problem Figures ( )



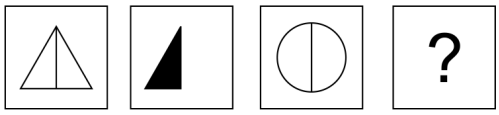
(A) (B) (C) (D)

Answer Figures



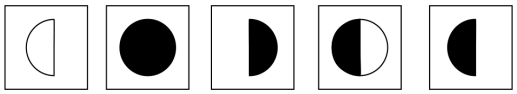
(1) (2) (3) (4) (5)

26. Problem Figures ( )



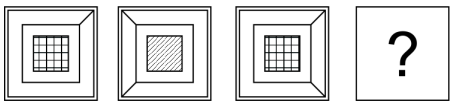
(A) (B) (C) (D)

Answer Figures



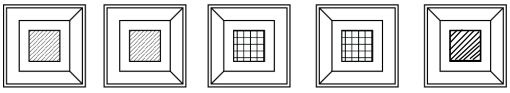
(1) (2) (3) (4) (5)

27. Problem Figures ( )



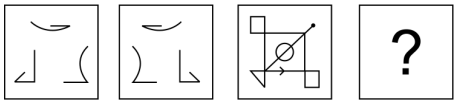
(A) (B) (C) (D)

Answer Figures



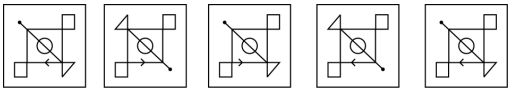
(1) (2) (3) (4) (5)

28. Problem Figures ( )



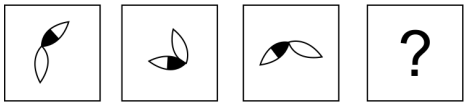
(A) (B) (C) (D)

Answer Figures



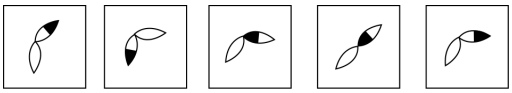
(1) (2) (3) (4) (5)

29. Problem Figures ( )



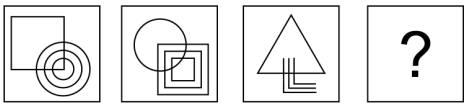
(A) (B) (C) (D)

Answer Figures



(1) (2) (3) (4) (5)

30. Problem Figures ( )



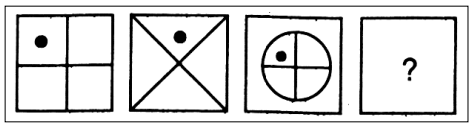
(A) (B) (C) (D)

Answer Figures

(1) (2) (3) (4) (5)

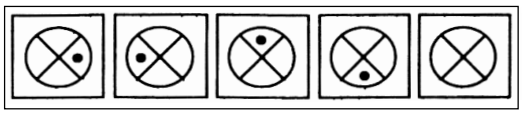
MATHS 4 ALL

31. **Problem Figures** ( )



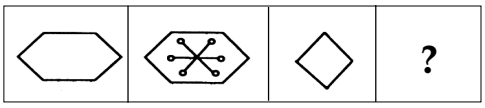
(A) (B) (C) (D)

Answer Figures



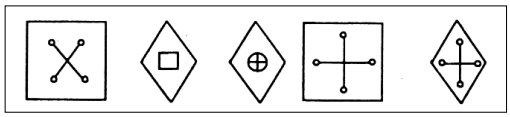
(1) (2) (3) (4) (5)

32. **Problem Figures** ( )



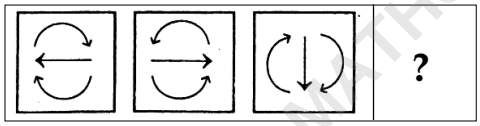
(A) (B) (C) (D)

Answer Figures



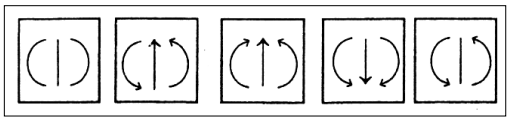
(1) (2) (3) (4) (5)

33. **Problem Figures** ( )



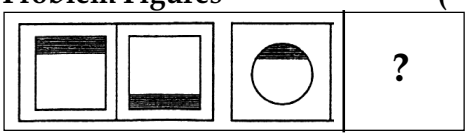
(A) (B) (C) (D)

Answer Figures



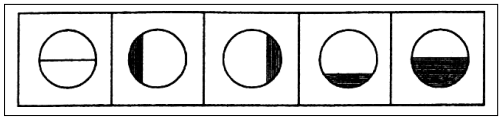
(1) (2) (3) (4) (5)

34. **Problem Figures** ( )



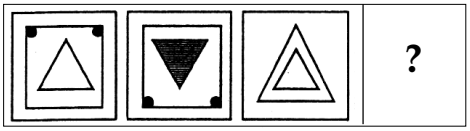
(A) (B) (C) (D)

Answer Figures



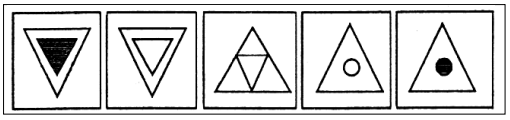
(1) (2) (3) (4) (5)

35. **Problem Figures** ( )



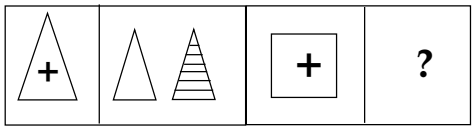
(A) (B) (C) (D)

Answer Figures



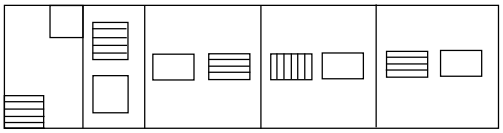
(1) (2) (3) (4) (5)

36. **Problem Figures** ( )



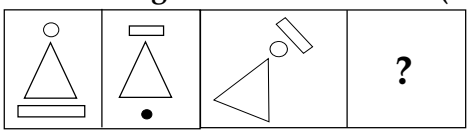
(A) (B) (C) (D)

Answer Figures



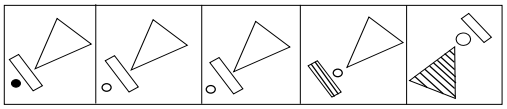
(1) (2) (3) (4) (5)

37. **Problem Figures** ( )



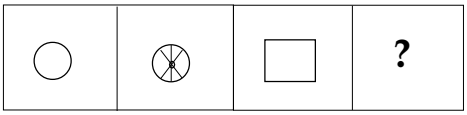
(A) (B) (C) (D)

Answer Figures



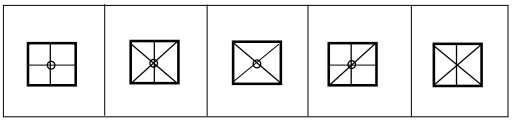
(1) (2) (3) (4) (5)

38. **Problem Figures** ( )



(A) (B) (C) (D)

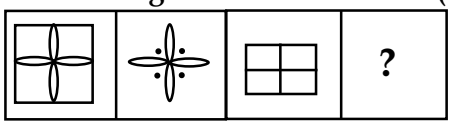
Answer Figures



(1) (2) (3) (4) (5)

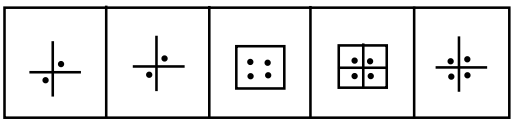
MATHS 4 ALL

39. Problem Figures ( )



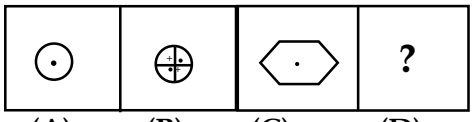
(A) (B) (C) (D)

Answer Figures



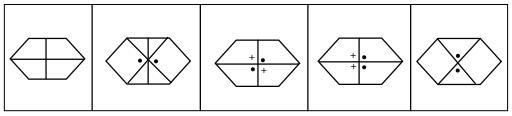
(1) (2) (3) (4) (5)

40. Problem Figures ( )



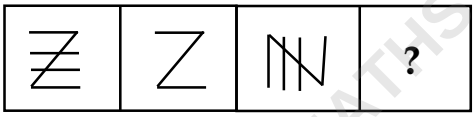
(A) (B) (C) (D)

Answer Figures



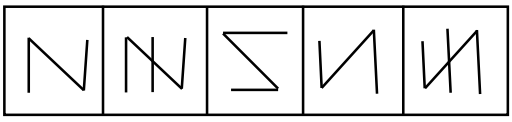
(1) (2) (3) (4) (5)

41. Problem Figures ( )



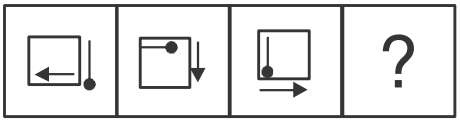
(A) (B) (C) (D)

Answer Figures



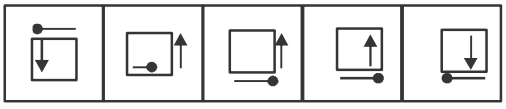
(1) (2) (3) (4) (5)

42. Problem Figures ( )



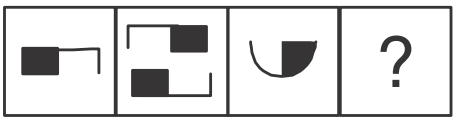
(A) (B) (C) (D)

Answer Figures



(1) (2) (3) (4) (5)

43. Problem Figures ( )

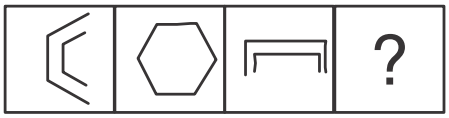


(A) (B) (C) (D)

Answer Figures

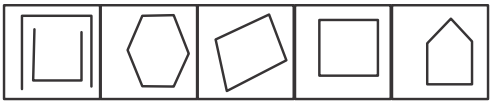
(1) (2) (3) (4) (5)

44. Problem Figures ( )



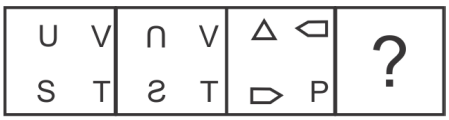
(A) (B) (C) (D)

Answer Figures



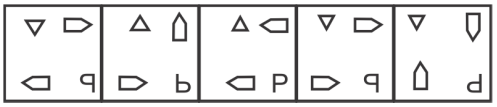
(1) (2) (3) (4) (5)

45. Problem Figures ( )



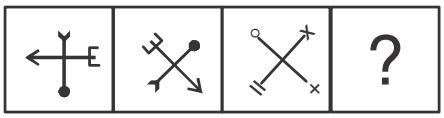
(A) (B) (C) (D)

Answer Figures



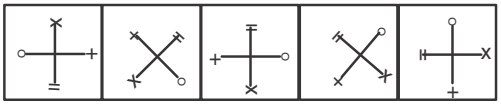
(1) (2) (3) (4) (5)

46. Problem Figures ( )



(A) (B) (C) (D)

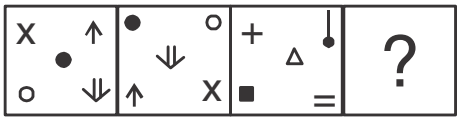
Answer Figures



(1) (2) (3) (4) (5)

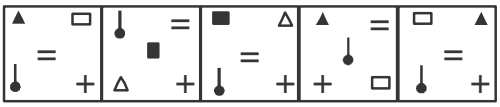
MATHS 4 ALL

47. Problem Figures ( )



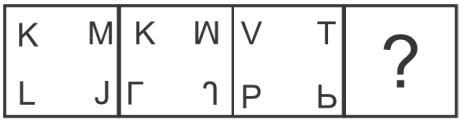
(A) (B) (C) (D)

Answer Figures



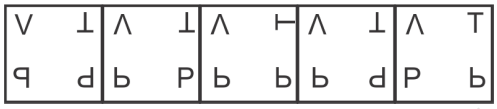
(1) (2) (3) (4) (5)

48. Problem Figures ( )



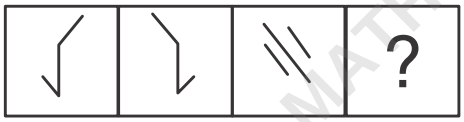
(A) (B) (C) (D)

Answer Figures



(1) (2) (3) (4) (5)

49. Problem Figures ( )

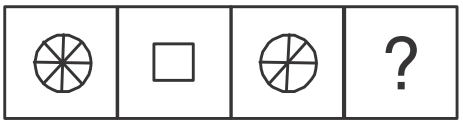


(A) (B) (C) (D)

Answer Figures

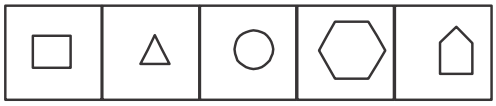
(1) (2) (3) (4) (5)

50. Problem Figures ( )



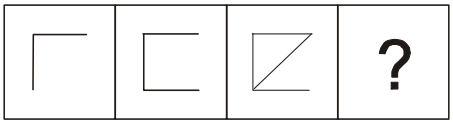
(A) (B) (C) (D)

Answer Figures



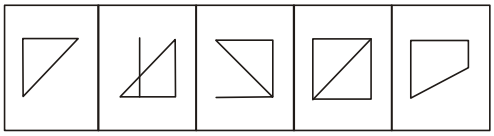
(1) (2) (3) (4) (5)

51. Problem Figures ( )



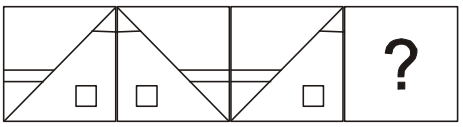
(A) (B) (C) (D)

Answer Figures



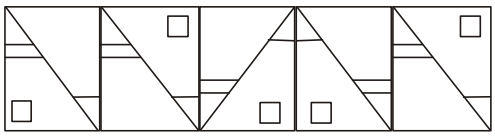
(1) (2) (3) (4) (5)

52. Problem Figures ( )



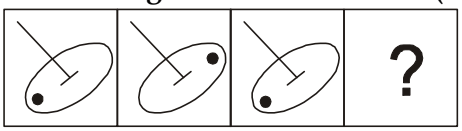
(A) (B) (C) (D)

Answer Figures



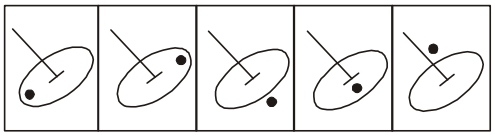
(1) (2) (3) (4) (5)

53. Problem Figures ( )



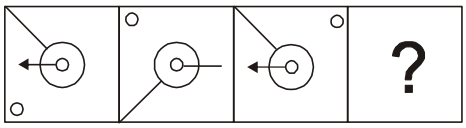
(A) (B) (C) (D)

Answer Figures



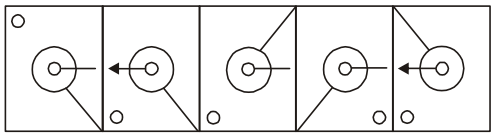
(1) (2) (3) (4) (5)

54. Problem Figures ( )



(A) (B) (C) (D)

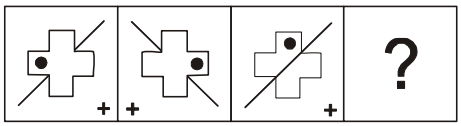
Answer Figures



(1) (2) (3) (4) (5)

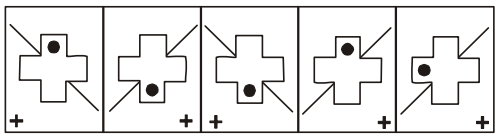
MATHS 4 ALL

55. Problem Figures ( )



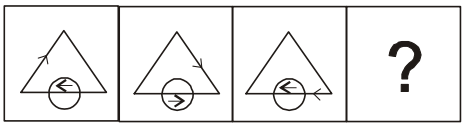
(A) (B) (C) (D)

Answer Figures



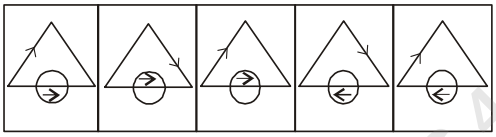
(1) (2) (3) (4) (5)

56. Problem Figures ( )



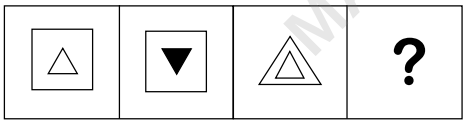
(A) (B) (C) (D)

Answer Figures



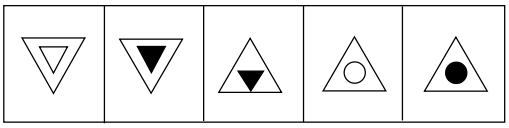
(1) (2) (3) (4) (5)

57. Problem Figures ( )



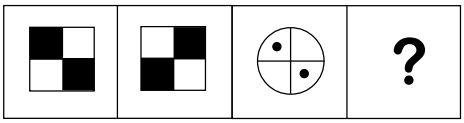
(A) (B) (C) (D)

Answer Figures



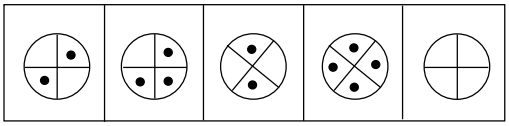
(1) (2) (3) (4) (5)

58. Problem Figures ( )



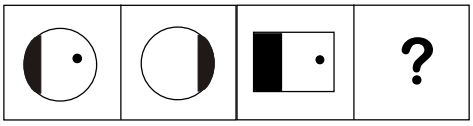
(A) (B) (C) (D)

Answer Figures



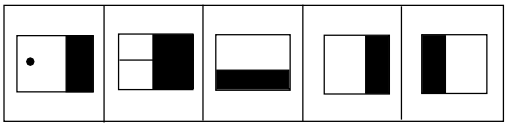
(1) (2) (3) (4) (5)

59. Problem Figures ( )



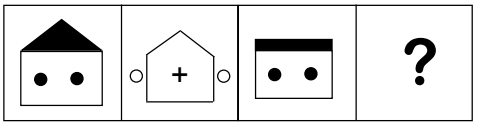
(A) (B) (C) (D)

Answer Figures



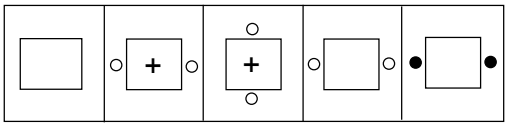
(1) (2) (3) (4) (5)

60. Problem Figures ( )



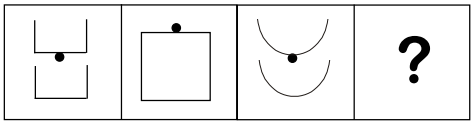
(A) (B) (C) (D)

Answer Figures



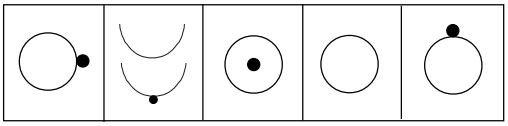
(1) (2) (3) (4) (5)

61. Problem Figures ( )



(A) (B) (C) (D)

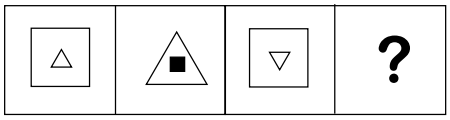
Answer Figures



(1) (2) (3) (4) (5)

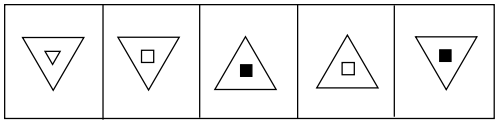
MATHS 4 ALL

62. Problem Figures ( )



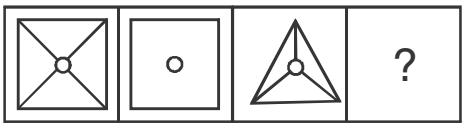
(A) (B) (C) (D)

Answer Figures



(1) (2) (3) (4) (5)

63. Problem Figures ( )

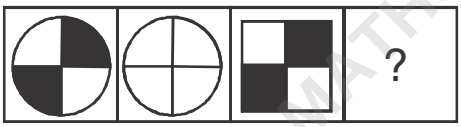


(A) (B) (C) (D)

Answer Figures

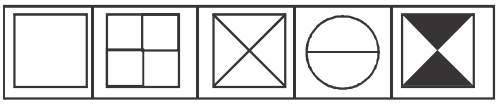
(1) (2) (3) (4) (5)

64. Problem Figures ( )



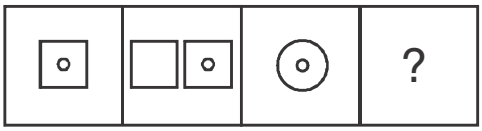
(A) (B) (C) (D)

Answer Figures



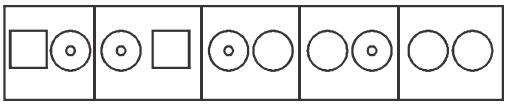
(1) (2) (3) (4) (5)

65. Problem Figures ( )



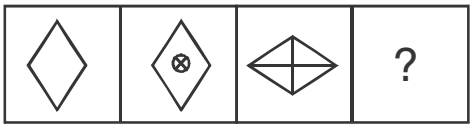
(A) (B) (C) (D)

Answer Figures



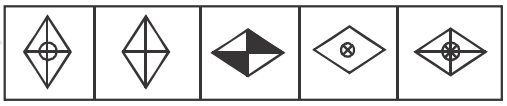
(1) (2) (3) (4) (5)

66. Problem Figures ( )



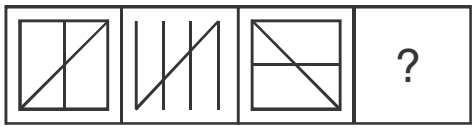
(A) (B) (C) (D)

Answer Figures



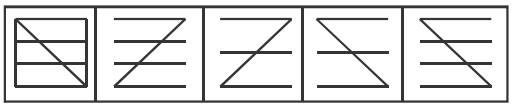
(1) (2) (3) (4) (5)

67. Problem Figures ( )



(A) (B) (C) (D)

Answer Figures



(1) (2) (3) (4) (5)

MATHS4 ALL

WORKED OUT ANSWERS

1. (3)

Sol. Middle figure comes right bottom and turns clockwise. ' ' symbol turns 1½ times anti-clockwise. The remaining figure reverses moving 135° anti clockwise.

2. (3)

Sol. Empty circle changes to shaded circle. In the same way, shaded circle should change to empty circle in the answer figure and triangle moves anti-clockwise.

3. (3)

Sol. Third figure, that is on right side, changes to big one, the remaining two figures goes to innerside of the big figure.

4. (3)

Sol. The 'B' figure is the mirror image of 'A' figure. Answer figure '3' is the mirror image of problem figure 'C'.

5. (1)

Sol. The pentagon in problem figure 'A' changed upward to downward and the wick went inside the pentagon changing half to white in problem figure 'B'. If the same changes take place in problem figure 'C', answer figure '1' will be an accurate figure.

6. (4)

Sol. The arrow on the bottom of hexagon moved clockwise upwards. The line inside the hexagon moved clockwise 2 steps ahead. The small circle outside the hexagon also moved clockwise two steps. These are the changes in the problem figure 'B' compared to 'A'. If the same changes take place in 'C', the answer figure '4' is correct answer.

7. (3)

Sol. If we look at the changes in the problem figure 'B' compared to 'A', the dot inside octagone (8 sides) moved 5 steps clockwise and the line outside the octagone 4 steps clockwise. If the same changes take place in problem figure 'C', answer figure '3' correctly satisfies the question box and best fits.

8. (4)

Sol. In problem figures A, B, C, the moved clockwise. One side each time reversing its position. The also moved anti clockwise and reversed its head every time. If the same changes take place, answer figure '4' fits the question box correctly.

9. (3)

Sol. There are two figures in 'A'. They are and . The moved clockwise and it should be like . But, it changed its shape and appeared like . Thus, if 'C' figure moves clockwise changes oppositely, answer figure '3' takes place in '?' box.

10. (2)

Sol. Problem figure 'B' is opposite to 'A'. So if 'C' changes opposite to its place, it will be like . But this is not in given answer figures. If we take water image, the figure will be like . This is in answer figure (2). Hence it is to be taken as answer.

11. 1

12. 5

13. 4

14. 3

15. 1

16. 5

17. 1

18. 4

19. 5

20. 4

21. (3)

Sol. From figure 'C' to 'D'.

should move 2 spaces in clockwise direction.

should also move in clockwise direction.

Note : The changes that occurred from 'A' to 'B' should also occur from 'C' to 'D'.

MATHS 4 ALL

22. **(1)**

Sol. The changes from 'A' to 'B' are explained like this.

_____ ⁄ moving like this and shifting places. Following this the same changes occur from 'C' to 'D' like → .

23. **(2)**

Sol. Should observe shaded part.

24. **(2)**

Sol. The total figure is shifting from left to right & up and down.

25. **(1)**

Sol. In figure 'A' the 5 sided is rotating in clockwise direction in figure 'B'. And the 5 -1 = 4 sided square comes around it . Similarly from figure 'C' rotating in clockwise direction, 4 - 1 = 3 sided triangle is found encircling the diamond, in option (1).

26. **(5)**

Sol. The half position of right side is deleted and the shade comes on to left side.

27. **(5)**

Sol. From 'A' to 'B' one line is added. Similarly there are 2 lines in 'C' and one more line is added in 'D'. i.e., option (5)

28. **(1)**

Sol. Anticlockwise rotation

29. **(3)**

Sol. Empty petal is moving in anticlockwise direction with $2\frac{1}{2}$ spaces.

Shaded petal is also moving in anticlockwise direction with $1\frac{1}{2}$ spaces.

30. **(1)**

Sol. From A to B the square and circle are interchanging their positions. So the positions of △ and ⌊ are reversed as in (1).

31. 3

32. 5

33. 2

34. 4

35. 1

36. 3

37. 4

38. 2

39. 5

40. 3

41. 1

42. **(4)**

Inner arrow comes outside & outer dot line comes inside O Based on arrow direction answer is (4.)

43. **(5)**

One figure in to two figures and also turned/moved left to right & the new figure comes up & down basing on the old figure.

44. **(4)**

Completed the figure with the given lines in figure one.

45. **(4)**

First column is with water image second column is with mirror image.

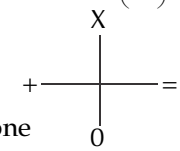
46. **(3)**

Entire figure rotates one and a half. $\left(1\frac{1}{2}\right)$ anticlockwise direction.

Actually answer is

but according to given

choices option (3) is best one



47. **(5)**

Elements changed (observation only), from one place to another place.

option (1) is the best among options.

48. **(2)**

Water images of letters.

49. **(1)**

Turn from left to right lateral inversion

50. **(2)**

In figure (A) - 8 lines are there ; so 8/2 = 4 4 lines are formed as square.

Similarly, 6 - lines are there in circle (inner)

6/2 = 3 lines are formed with triangle.

51. 4

52. 4

53. 2

54. 4

MATHS 4 ALL

55. 3

56. 1

57. **(2)** The problem figure A which is a white triangle got reversed and became a black triangle. If the same change takes place in problem figure C, it gets reversed and becomes black in 'D' block. Answer figure 2 is correct.

58. **(1)** The black square is moving in clockwise direction from A to B. Answer figure 1 correctly suits the problem figure 'D'.

59. **(4)** The dot on the right inner part of the circle in problem figure A disappeared in problem figure B. The black part changed to opposite direction from problem A to problem B. If same changes take place in problem figure 'C', the dot in the square disappears and the black part changes to opposite side to form figure D. Answer figure 4 correctly suits in the problem figure 'D'.

60. **(2)** The inner black circles in problem figure A changed into white circles and were placed out of the square. The upper black triangle became a white triangle and a 'plus' had come in the middle. The same changes have to take place in problem figure 'C'. The upper black part has to become white, a plus has to come in the middle. The inner black circles have go out on opposite directions and become white circles. Ans figure 2 is correct.

61. **(5)**

62. **(5)** The big square in problem figure A has become a small one and black one. The small triangle became big in size. If the same happens in problem figure 'c', small triangle become big and big square becomes small and black.

63. 1

64. 2

65. 4

66. 5

67. 5

MATHS 4 ALL

8. COMPLETING FIGURES

Directions :

Questions : *In these questions a figure (X) is given with three parts and fourth with a ? mark. Find the fourth part from the adjacent figures to complete the figure.*

1. ( )

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 4) 4

2. ( )

(X) (1) (2) (3) (4)

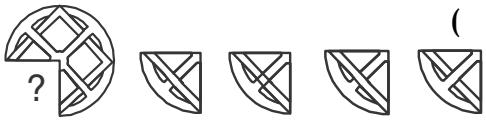
1) 1 2) 2 3) 3 4) 4

3. ( )

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 4) 4

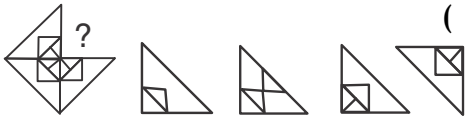
4. ( )



(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 4) 4

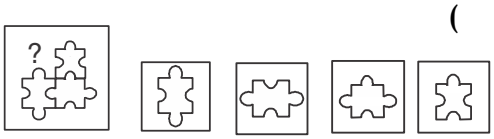
5. ( )



(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 4) 4

6. ( )



(X) (1) (2) (3) (4)

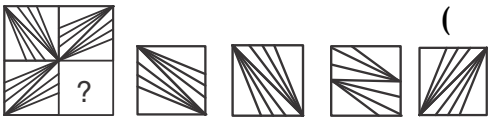
1) 1 2) 2 3) 3 4) 4

7. ( )

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 4) 4

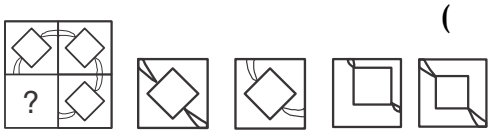
8. ( )



(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 4) 4

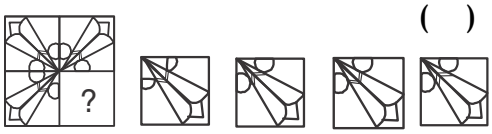
9. ( )



(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 4) 4

10. ( )



(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 4) 4

KEY

1. 3	**4.** 4	**7.** 4
2. 4	**5.** 3	**8.** 2
3. 4	**6.** 2	**9.** 2
		10. 3

MATHS 4 ALL

9. BALANCING EQUATIONS

Directions :

Questions : *In these questions, there are equations that have become wrong due to incorrect order of signs. From the five alternatives given below, find out the correct order of signs, so that the equations become correct.*

1. **5 – 2 + 7 = 17** ( )
1) +, –, = 2) ×, +, = 3) ×, –, =
4) +,=, – 5) –, +, =

2. **20 + 10 ÷ 5 = 10** ( )
1) ×, ÷, = 2) –, +, = 3) ÷, ×, =
4) ÷, +, = 5) =, ×, –

3. **4 × 42 – 7 ÷ 2** ( )
1) =, ÷, – 2) ×, –, ÷ 3) +, =, ×
4) ×, +, – 5) =, ÷, +

4. **25 + 5 = 7 – 10** ( )
1) –, +, = 2) =, –, + 3) +, =, ×
4) –, =, × 5) =, ×, –

5. **22 + 5 – 34 = 2** ( )
1) +, =, – 2) –, =, ÷ 3) =, ×, ÷
4) +, –, = 5) =, +, –

6. **2 = 7 + 72 × 8** ( )
1) ×, –, = 2) –, +, = 3) +, =, ÷
4) ×, =, ÷ 5) =, +, ÷

7. **52 – 13 = 8 + 2** ( )
1) –, +, = 2) =, +, × 3) +, =, ×
4) =, ×, ÷ 5) =, ×, –

8. **51 + 3 = 5 – 12** ( )
1) +, ÷, = 2) ÷, =, + 3) –, =, ×
4) –, +, = 5) =, ×, +

9. **15 – 3 + 4 = 3** ( )
1) =, –, + 2) ×, –, = 3) +, =, ×
4) ÷, =, + 5) =, ×, +

10. **7 + 2 = 4 – 10** ( )
1) +, –, = 2) ×, ÷, = 3) –, =, +
4) ×, –, = 5) ×, ÷, =

11. **36 – 9 × 4 = 8** ( )
1) =, +, ... 2) ×, –, = 3) +, –, =
4) ÷, +, = 5) +, –, ×

12. **2 + 3 × 5 = 1** ( )
1) ×, +, = 2) =, +, – 3) ×, –, =
4) +, –, = 5) +, –, ×

13. **4 + 3 × 5 = 17** ( )
1) ×, +, = 2) –, +, = 3) =, +, –
4) –, ×, = 5) +, –, ×

14. **25 = 5 × 3 + 2** ( )
1) –, +, = 2) ÷, –, = 3) =, +, –
4) ×, –, = 5) +, –, ×

15. **17 = 7 – 2 × 3** ( )
1) +, –, = 2) –, ×, = 3) =, ×, +
4) –, =, + 5) +, –, ×

16. **32 = 21 + 4 – 15** ( )
1) –, ×, = 2) +, –, = 3) =, ÷, +
4) –, +, = 5) +, –, ×

17. **15 × 5 – 4 = 12** ( )
1) ÷, ×, = 2) =, ×, – 3) +, –, =
4) ÷, –, = 5) +, –, ×

18. **15 – 3 + 4 = 3** ( )
1) =, –, + 2) –, ÷, = 3) ×, –, =
4) ÷, –, = 5) +, –, ×

19. **6 = 3 + 5 – 8** ( )
1) ×, –, = 2) ÷, +, = 3) –, +, =
4) +, –, = 5) +, –, ×

20. **5 = 3 × 7 – 8** ( )
1) =, +, – 2) ×, ÷, = 3) +, –, =
4) ×, –, = 5) +, –, ×

21. **56 = 7 + 2 – 16** ( )
1) +, ×, ÷ 2) –, +, ×
3) ÷, ×, = 4) ÷, –, –

22. **34 × 2 = 17 ÷ 34** ( )
1) –, ×, ÷ 2) +, +, +
3) –, ÷, × 4) ÷, +, =

23. **10 × 5 = 2 ÷ 4** ( )
1) ÷, +, = 2) –, +, ÷
3) ×, –, = 4) =, ×, –

24. **210 ÷ 15 = 15 – 15** ( )
1) +, –, × 2) +, =, ÷
3) –, ×, × 4) =, ×, –

25. **900 = 30 ÷ 2 × 15** ( )
1) ×, =, + 2) ÷, =, ×
3) +, ÷, × 4) =, ×, ×

MATHS 4 ALL

26. **729 = 9 + 9 × 9** ( )

1) +, +, + 2) =, ×, ÷
3) =, ÷, × 4) =, ×, ×

27. **15 ÷ 10 = 2 × 3** ( )

1) ×, ÷, + 2) ×, +, –
3) =, +, + 4) =, ÷, +

28. **64 ÷ 48 = 4 ÷ 4** ( )

1) =, +, × 2) =, –, ×
3) ÷, +, ÷ 4) ×, ÷, ÷

29. **30 = 2 + 9 + 12** ( )

1) =, +, × 2) =, ×, +
3) ÷, ×, – 4) +, ×, ÷

30. **196 ÷ 13 + 13 = 27** ( )

1) =, +, × 2) =, ÷, ×
3) +, ÷, + 4) =, ×, +

WORKED OUT ANSWERS

1. **(2)** ×, +, =
2. **(3)** ÷, ×, =
3. **(1)** =, ÷, –
4. **(5)** =, ×, –
5. **(2)** –, =, ÷
6. **(3)** +, =, ÷
7. **(4)** =, ×, ÷
8. **(2)** ÷, =, +
9. **(5)** =, ×, +
10. **(4)** ×, –, =
11. **(4)** ÷, +, =
12. **(3)** ×, –, =
13. **(1)** ×, +, =
14. **(2)** ÷, –, =
15. **(3)** =, ×, +
16. **(4)** –, +, =
17. **(1)** ÷, ×, =
18. **(2)** –, ÷, =
19. **(3)** –, +, =
20. **(4)** ×, –, =

21. **(3)**

Sol. 56 = 7 + 2 – 16
56 ÷ 7 × 2 = 16
8 × 2 = 16
16 = 16

22. **(4)**

Sol. 34 × 2 = 17 ÷ 34
34 ÷ 2 + 17 = 34
17 + 17 = 34
34 = 34

23. **(1)**

Sol. 10 × 5 = 2 ÷ 4
10 ÷ 5 + 2 = 4
2 + 2 = 4
4 = 4

24. **(4)**

Sol. 210 ÷ 15 = 15 – 15
210 = 15 × 15 – 15
210 = 225 – 15
210 = 210

25. **(2&4)**

Sol.

900 = 30 ÷ 2 × 15	900 = 30 ÷ 2 × 15
900 ÷ 30 = 2 × 15	900 = 30 × 2 × 15
30 = 30	900 = 900

26. **(4)**

Sol. 729 = 9 + 9 × 9
729 = 9 × 9 × 9
729 = 729

27. **(3)**

Sol. 15 ÷ 10 = 2 × 3
↓ ↓ ↓
15 = 10 + 2 + 3
15 = 15

28. **(1)**

Sol. 64 ÷ 48 = 4 ÷ 4
64 = 48 + 4 × 4
64 = 48 + 16
64 = 64

29. **(2)**

Sol. 30 = 2 + 9 + 12
30 = 2 × 9 + 12
30 = 30

30. **(4)**

Sol. 196 ÷ 13 + 13 = 27
196 = 13 × 13 + 27
196 = 169 + 27 ⇒ 196 = 196

MATHS 4 ALL

10. ODD MAN OUT

Directions :

Questions : *In these questions, there are five alternatives among which four alternatives are alike but one is different from others. Find out that different one alternative and indicate your correct response.*

1. 1) 131 2) 151 3) 161 ( )
4) 171 5) 181

2. 1) Three 2) Four 3) Five ( )
4) Six 5) Nine

3. 1) 169 2) 179 3) 135 ( )
4) 149 5) 157

4. 1) Dr. Abdul Kalam ( )
2) Sardar Vallabhbhai Patel
3) Pratibha Patil
4) Dr. Rajendra Prasad
5) Pranab Mukherjee

5. 1) Anxiety 2) Anger 3) Sorrow
4) Joy 5) Feeling ( )

6. 1) Listen 2) Fell 3) Think ( )
4) Sing 5) Hear

7. 1) Eye 2) Ear 3) Nose ( )
4) Tongue 5) Hand

8. 1) A 2) U 3) I ( )
4) Y 5) O

9. 1) Copper 2) Iron 3) Gold ( )
4) Silver 5) Wood

10. 1) Crow 2) Pigeon 3) Bat ( )
4) Bulbul 5) Parrot

11. 1) Malaysia 2) Tunisia 3) Brazil
4) Europe 5) Russia ( )

12. 1) Bidar 2) Nagpur ( )
3) Haryana 4) Jhansi 5) Indore

13. 1) Veena 2) Violin 3) Tabla ( )
4) Guitar 5) Sitar

14. 1) Carrot 2) Brinjal 3) Tomato
4) Drumstick 5) Bitter Gourd ( )

15. 1) Camel 2) Pigeon 3) Cow ( )
4) Dog 5) Goat

16. 1) C.V. Raman ( )
2) M.S. Swaminathan
3) U.R. Rao
4) Jayant V. Narlikar
5) Swami Agnivesh

17. 1) Chemistry 2) Geology 3) Astronomy
4) History 5) Physics ( )

18. 1) Hatred 2) Anger 3) Happiness
4) Sorrow 5) Jealousy ( )

19. 1) Kolkata 2) Bellary 3) Indore ( )
4) Calicut (Kozhikode) 5) Patiala

20. 1) Curd 2) Oil ( )
3) Butter 4) Ghee 5) Milk

21. 1) Lucknow 2) Jaipur ( )
3) Indore 4) Ranchi 5) Shillong

22. 1) Norway 2) Finland ( )
3) Portugal 4) Brazil 5) Belgium

23. 1) Dr. Sarvepalli Radhakrishnan ( )
2) Dr. Rajendra Prasad
3) Sri. V. V. Giri
4) Dr. Zakir Hussain
5) Sardar Vallabhai Patel

24. 1) Potato 2) Peach ( )
3) Papaya 4) Banana 5) Mango

25. 1) Eye 2) Ear 3) Nose ( )
4) Tongue 5) Hand

26. 1) Cauliflower ( )
2) Jasmine 3) Rose 4) Lily
5) Champak

27. 1) Kathakali 2) Bhangra ( )
3) Disco 4) Kathak 5) Kuchipudi

28. 1) Ravindranath Tagore ( )
2) Swami Vivekanand
3) R. K. Narayan
4) Subramania Bharati
5) Munshi Premchand

29. 1) Guitar 2) Sitar 3) Violin ( )
4) Veena 5) Tabla

30. 1) Diamond 2) Sapphire ( )
3) Ruby 4) Silver 5) Jade

MATHS 4 ALL

31. 1) Mango 2) Potato 3) Onion ( )
4) Cabbage 5) Cauliflower

32. 1) Ooty 2) Chennai ( )
3) Bhopal 4) Hyderabad
5) Ahmedabad

33. 1) Tirupati 2) Amristar 3) Kashi ( )
4) Agra 5) Badrinath

34. 1) Guitar 2) Tabla 3) Sitar ( )
4) Veena 5) Dholak

35. 1) E-mail 2) SMS 3) Blog ( )
4) MMS 5) Postal letter

36. 1) Kuchipudi 2) Kathak
3) Salsa 4) Bhangra ( )
5) Bharatanattyam

37. 1) Tubelight 2) Fan 3) Bulb ( )
4) Torch 5) Candle

38. 1) Notebook 2) Textbook 3) Novel ( )
4) Magazine 5) Newspaper

39. 1) Water 2) Juice 3) Milk ( )
4) Sandwich 5) Cool drink

40. 1) Uncle 2) Aunt 3) Mother
4) Niece 5) Nephew ( )

41. 1) France 2) Germany ( )
3) Spain 4) Srilanka 5) Italy

42. 1) Parrot 2) Cat 3) Cow ( )
4) Goat 5) Rat

43. 1) Parrot 2) Duck ( )
3) Sparrow 4) Cuckoo (Koel)
5) Eagle

44. 1) Guitar 2) Violin 3) Flute ( )
4) Sitar 5) Veena

45. 1) Nose 2) Ear 3) Eye ( )
4) Skin 5) Liver

46. 1) Milk 2) Curd 3) Ghee ( )
4) Cream 5) Oil

47. 1) Physics 2) Sociology ( )
3) Economics 4) Philosophy
5) Psychology

48. 1) Tomato 2) Beans ( )
3) Potato 4) Brinjal 5) Cucumber

49. 1) Anger 2) Sorrow ( )
3) Jealousy 4) Joy 5) Hatred

50. 1) Chennai 2) Nagpur ( )
3) Shillong 4) Mumbai 5) Bhopal

51. 1) Curd 2) Butter 3) Oil ( )
4) Cheese 5) Cream

52. 1) Puppy 2) Lamb 3) Larva ( )
4) Hen 5) Cub

53. 1) Scale 2) Temperature ( )
3) Odometer 4) Balance 5) Barometer

54. 1) Window 2) Terrace 3) Roof ( )
4) Door 5) House

55. 1) Tomato 2) Potato 3) Brinjal ( )
4) Lady's finger
5) Bitter gourd

56. 1) Root 2) Flower 3) Tree ( )
4) Bud 5) Stem

57. 1) Gold 2) Pearl 3) Diamond
4) Silver 5) Iron ( )

58. 1) Pyjamas 2) Pantaloon ( )
3) Cloth 4) Coat 5) Shirt

59. 1) Pen 2) Pencil ( )
3) Fountain pen 4) Crayon
5) Eraser

60. 1) Lotus 2) Sunflower ( )
3) Rose 4) Jasmine 5) Marigold

61. 1) Table 2) Chair 3) Almarah
4) Bench 5) Jug ( )

62. 1) India 2) Srilanka 3) Mexico
4) Asia 5) France ( )

63. 1) Mysore 2) Odisa 3) Warangal ( )
4) Nagpur 5) Jodhpur

64. 1) Hand 2) Intestine 3) Elbow ( )
4) Leg 5) Knee

65. 1) Deer 2) Cow 3) Eagle ( )
4) Cat 5) Goat

66. 1) Potato 2) Orange 3) Mango
4) Banana 5) Grape ( )

67. 1) Ravindranath Tagore ( )
2) C.V. Raman
3) Jagadish Chandra Bose
4) Ramanujam 5) Homi J. Bhabha

68. 1) M.L.A. 2) M.P. 3) M.P.P.
4) Sarpanch 5) Collector ( )

MATHS 4 ALL

69. 1) Centimeter 2) Meter 3) Yard ( )
4) Gram 5) Kilogram

70. 1) Voice 2) Height 3) Weight
4) Character 5) Complexion ( )

71. 1) Lucknow 2) Patna ( )
3) Bhopal 4) Jaipur 5) Mysore

72. 1) Sitar 2) Guitar ( )
3) Tanpur 4) Mrudangam
5) Violin

73. 1) Diamond 2) Gold ( )
3) Sapphire 4) Ruby 5) Emerald

74. 1) Spinach 2) Potato ( )
3) Radish 4) Carrot 5) Tomato

75. 1) Grandfather ( )
2) Father-in-law 3) Son
4) Brother 5) Father

76. 1) Rice 2) Wheat ( )
3) Maize 4) Jowar 5) Cotton

77. 1) Pituitary 2) Thyroid ( )
3) Heart 4) Pancreas
5) Adrenal

78. 1) Fertilizer 2) Root ( )
3) Stem 4) Branch 5) Leaf

79. 1) Necklace 2) Belt ( )
3) Ring 4) Bangle 5) Bracelet

80. 1) Snake 2) Chameleon ( )
3) Whale 4) Lizard 5) Crocodile

WORKED OUT ANSWERS

1. (1) 151, 161, 171 & 181 differ from one another by 10 digits successively but option (1) 131 has a difference of 20 with its succeeding number 151.

2. (5) The first four options are ascending with a difference of 1 whereas the last option nine differs from its preceding number by 3 digits.

3. (1) The number 169 have a square root of 13 whereas the remaining options do not have square roots.

4. (2) Sardar Vallabhai Patel was the Home Minister of India. The remaining four were Presidents.

5. (5) Anxiety, anger, sorrow and joy are the different types of feelings.

6. (4) Out of the 5 options, except sing all the four are ordinary activities where as 'Sing' is an art form.

7. (5) Except hand, eye, ear, nose and tongue are sense organs.

8. (4) All are vowels except 'Y' which is a consonant.

9. (5) All are metals except wood.

10. (3) Out of the 5 options bat is a mammal whereas the remaining 4 belong to aves group.

11. (4) Europe is a continent and remaining all are countries.

12. (3) Haryana is a state and remaining all are cities.

13. (3) Veena, Violin, Guitar and Sitar are musical string instruments. Tabla is not a musical string instrument.

14. (1) Carrot is an underground tubor which grows under the soil. It is stored food form of the plant. Remaining all are grown on the top of the soil.

15. (2) Pigeon is a bird and remaining all are animals.

16. (5) Swami Agnivesh is a Hindu religion guru remaining all are Scientists.

17. (4) History is the study of past events. Remaining all are related to science.

18. (3) Happiness is related to joy. Remaining all are related to sadness.

19. (1) Kolkata is a capital city remaining all are not.

20. (2) Curd, Butter, Ghee and Milk are Milk products. Oil is not.

MATHS 4 ALL

21. (3) Indore
22. (4) Brazil
23. (5) Sardar Vallabhai Patel
24. (1) Potato
25. (5) Hand
26. (1) Cauliflower
27. (3) Disco
28. (2) Swami Vivekanand
29. (5) Tabla
30. (4) Silver
31. (1) Mango
32. (1) Ooty
33. (4) Agra
34. (1) Guitar
35. (5) Postal letter
36. (3) Salsa
37. (2) Fan
38. (1) Notebook
39. (3) Milk
40. (3) Mother
41. (4) Except Srilanka, remaining France, Germany, Spain and Italy are in Europe.
42. (1) Parrot is a bird. The remaining all are not birds.
43. (2) Except duck, remaining all are birds.
44. (3) Except flute, remaining all are stringed musical instruments.
45. (5) Liver is an internal organ.
46. (5) Oil is not a produce of milk. Milk, curd, ghee and cream belong to milk group.
47. (1) Except Physics, all other are social sciences and humanity subjects.
48. (5) Cucumber is a creeper where as Tomato, Beans, Potato, Brinjal are Shrubs.
49. (4) Anger, Sorrow, Jealousy and Hatred are the words related to unhappiness. Joy is a word that expresses happiness.
50. (2) Nagpur is not a capital city. Remaining all are capitals of states.
51. (3) curd, butter, cheese, cream are related to milk. Oil is an odd word.
52. (4) Hen
53. (2) Temperature
54. (5) Window, door, terrace, roof are parts of a house. Here 'House' which is a complete identity is an odd word.
56. (3) Root, flower, bud and stem are parts of a tree. Tree which is a complete identity is an odd word.
57. (5) Gold, Diamond, Silver, Iron are metals and minerals available from ground. Pearl is an animal concerned calcium product.
58. (3) Pyjamas, pantaloon, coat, shirt are wearing dresses. Cloth is a finished product, which we don't wear directly. Hence cloth is an odd word.
59. (5) Pen, pencil, fountain pen, crayon are writing materials. Eraser is not a writing material.
60. (1) Lotus is a water plant. Hence it is an odd word.
61. (5) Jug
62. (4) Asia
63. (2) Odisa
64. (2) Intestine
65. (3) Eagle
66. (1) Potato
67. (4) Ramanujam
68. (5) Collector
69. (3) Yard
70. (1) Voice
71. (5) Mysore
72. (4) Mrudangam
73. (1) Diamond
74. (1) Spinach
75. (2) Father-in-law
76. (5) Cotton
77. (3) Heart
78. (1) Fertilizer
79. (2) Belt
80. (2) Chameleon

MATHS 4 ALL

11. COMPLETING THE SQUARE

Directions :

Questions : *Select from the given 5 alternatives when filled into each other would form a complete Square.*

1. ( )

(1) (2) (3) (4) (5)

1) 1, 4, 5 2) 2, 3, 4 3) 1, 3, 4 4) 2, 3, 5

2. ( )

(1) (2) (3) (4) (5)

1) 1, 4, 5 2) 1, 3, 5

3) 2, 3, 5 4) 2, 3, 4

3. ( )

(1) (2) (3) (4) (5)

1) 1, 3, 4 2) 1, 2, 4

3) 2, 3, 4 4) 3, 4, 5

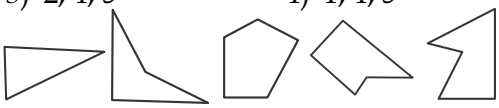
4. ( )

(1) (2) (3) (4) (5)

1) 1, 2, 3 2) 2, 3, 5

3) 2, 4, 5 4) 1, 4, 5

5.

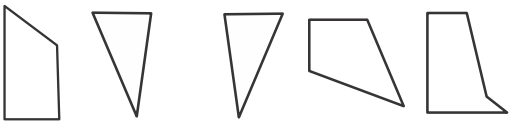


(1) (2) (3) (4) (5)

1) 1, 4, 5 2) 2, 3, 4 ( )

3) 2, 4, 5 4) 1, 3, 5

6.

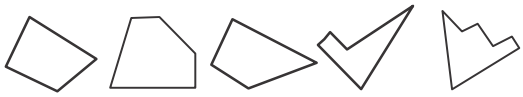


(1) (2) (3) (4) (5)

1) 1, 2, 3 2) 1, 2, 5 ( )

3) 2, 3, 4 4) 2, 4, 5

7.



(1) (2) (3) (4) (5)

1) 1, 2, 4 2) 2, 3, 4 ( )

3) 3, 4, 5 4) 2, 3, 5

8.

(1) (2) (3) (4) (5)

1) 1, 2, 3 2) 1, 2, 4 ( )

3) 1, 2, 5 4) 2, 3, 5

9.

(1) (2) (3) (4) (5)

1) 1, 2, 5 2) 1, 2, 3 ( )

3) 2, 3, 5 4) 2, 3, 4

10.

(1) (2) (3) (4) (5)

1) 1, 2, 3 2) 1, 3, 4 ( )

3) 1, 3, 5 4) 1, 4, 5

Directions :

Questions : *Select a figure from the given 5 alternatives which fits exactly into figure X to form a complete Square.*

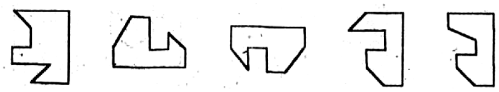
11. ( )

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3

4) 4 5) None

12. ( )



(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3

4) 4 5) None

MATHS 4 ALL

13. ( )

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3

4) 4 5) None

14. ( )

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3

4) 4 5) None

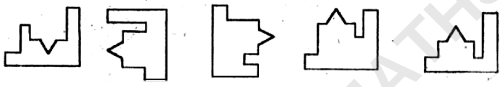
15. ( )

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3

4) 4 5) None

16. ( )

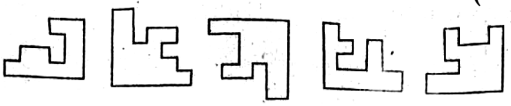


(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3

4) 4 5) None

17. ( )



(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3

4) 4 5) None

18. ( )

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3

4) 4 5) None

19. ( )

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3

4) 4 5) None

20. ( )

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3

4) 4 5) None

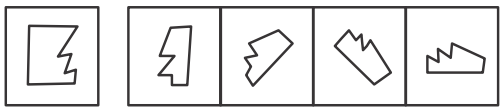
21.

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

22.



(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

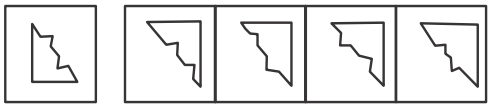
23.

(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

24.



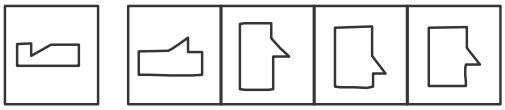
(X) (1) (2) (3) (4)

1) 1 2) 2 3) 3 ( )

4) 4 5) None

MATHS 4 ALL

25.

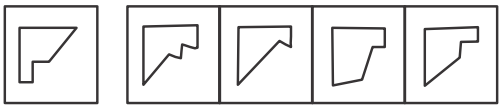


(X) **(1)** **(2)** **(3)** **(4)**

1) 1 2) 2 3) 3 ( )

4) 4 5) None

26.

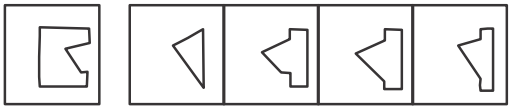


(X) **(1)** **(2)** **(3)** **(4)**

1) 1 2) 2 3) 3 ( )

4) 4 5) None

27.

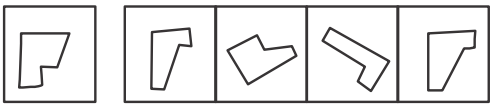


(X) **(1)** **(2)** **(3)** **(4)**

1) 1 2) 2 3) 3 ( )

4) 4 5) None

28.

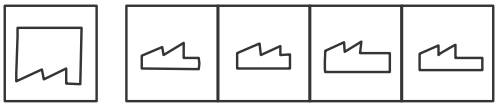


(X) **(1)** **(2)** **(3)** **(4)**

1) 1 2) 2 3) 3 ( )

4) 4 5) None

29.

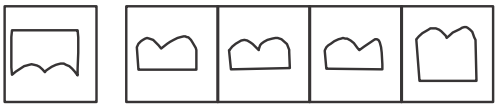


(X) **(1)** **(2)** **(3)** **(4)**

1) 1 2) 2 3) 3 ( )

4) 4 5) None

30.



(X) **(1)** **(2)** **(3)** **(4)**

1) 1 2) 2 3) 3 ( )

4) 4 5) None

MATHS 4 ALL

KEY

1. 2	**2.** 4	**3.** 1	**4.** 3	**5.** 4	**6.** 3	**7.** 2	**8.** 1	**9.** 1	**10.** 2
11. 4	**12.** 3	**13.** 1	**14.** 4	**15.** 4	**16.** 3	**17.** 4	**18.** 4	**19.** 2	**20.** 3
21. 3	**22.** 2	**23.** 1	**24.** 2	**25.** 2	**26.** 2	**27.** 4	**28.** 4	**29.** 1	**30.** 2

12. LETTER SERIES

Directions :

In the following questions, letters/letter groups are arranged in a particular order with some underlying criterion. Study the order and choose the answer from the alternative to fill the gaps. Indicate the right answer as per the 'Instructions'.

1. A, C, F, H, ... ( )
1) I 2) L 3) J
4) K 5) M

2. A, G, L, P ..... ( )
1) R 2) S 3) Q
4) T 5) U

3. AC, EG, IK, ... ( )
1) MN 2) MP 3) LN
4) LO 5) MO

4. AZ, BX, CV, ... ( )
1) DS 2) ET 3) DT
4) DU 5) DW

5. A, E, G, K, ... ( )
1) M 2) L 3) N
4) O 5) J

6. AF, HL, NQ, ... ( )
1) SV 2) SU 3) TU
4) TV 5) ST

7. ZYX, ABC, VUT, EFG, ... ( )
1) PQR 2) RPQ 3) QPO
4) RQP 5) QOP

8. ABC, ZYX, DEF, WVU, ... ( )
1) HIJ 2) IJK 3) GHI
4) UTS 5) HIG

9. Z, X, U, Q, ... ( )
1) K 2) M 3) N
4) J 5) L

10. AFK, BGL, CHM, DIN, ... ( )
1) GJO 2) EJO 3) GJN
4) EJN 5) FIO

11. A, B, D, E, G, ... ( )
1) F 2) I 3) J
4) H 5) C

12. B, G, K, ..., P ( )
1) N 2) O 3) M
4) L 5) H

13. B, E, H, K, N, ... ( )
1) O 2) P 3) Q
4) R 5) M

14. AZ, CX, EV, GT, ... ( )
1) HT 2) HR 3) RI
4) RS 5) IR

15. A, C, G, I, M, O, ... ( )
1) R 2) S 3) T
4) Q 5) P

16. AB, EF, IJ, MN, ... ( )
1) QS 2) RS 3) OP
4) QR 5) PQ

17. Y, WV, SRQ, MLKJ, ... ( )
1) EBCA 2) EDCBA
3) EDCBF 4) FEDCB
5) FECBA

18. IJKL, KLMN, MNOP, ... ( )
1) OPQR 2) OPRS 3) NOPQ
4) NOPR 5) PQRS

19. MEU, NFV, OGW, PHX, ... ( )
1) QHY 2) RIY 3)QIY
4) RHY 5) QIX

20. QRST, OPQR, MNOP, KLMN .....
1) IJLM 2) JKLM 3) HIJK ( )
4) HJKL 5) IJKL

21. A, D, E, H, I, L, ..., ... ( )
1) M, P 2) M, N 3) M, O
4) M, Q 5) N, M

22. CD, HI, MN, ... ( )
1) QS 2) RS 3) OP
4) PQ 5) ST

MATHS 4 ALL

23. A, G, L, P, S, ... ( )
1) X 2) Y 3) W
4) U 5) Z

24. C, F, I, L, O, ... ( )
1) P 2) Q 3) R
4) S 5) D

25. A, I, P, V, A, E, ... ( )
1) F 2) G 3) H
4) I 5) E

26. C, E, I, K, O, Q, ... ( )
1) R 2) S 3) T
4) U 5) V

27. CD, GH, KL, OP, ST, ... ( )
1) RS 2) QR 3) GH
4) WX 5) RN

28. XD, WC, ..., YA ( )
1) XY 2) CD 3) OP
4) WV 5) ZB

29. AI, BJ, CK, ..., ( )
1) LM 2) GH 3) QR
4) SE 5) DL

30. AC, EG, BD, FH, IK, ... ( )
1) LM 2) OP 3) IJ
4) JL 5) JK

31. A, D, G, J, ..., ... ( )
1) N, P 2) N, O 3) M, O
4) M, P 5) O, P

32. A, D, H, M, ..., Z ( )
1) T 2) S 3) R
4) U 5) P

33. Z, X, V, T, ..., ... ( )
1) R, Q 2) S, Q 3) P, Q
4) R, O 5) R, P

34. AZ, BW, CT, DQ, ... ( )
1) AN 2) BN 3) EP
4) EM 5) EN

35. AB, DE, HI, MN, ... ( )
1) ST 2) TU 3) TV
4) RS 5) UV

36. D, FG, IJK, MNOP, ... ( )
1) QRSTU 2) RSTU 3) RSTUV
4) RST 5) STUV

37. ZY, WU, TS, QP ..... ( )
1) ON 2) MN 3) NM
4) OM 5) NO

38. W, UT, RQP, NMLK, ... ( )
1) IHGFE 2) HGFED
3) IHGF 4) JIHGF 5) JIHG

39. ZYX, YXW, XWV, WVU, ... ( )
1) UTS 2) VUT 3) UVT
4) TUV 5) VUS

40. ADF, BEG, CFH, DGI, ... ( )
1) EFG 2) EGI 3) EGJ
4) EHJ 5) EGH

41. A, E, I, M, ..., ... ( )
1) Q,V 2) P, S 3) Q, U
4) P, Q 5) Q, T

42. B, E, I, N, ..., A ( )
1) S 2) R 3) T
4) U 5) Q

43. Z, W, T, Q, N, ..., ... ( )
1) L, I 2) K, H 3) L, J
4) K, G 5) K, I

44. AZ, CX, EV, GT, ... ( )
1) IQ 2) HR 3) IS
4) HS 5) IR

45. BC, FG, JK, ..., RS ( )
1) ON 2) MN 3) OP
4) NO 5) NQ

46. A, CD, GHI, ..., UVWXY ( )
1) MNOP 2) LMNO
3) NOPQ 4) MNO 5) LMN

MATHS 4 ALL

47. DEFG, FGHI, HIJK, ..., LMNO. ( )

1) KLMN 2) JKNO 3) LMNO
4) JKLM 5) JKMN

48. BDF, GIK, LNP, ... ( )

1) QRT 2) RTV 3) QSU
4) RSU 5) QRS

49. ZYVU, TSPO, NMJI, ... ( )

1) HFDB 2) GFHE 3) HGFE
4) HGDC 5) GHDC

50. ACF, ZXU, GIL, ... ( )

1) SPN 2) TRO 3) SQO
4) TQP 5) TRP

51. BCEF, GHJK, LMOP, QRTU, ? ( )

1) VWYZ 2) UWXY
3) WXYZ 4) UVWX
5) VXYW

52. B, G, K, N, ... ( )

1) Q 2) P 3) R
4) O 5) S

53. ZA, XB, VC, TD, ... ( )

1) RA 2) SE 3) SF
4) RE 5) RF

54. AC, DF, GI, JL, ... ( )

1) MN 2) MO 3) MP
4) NP 5) NO

55. Z, XW, UTS, QPON, ... ( )

1) LKJI 2) MLKJIH
3) MLKJI 4) MLKJ 5) LKJIH

56. AB, DF, HK, MQ, ... ( )

1) RW 2) RX 3) SW
4) SX 5) SV

57. ZY, XV, UR, QM, ... ( )

1) LG 2) LI 3) LH
4) KJ 5) KG

58. AFK, BGL, CHM, DIN, ... ( )

1) EJO 2) EKO 3) EOP
4) EJP 5) FIO

59. XWV, WVU, VUT, UTS, ... ( )

1) SRQ 2) TRS 3) TSR
4) TSQ 5) SRT

60. A, CD, GHI, MNOP, ... ( )

1) VWXY 2) VWXYZ 3) UVXYZ
4) UVWX 5) UVWXY

61. A, C, E, G, ?, ? ( )

1) I, K 2) H, I 3) I, J
4) K, M 5) M, N

62. B, D, F, H, ?, ? ( )

1) I, J 2) J, L 3) K, L
4) L, M 5)K, M

63. DE, VW, FG, TU, ? ( )

1) LS 2) IJ 3) JL
4) ST 5) HI

64. AB, EF, IJ, MN ? ( )

1) PQ 2) OP 3) QR
4) RS 5) ST

65. ZX, VT, RP, NL, ? ( )

1) JI 2) KI 3) JH
4) IH 5) IL

66. ACE, BDF, GIK, HJL, ? ( )

1) LNO 2) KMO 3) NPQ
4) MOP 5) MOQ

67. YXW, BCD, UTS, FGH, ? ( )

1) QPO 2) PQR 3) QOM
4) MNO 5) QRS

68. A, CD, FGH, JKLM, ? ( )

1) OPQ 2) LMN 3) OPQRS
4) PQRST 5) NOPQR

69. UVWXY, VWXY, WXY, XY, ? ( )

1) Y 2) XY 3) W
4) YZ 5) V

MATHS 4 ALL

WORKED OUT ANSWERS

1. **(4)** 1 3 6 8 11

A, C, F, H, K.....

+2 +3 +2 +3

K

2. **(2)** 1 7 12 16 19

A, G, L, P S.....

+6 +5 +4 +3

3. **(5)** AC, EG, I K, MO.....

+2 +2 +2 +2

MO

4. **(3)** 1 26 2 24 3 22 4 20

A Z, B X, C V, D T

DT

5. **(1)** +4 +2 +4 +2

A, E, G, K, M.....

M

6. **(2)** 1 6 8 12 14 17 19 21

A F, H L, N Q, S U

+5 +4 +3 +2

SU

7. **(4)** 26 25 24 1 2 3 22 21 20 5 6 7 18 17 16

Z Y X, A B C, V U T, E F G, R Q P.....

X Y Z T U V P Q R

← ← ←

RQP

8. **(3)** 1 2 3 4 5 6 7 8 9

A B C, Z Y X, D E F, W V U, G H I.....

26 25 24 23 22 21

GHI

9. **(5)** 26 24 21 17 12

Z, X, U, Q, L.....

–2 –3 –4 –5

L

10. **(2)** 1 6 11 2 7 12 3 8 13 4 9 14 5 10 15

A F K, B G L, C H M, D I N, E J O

+5 +5 +5 +5 +5 +5 +5 +5 +5 +5

11. **(4)** H

12. **(1)** N

13. **(3)** Q

14. **(5)** IR

15. **(2)** S

16. **(4)** QR

17. **(2)** EDCBA

18. **(1)** OPQR

19. **(3)** QIY

20. **(5)** IJKL

21. **(1)** M, P

22. **(2)** RS

23. **(4)** U

24. **(3)** R

25. **(3)** H

26. **(4)** U

27. **(4)** WX

28. **(5)** ZB

29. **(5)** DL

30. **(4)** JL

31. **(4)** A (B) (C) D (E) (F) G (H) (I) J (K) (L) **M** (N) (O) **P**

32. **(2)** S

33. **(5)** Z (Y) X (W) V (U) T (S) R (Q) P. Every alternative is left out and the alphabet is in the order of Z to P.

34. **(5)** AZ, BW, CT, DQ.

The first letters of the pairs are in the order of Z to A with every two following letters missing.

Z (Y) (X) W (V) (U) T (S) (R) Q (P) (O) N

So EN is the answer.

MATHS 4 ALL

35. **(1)** A B (C) D E (F) (G) H

1 letter missed — 2 letters missed

I (J) (K) (L) M N

3 letters missed

(O) (P) (Q) (R) ST.

4 letters missed

36. **(3)** **D** (E) F G (H) I J K

1 letter — 2 letters — 3 letters

(L) M N O P (Q)

4 letters

R S T U V

5 letters

37. **(3)** Z Y (X) W V (U) T S

(R) Q P (O) **N** **M**

38. **(1)** W (V) U T (S) R Q P

1 letter — 2 letters — 3 letters

(O) N M L K (J)

4 letters

I H G F E

5 letters

39. **(4)** TUV

40. **(4)** A (B) (C) D (E) F ;

B (C) (D) E (F) G,

C (D) (E) F (G) H,

D (E) (F) G (H) I,

E (F) (G) H (I) J

41. **(3)** A, B, C, D, E, F, G, H, I,

I, J, K, L, M, N, O, P, Q, R, S, T, U

Three alphabets are left and the next letter is coming.

42. **(3)** T

43. **(2)** K, H

44. **(5)** The first letter in the series are coming leaving one alphabet in the order from left to right.

A ~~B~~ C ~~D~~ E ~~F~~ G ~~H~~ I

The second letters are coming leaving one alphabet from right to left.

Z ~~Y~~ X W ~~V~~ U ~~T~~ R ~~S~~

IR is the correct order in the series.

45. **(4)** NO

46. **(1)** MNOP

47. **(4)** JKLM

48. **(3)** QSU

49. **(4)** HGDC

50. **(2)** A ~~B~~ C ~~D~~ ~~E~~ F, Z ~~Y~~ X ~~W~~ ~~V~~ U,

G ~~H~~ I ~~J~~ ~~K~~ L, T ~~S~~ R ~~Q~~ ~~P~~ O

51. **(1)** BCEF, GHJK, LMOP, QRTU, VWYZ

~~D~~ ~~I~~ ~~N~~ ~~S~~ X

52. **(2)** **B, ~~C~~, ~~D~~, ~~E~~, ~~F~~** (4) **G, ~~H~~, ~~I~~, ~~J~~** (3)

K, ~~L~~, ~~M~~ (2) **N, ~~O~~, P** (1)

53. **(4)** **a) ZA, XB, VC, TD, E**

b) ZA, XB, VC, TD., R

Z ~~Y~~ X ~~W~~ V ~~U~~ T ~~S~~ R

54. **(2)** **A ~~B~~ C, D ~~E~~ F, G ~~H~~ I, J ~~K~~ L, M ~~N~~ O**

55. **(5)** **Z, XW, UTS, QPON**

Z, ~~Y~~, X, W, ~~V~~, UTS, ~~R~~,

1 2 3

QPON, ~~M~~, L,K,J,I,H, ~~G~~

4 5

56. **(4)** **AB, ~~C~~, D E F ~~G~~, H IJ K, ~~L~~,**

M NOP Q, ~~R~~, S TUVW X

57. **(1)** **ZY, XV, UR, QM**

ZY, X ~~W~~ V, U ~~T~~ ~~S~~ R, Q ~~P~~ ~~O~~ ~~N~~ M,

L ~~K~~ ~~J~~ ~~I~~ ~~H~~ G

MATHS 4 ALL

58. (1) **A B C D E F G H I J K**

B C D E F G H I J K L

C D E F G H I J K L M

D E F G H I J K L M N

E F G H I J K L M N O

59. (3) **X W V, WVU, VUT, UTS, TSR**

60. (5) **A B C D E F G H I J K L M N O**

P Q R S T U V W X Y Z

61. **(1)** ~~B~~ ~~D~~ ~~F~~ ~~H~~ ~~J~~

A C E G I K

(Writing alphabets in odd series)

62. **(2)** ~~C~~ ~~E~~ ~~G~~ ~~I~~ ~~K~~

B D F H J L

(Writing alphabets in odd series)

63. **(5)** DE VW FG TU HI

There is a continuity in the letters of 1st, 3rd and 5th word.

DE FG HI

64. **(3)** AB EF IJ MN QR

~~CD~~ ~~GH~~ ~~KL~~ ~~OP~~

65. **(3)** ZX VT RP NL JH

66. **(5)** ACE BDF GIK HJL MOQ NPR

+1 +1 +1 +1 +1

67. **(1)** YXW BCD UTS FGH

68. **(1)** A CD FGH JKLM OPQRS

~~B~~ ~~E~~ ~~I~~ ~~N~~

69. **(1)** UVWXY, VWXY, WXY, XY,____

~~U~~VWXY, ~~V~~WXY, ~~W~~XY, ~~X~~Y, ~~X~~Y

MATHS 4 ALL

13. LOGICAL VENN DIAGRAMS

Directions :

Questions : *These are based on the following diagrams. Study them carefully and indicate the correct answer as per the 'Instructions'.*

I.

1.
2.
3.
4.
5.

1. Animals, Cows, Horses ( )
2. Doctors, Authors, Women ( )
3. District, Mandal, Village ( )
4. Parrots, Birds, Cats ( )
5. Fish, Tigers, Snakes ( )
6. Flowers, Jasmine, Banana ( )

II.

1.
2.
3.
4.
5.

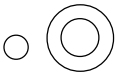
7. Flowers, Jasmine, Birds ( )
8. Year, Months, Days ( )
9. Animals, Tigers, Cows ( )
10. Trees, Animals, Humans ( )
11. Humans, Doctors, Women ( )
12. Food, Fruits, Milk ( )

III.

1.
2.
3.
4.
5.

13. Minutes, Days, Months. ( )
14. Uttar Pradesh, Jhansi, Madhya Pradesh. ( )
15. Women, Teachers, Doctors ( )
16. Criminals, Pick Pocketers, Burglers. ( )
17. Thumsup, Fanta, Soft Drinks ( )
18. Chilli, Salt, Vegetables ( )

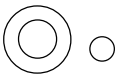
IV.

1.
2.
3. 
4.
5.

19. State, District, Mandal ( )
20. Men, Poets, Teachers ( )
21. Animals, Horses, Trees ( )
22. Cows, Dogs, Camels ( )
23. Fruits, Banana, Apple ( )
24. Fish, Salmon, Shark ( )

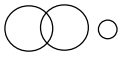
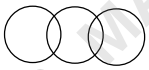
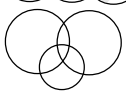
MATHS 4 ALL

V.

1.
2.
3.
4. 
5.

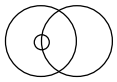
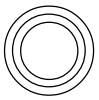
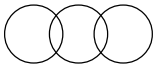
25. Elephants, Wolves, Animals ( )
26. Authors, Teachers, Men ( )
27. School, Benches, Classroom ( )
28. Sparrows, Birds, Mouse ( )
29. Dog, Fish, Parrot ( )
30. Roses, Flowers, Apple ( )

VI.

1. 
2.
3.
4. 
5. 

31. District, Mandal, Village ( )
32. Men, Lawyers, Engineers ( )
33. Women, Doctors, Children ( )
34. Kilometer, Meter, Centimeter ( )
35. Citizens, Educated, Senior Citizens ( )
36. Boys, Players, Singers ( )

VII.

1.
2. 
3. 
4.
5. 

37. Females, Mothers, Doctors. ( )
38. Family, Husband, Wife. ( )
39. Musicians, Men, Women. ( )
40. Potato, Cabbage, Vegetables. ( )
41. Week, Day, Year. ( )
42. Teachers, Human beings. ( )

MATHS 4 ALL

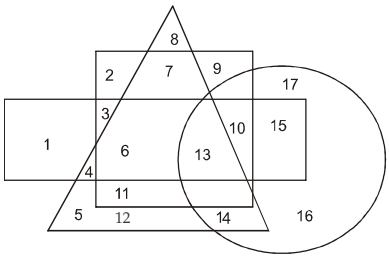
KEY

1. 3	**2.** 1	**3.** 2	**4.** 4	**5.** 5	**6.** 4	**7.** 3	**8.** 1	**9.** 2	**10.** 4
11. 5	**12.** 2	**13.** 1	**14.** 3	**15.** 4	**16.** 5	**17.** 2	**18.** 3	**19.** 2	**20.** 1
21. 3	**22.** 5	**23.** 4	**24.** 5	**25.** 3	**26.** 1	**27.** 2	**28.** 4	**29.** 5	**30.** 4
31. 2	**32.** 4	**33.** 1	**34.** 3	**35.** 4	**36.** 5	**37.** 2	**38.** 1	**39.** 1	**40.** 1
41. 3	**42.** 4								

14. SYLLOGISM

Questions : *In the following questions, Engineers are depicted in rectangle, Doctors in triangle, Farmers in square and Leaders in circle. Therefore have a look on the following figure and indicate your correct alternatives.*

1. How many people are only farmers? ( )



1) 0 2) 1 3) 2
4) 3 5) 4

2. How many Engineers are farmers, but not the doctors and leaders ? ( )
1) 0 2) 1 3) 2
4) 3 5) 4

3. How many Leaders are there, who are also farmers, doctors and engineers? ( )
1) 5 2) 4 3) 3
4) 2 5) 1

4. Over all how many Doctors are there?
1) 6 2) 7 3) 8 ( )
4) 9 5) 10

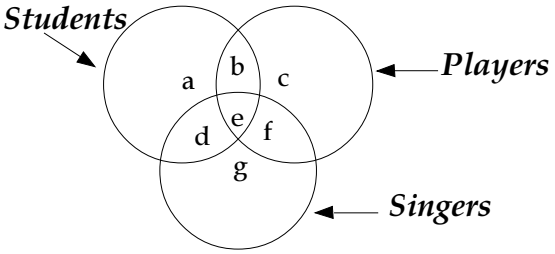
5. How many Engineers are leaders but not the farmers and doctors? ( )
1) 1 2) 3 3) 5
4) 6 5) 7

6. How many Farmers are there, who are also engineers, doctors and leaders ? ( )
1) 1 2) 5 3) 6
4) 4 5) 8

7. How many Engineers are also doctors ?
1) 1 2) 2 3) 3 ( )
4) 4 5) 5

8. Over all how many Leaders are there?
1) 2 2) 3 3) 4 ( )
4) 5 5) 6

Questions : *In these diagrams, some circles are given and questions are asked basing on the circles. Students have to draw inference looking at the questions.*



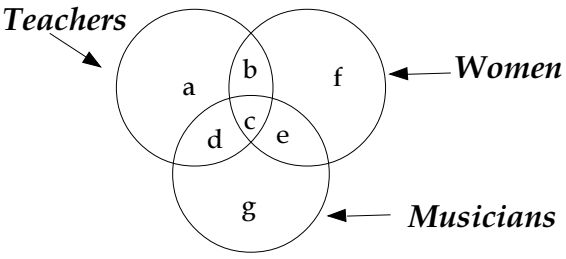
9. Which letter indicates students who are players but not singers .....
1) d 2) c 3) b ( )
4) a 5) e

10. Which letter indicates students who are neither players nor singers ..... ( )
1) a 2) b 3) e 4) d 5) f

11. Which letter indicates those who are both players and singers but not students ? ( )
1) e 2) d 3) b 4) c 5) f

12. Which letter indicates those who are players, singers and also students ?
1) f 2) e 3) b ( )
4) d 5) c

13. Which letter indicates singers who are neither players nor students
1) b 2) d 3) f ( )
4) g 5) e



14. Women teachers who are not musicians ..... ( )
1) a 2) b 3) c
4) e 5) f

MATHS 4 ALL

15. Women who are musicians but not teachers ..... ( )

1) e 2) b 3) g
4) c 5) f

16. Musicians who are also teachers but not women ..... ( )

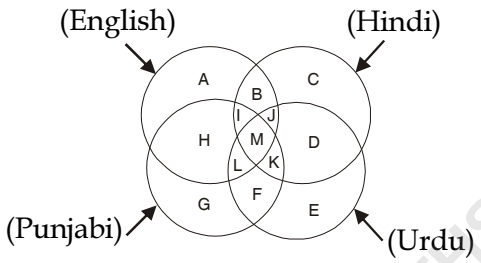
1) b 2) e 3) g
4) c 5) d

17. Women who are both musicians and teachers ..... ( )

1) g 2) f 3) c
4) d 5) e

18. Teachers who are neither musicians nor women ( )

1) b 2) c 3) a
4) d 5) f



19. People who can read and write Hindi, Urdu and Punjabi but not English are represented by... ? ( )

1) A 2) D 3) K
4) E 5) B

20. People who can read and write all the four languages are represented by

1) L 2) J 3) M ( )
4) K 5) B

21. People who can read and write Hindi, English and Punjabi but not Urdu are represented by ( )

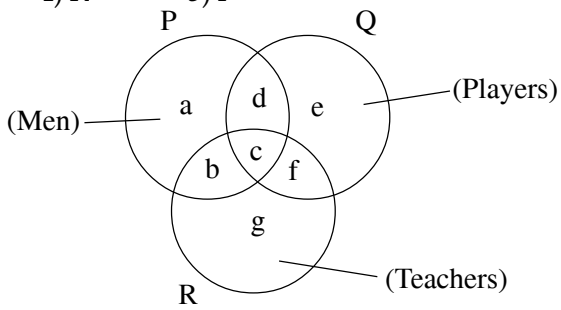
1) K 2) M 3) B
4) I 5) L

22. People who can read and write Urdu but not English, Hindi and Punjabi are represented by... ( )

1) L 2) K 3) C
4) E 5) H

23. People who can read and write Urdu but Punjabi but can read and write English and Hindi are represented by...

1) M 2) B 3) J ( )
4) K 5) F



24. Which letter represents players, who are both teachers and players ? ( )

1) a 2) b 3) d 4) e 5) c

25. Which letter represents men who are players but not teachers ? ( )

1) c 2) d 3) f 4) e 5) b

26. Which letter represents men who are teachers but not players ? ( )

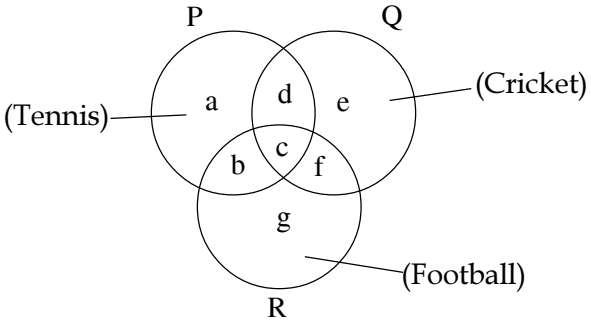
1) b 2) c 3) f 4) g 5) a

27. Which letter represents teachers who are neither players nor men ? ( )

1) b 2) c 3) d 4) g 5) f

28. Which letter represents men who are neither teachers nor players ? ( )

1) b 2) a 3) c 4) e 5) d



29. Which letter represents players, who play both Tennis and Cricket but not Football ( )

1) b 2) f 3) d 4) c 5) g

MATHS 4 ALL

30. Which letter represents players, who play all the three games ? ( )

1) d 2) c 3) f 4) b 5) a

31. Which letter represents players, who neither play Football nor Tennis ? ( )

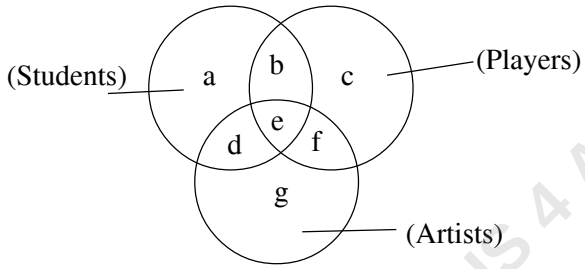
1) g 2) a 3) f 4) e 5) b

32. Which letter represents players, who play only Tennis ? ( )

1) e 2) d 3) g 4) a 5) b

33. Which letter represents players, who play both Football and Cricket but not Tennis ( )

1) f 2) d 3) c 4) b 5) a



34. Which letter represents students, who are players but not artists ? ( )

1) e 2) d 3) c 4) b 5) a

35. Which letter represents artists, who are students but not players ? ( )

1) d 2) e 3) g 4) f 5) b

36. Which letter represents players who are artists but not students ? ( )

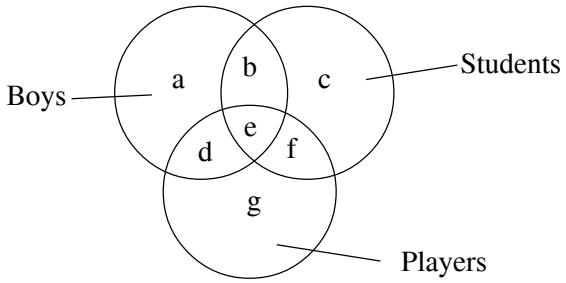
1) c 2) e 3) b 4) f 5) d

37. Which letter represents people, who are students, players and also artists ? ( )

1) b 2) d 3) e 4) f 5) a

38. Which letter represents the artists, who are neither students nor players ? ( )

1) e 2) g 3) d 4) f 5) c



39. Which letter represents boys who are neihter students nor players ? ( )

1) c 2) b 3) a 4) d 5) e

40. Which letter represents boys who are both students & players ? ( )

1) a 2) e 3) g 4) f 5) b

41. Which letter represents students who are boys but not players ? ( )

1) e 2) c 3) d 4) a 5) b

42. Which letter represents players who are boys but not students ? ( )

1) d 2) b 3) c 4) e 5) f

43. Which letter represents students who are neither boys nor players ? ( )

1) b 2) a 3) d 4) c 5) e

MATHS 4 ALL

KEY

1. 3	**2.** 2	**3.** 5	**4.** 4	**5.** 1	**6.** 3	**7.** 2	**8.** 5	**9.** 3	**10.** 1
11. 5	**12.** 2	**13.** 4	**14.** 2	**15.** 1	**16.** 5	**17.** 3	**18.** 3	**19.** 3	**20.** 3
21. 4	**22.** 4	**23.** 2	**24.** 5	**25.** 2	**26.** 1	**27.** 4	**28.** 2	**29.** 3	**30.** 2
31. 4	**32.** 4	**33.** 1	**34.** 4	**35.** 1	**36.** 4	**37.** 3	**38.** 2	**39.** 3	**40.** 2
41. 5	**42.** 1	**43.** 4							

15. LETTER ANALOGY

Directions :

Questions : *These questions involves letter coding, number coding and mixed coding. Each letter in a word is replaced by certain other alphabet number according to a specific rule.*

1. ROMAN : QMONA :: ITALIAN : .... ( )

1) JUBMJBO 2) HSZKHZM
3) HATLIBM 4) HATILNA
5) LATPQRS

2. FORMS : FPTPW :: CONVICT : ..... ( )

1) CPPYMHZ 2) CPOWJDU
3) CPPXKEV 4) CPPYLFW
5) COPJWUD

3. SECOND: ARDBNMC:: FINISH: ..... ( )

1) EHNJRG 2) EHOJSG
3) EHMJTI 4) EHMHRG
5) EMHGRH

4. DONKEY:XDJMNC :: ZEBRA: ..... ( )

1) YDAQZ 2) ZQADY
3) ZDAQB 4) ZQYDA
5) ZYQAD

5. WINNER : ZLQQHU :: LOOSER:. .... ( )

1) MPPTFS 2) MQQUGT
3) OPPUFT 4) ORRVHU
5) ORVRUH

6. SINGAPORE:NISPAGERO::GUJRAT: ( )

1) UGRJTA 2) GURJTA
3) GJURTA 4) JUGTAR
5) TARGUJ

7. RADIO : UCHKT :: AUDIO : ..... ( )

1) CVHKT 2) BWHKT
3) DXHKT 4) DWHKT
5) DKTHW

8. GOLD : SKNV : : SILVER: ..... ( )

1) TJMWFS 2) RHKUDQ
3) LISREV 4) GQNDUH
5) UKDQRH

9. REGARD : TCIYTB :: THANKS : .... ( )

1) UIBOLT 2) SGZMJR
3) VFCLMQ 4) VJCPMU
5) MZJRGS

10. SYSTEM : TAVXJS : : POLICY : .... ( )

1) QPMJDZ 2) QQNKEZ
3) QLOCIE 4) QQOMHE
5) PQMJDZ

11. LXNU : NYPV :: QTBR : ? ( )

1) SDSU 2) RSUD 3) RUSD
4) SRUD 5) SUDS

12. DFHJ : LNPR :: ? : BDFH ( )

1) SVXZ 2) TVXZ 3) UVXZ
4) VXZT 5) TXVZ

13. ACEG : ? :: BDFH : KMOQ ( )

1) NLPR 2) LMNO 3) JLNP
4) JNLO 5) JLON

14. DULC : EVMD :: ? : GXOF ( )

1) FNWE 2) HWNE 3) FUEN
4) FWNE 5) HNWE

15. MRPL : OTRN :: ? : EJID ( )

1) CHGB 2) HGFE 3) GHBF
4) EFGH 5) CHEH

MATHS 4 ALL

Directions :

These are based on letter analogy. There are two pairs of letter combinations in each question. The first (left hand side) pair has some relationship between its members. In the second pair, one member is missing. Find this out from the answers (1), (2), (3), (4) and (5) such that this pair has a similar relationship as the first pair. Indicate your answers as per the 'Instructions'.

16. BD : AE :: HJ : ? ( )

1) FL 2) FK 3) IK
4) GL 5) GK

17. CBA : GFE :: PON : ? ( )

1) TSR 2) TRS 3) SRT
4) RST 5) QRS

18. FH : EG :: NP : ? ( )

1) MN 2) OP 3) MO
4) NO 5) MP

19. TS : PO :: LK ( )

1) GH 2) HG 3) GI
4) HI 5) IJ

20. ABCD : BCEF :: IJKL : ? ( )

1) JKML 2) JKLM 3) IJMN
4) JLMN 5) JKMN

21. AC : EG :: MO : ? ( )

1) RS 2) NP 3) QR
4) QS 5) OP

22. DCB : EFG :: LKJ : ? ( )

1) MON 2) MNO 3) NMO
4) NOP 5) MOP

23. BD : AC :: FH : ? ( )

1) GI 2) GH 3) EH
4) GE 5) EG

24. CBA : DEG :: ? : MNP ( )

1) JKL 2) JLK 3) LKJ
4) LJK 5) KLJ

25. ABDE : FGHI :: RSUV : ? ( )

1) VWXY 2) WXYZ 3) VWXZ
4) UVWX 5) XWYZ

26. ZA : YB :: XC : ? ( )

1) YZ 2) WD 3) NM
4) OP 5) BC

27. AD : BE :: CF : ? ( )

1) DE 2) BC 3) DG
4) FG 5) GD

28. BAC : DEF :: ? : NOP ( )

1) JLK 2) JKL 3) MKL
4) KLM 5) LKM

29. ABCD : STUV :: EFGH : ? ( )

1) UVWX 2)TUVW 3) UVWZ
4) UXWZ 5) WYXZ

30. ACDE : EGHI :: QSTU : ? ( )

1) UWXY 2) UVWX 3) XVWU
4) VXWY 5) WXYZ

31. ABC : EFG : : KLM : ? ( )

1) OPQ 2) NOP 3) PQR
4) LMN 5) ABC

32. AD : GJ : : MP : ? ( )

1) ST 2) TW 3) UW
4) SW 5) SV

33. BCDE : EFGH : : KLMN : ? ( )

1) NOPQ 2) OPQR 3) MNOP
4) PQRS 5) LMOP

34. ZY : VU : : TS : ? ( )

1) OP 2) PN 3) PO
4) PN 5) ON

35. ABCD : ZYXW : : EFGH : ? ( )

1) VUTS 2) UTSR 3) STUV
4) WXYZ 5) WVUT

MATHS 4 ALL

36. DEF : JKL :: OPQ : ? ( )

1) STU 2) TUV 3) VWX

4) XYZ 5) UVW

37. AE : GK :: NR : ? ( )

1) SW 2) SV 3) TX

4) RV 5) TW

38. CDEF : FGHI :: KLMN : ? ( )

1) OPQR 2) NOPQ 3) MNOP

4) NOQP 5) PQRS

39. ZX : TR : JH : ? ( )

1) BC 2) BD 3) DC

4) BA 5) DB

40. ABC : ZYX :: DEF : ? ( )

1) WUT 2) UVT 3) WVU

4) VUT 5) UVW

41. BCD : GHI :: PQR : ? ( )

1) UVW 2) WXY 3) XYZ

4) STU 5) TUV

42. AD : GJ :: MP : ? ( )

1) TU 2) TV 3) SV

4) SU 5) ST

43. BDE : IKL :: NPQ : ? ( )

1) UVW 2) VWX 3) UWY

4) XYZ 5) UWX

44. VU : SR :: PO : ? ( )

1) ML 2) LM 3) MN

4) NM 5) KL

45. ABCD : CDEF :: IJKL : ? ( )

1) LMNP 2) LMNO 3) KLMN

4) JKLM 5) KMNP

46. BC : EF :: HI __? ( )

1) JK 2) KM 3) MN

4) KL 5) LM

47. AD : ZW :: GJ : __? ( )

1) TQ 2) ST 3) QR

4) UT 5) TU

48. BDF : GIK :: LNP : __? ( )

1) STV 2) QST 3) RTV

4) STU 5) QSU

49. DEF : IJK :: NOP : __? ( )

1) UVW 2) STV 3) STU

4) TVW 5) WXY

50. CDEF : UVWX :: GHIJ :__? ( )

1) TSRQ 2) QRST 3) RSTU

4) STUV 5) TUVW

MATHS 4 ALL

WORKED OUT ANSWERS

1. (4) R O M A N
Preceding Letter ↓
Q M O N A

In the same way I TA LI AN
↓
H AT IL NA

2. (1) F O R M S
+1 +2 +3 +4
F P T P W

Similarly

C O N V I C T
+1 +2 +3 +4 +5 +6

Ans. C P P Y M H Z

3. (4) S E C O N D
↑ ↑ ↑ ↑ ↑ ↑
A R D B N M C

R, D, B, N, M & C are preceding letters of S, E, C, O, N & D.(A is given without any purpose.) So the preceding letters of FINISH-

F I N I S H
↑ ↑ ↑ ↑ ↑ ↑
E H M H R G

4. (2) D O N K E Y
X D J M N C

Next Letter of X, D, J, M, N & C come in reverse in the word D O N K E Y.

Like wise

Z E B R A

Ans : Z Q A D Y

5. (4) W I N N E R
Z L Q Q H U

The difference is 2 letters. So

L O O S E R
↓

Ans : O R R V H U

6. (4) SIN GAP ORE
↓ ↓ ↓
NIS PAG ERO Letters are reversed.

So GUJ RAT
↓ ↓
JUG TAR

7. (4) R A D I O
U C H K T

If we observe difference like this

A U D I O
D W H K T

8. (4) G O L D
S K N V

A B C D E F G H I J K L M
Z Y X W V U T S R Q P O N

In the same way, the concerned word for SILVER is GQNDUH

9. (3) R E G A R D
+2 -2 +2 -2 +2 -2
T C I Y T B

So

T H A N K S
+1 -1 +1 -1 +1 -1
V F C L M Q

10. (4) S Y S T E M
+1 +2 +3 +4 +5 +6
T A V X J S

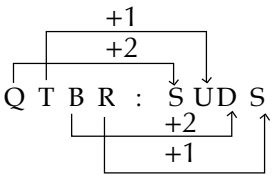
So

P O L I C Y
+1 +2 +3 +4 +5 +6
Q Q O M H E

MATHS 4 ALL

11. **(5)** LXNU : NYPV : : QTBR : ?

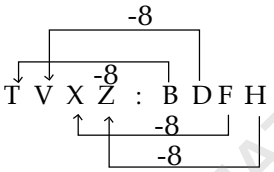
Adding 2 letters to L & N, gives N, P & adding 1 letter to X & U gives Y, V. In the same way



Adding 2 letters to Q & B gives S, D and adding 1 letter to T & R gives U, S. So answer is SUDS

12. **(2)** DFHJ : LNPR : : ? : BDFH

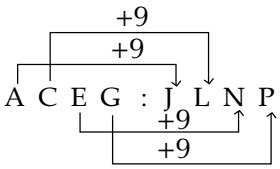
L is the 8th letter after D, N is the 8th letter after F, P is the 8th letter after H and R is the 8th letter after J.



In descending order T is the 8th letter after B, V is the 8th one after D, X is the 8th one after F and Z is the 8th one after H.

13. **(3)** ACEG : ? : : BDFH : KMOQ

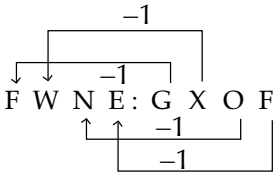
In ascending order KMOQ are the 9th letters from BDFH.



Similarly JLNP are the 9th letters from ACEG.

14. **(4)** DULC : EVMD : : ? : GXOF

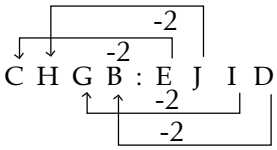
Adding 1 letter to each letter of DULC gives EVMD.



Thus preceding letters of G X O F are F W N E.

15. **(1)** M R P L : O T R N : : ? : E J I D

The alternate letters of each one in MRPL are OTRN.



So in, descending order 2 letters after E, J, I & D are CHGB.

16. **(5)**

2 4 1 5 8 10

B D : A E :: H J : G K

+2 +4 +2

Alphabet before H is G

GK

+4

17. **(1)** CBA : GFE :: PON : TSR

ABC EFG NOP RST

← ← ← ←

TSR

MATHS 4 ALL

18. **(3)** –1 –1

FH : EG :: NP : MO

–1 –1

MO

19. **(2)** TS : PO :: LK HG

ST OP KL GH

← ← ← ←

HG

20. **(5)** +1 +1

+1 +1

ABCD : BCEF :: IJKL : JKMN

+2 +2

+2 +2

JKMN

21. **(4)** QS

22. **(2)** MNO

23. **(5)** EG

24. **(3)** LKJ

25. **(2)** WXYZ

26. **(2)** WD

27. **(3)** DG

28. **(5)** LKM

29. **(5)** WYXZ

30. **(1)** UWXY

31. **(1)** ABC : EFG (Leaving D, all the letters from A to G are present). So KLM : OPQ.

32. **(5)** AD : GJ : : MP : ?

In the letters AD, two letters BC missed. And again two letters EF missed after D. In between GJ, two letters HI missed. After P, QR are to be missed and 'S' has to come. And after S two letters TU are to be missed and V has to come.

Ans : SV.

33. **(1)** BCDE : EFGH : : KLMN : NOPQ

34. **(3)** The alphabet are in the order from Z to A and two letters are missing (Z Y X W V U). Again from TSRQPO, two letters after TS have to miss. T S R Q P O.

PO is the answer.

35. **(1)** ABCD, EFGH are running in regular alphabet order. ZYXW are in Z to A order. So, for EFGH, VUTS have to come.

36. **(5)** JKL is formed leaving three letters (G,H,I) from F in DEF. Three letters from Q in OPQ are RST.

So UVW is correct answer.

37. **(3)** In AE : GK, G is 7th letter begining from A. K is 7th letter beginning from E.

Seventh letter beginning from N is T, X is from R. TX is the answer.

38. 2

39. 5

40. **(3)** If A is given 1, B - two, C - three ZYX are 26th, 25th and 24th letters in the alphabetical order.

ABC : Z Y X

123 : 26 25 24

So for DEF which are 4, 5, 6 letters in the serial of alphabet, 23, 22, 21 letters are answer. They are WVU.

41. **(1)** BCD : GHI : : PQR : **UVW**

EF ST

42. **(3)** AD : GJ : : MP : **SV**

43. **(5)** *Every second letter that comes after the first letter is omitted*

MATHS 4 ALL

44. **(1)** V U ~~T~~ S R ~~Q~~ P O ~~N~~ **M L**

45. **(3)** KLMN

46. **(4)** BC : EF : : HI : KL

~~A~~ ~~D~~ ~~G~~ ~~J~~

47. **(1)** AD : ZW : : GJ : TQ

Opposite pairs group.

48. **(5)** BDF : GIK : : LNP : QSU

+5 +5 +5 +5 +5 +5

49. **(3)** DEF : IJK : : NOP : STU

+5 +5 +5 +5 +5 +5

50. **(2)** CDEF : UVWX : : GHIJ : QRST

Opposite direction series.

MATHS 4 ALL