Answers

1.	(2)	**2.**	(3)	**3.**	(3)	**4.**	(2)	**5.**	(3)	**6.**	(1)	**7.**	(4)	**8.**	(1)	**9.**	(2)	**10.**	(3)
11.	(4)	**12.**	(4)	**13.**	(4)	**14.**	(4)	**15.**	(3)	**16.**	(4)	**17.**	(4)	**18.**	(2)	**19.**	(3)	**20.**	(3)
21.	(3)	**22.**	(4)	**23.**	(2)	**24.**	(3)	**25.**	(3)	**26.**	(1)	**27.**	(4)	**28.**	(2)	**29.**	(4)	**30.**	(1)
31.	(3)	**32.**	(1)	**33.**	(3)	**34.**	(1)	**35.**	(4)	**36.**	(1)	**37.**	(4)	**38.**	(3)	**39.**	(1)	**40.**	(4)
41.	(2)	**42.**	(3)	**43.**	(2)	**44.**	(1)	**45.**	(3)	**46.**	(2)	**47.**	(3)	**48.**	(1)	**49.**	(2)	**50.**	(1)
51.	(3)	**52.**	(3)	**53.**	(2)	**54.**	(1)	**55.**	(2)	**56.**	(4)	**57.**	(3)	**58.**	(2)	**59.**	(1)	**60.**	(1)
61.	(2)	**62.**	(2)	**63.**	(3)	**64.**	(3)	**65.**	(3)	**66.**	(3)	**67.**	(3)	**68.**	(3)	**69.**	(1)	**70.**	(4)
71.	(1)	**72.**	(2)	**73.**	(2)	**74.**	(2)	**75.**	(2)	**76.**	(2)	**77.**	(4)	**78.**	(3)	**79.**	(3)	**80.**	(1)
81.	(2)	**82.**	(3)	**83.**	(4)	**84.**	(1)	**85.**	(1)	**86.**	(2)	**87.**	(4)	**88.**	(3)	**89.**	(2)	**90.**	(1)
91.	(3)	**92.**	(1)	**93.**	(2)	**94.**	(3)	**95.**	(2)	**96.**	(3)	**97.**	(2)	**98.**	(4)	**99.**	(4)	**100.**	(1)

Hints and Solutions

1. Each next figure, design moving in clockwise direction.

2. Each next figure black part is reverse.

3. Each next figure right side and left side one line is add.

4. Each next figure curve lines are convert into straight lines.

5. Inner figure comes to out side and outsider figure come to in side in figure and in the third figure new figure comes in.

6. Figures are moving clockwise 90°.

7. Designs are reversed and new small circle are increased.

8. Each next figure one dot are disappeared and one line increased.

9. Each next figure opposite direction one arrow is increased.

10. The sign is exchanging its place in the group of two.

11. Except (4) all others are same.

12. Except (4) in all three glasses there are drinking thing.

13. Except (4) all others are lighting things.

14. Except (4) all others are related with bird.

15. Except (3) all others are related with man's face.

16. Only option (4) are live in water.

17. Except (4) all others are related with vegetables.

18. Except (2) all others are related with meal.

19. Except (3) all others are related with vegetables.

20. Except (3) in all other figures are made by straight lines.

21. First figure in problem figure is doubled to second figure. Hence, in the third figure doubled to the fourth figure.

22. First figure to the second figure triangle made on the base. Hence, third figure to fourth figure triangle made on the base.

23. In the second figure outer figure come in inside the figure an inner figure comes in out side the figure and spot is horizontal.

24. Second figure is the mirror image of the first figure. Hence, fourth figure is the mirror image of the third figure.

25. Horizontaly one line decrease to the first figure.

26. Moving 180° figure from third to fourth.

27. Fourth figure is made by third figure lines.

28. In problem figure, first figure is moving 90° clockwise to second figure, thus third figure is moving 90° clockwise to fourth figure.

29. In problem figure, first figure is distributed in three parts and two parts are equal to second figure. Hence, the same process is going on third to fourth.

30. First figure squares is convert into circle, hence third figure square is convert into circle.

61. $$\frac{\frac{7}{3}\times\frac{2}{3}\div\frac{3}{5}}{2+1\frac{2}{3}} = \frac{\frac{7}{3}\times\frac{2}{3}\times\frac{5}{3}}{2+\frac{5}{3}} = \frac{\frac{70}{27}}{\frac{11}{3}} = \frac{70\times 3}{27\times 11} = \frac{70}{99}$$

62. $$\text{Other number} = \frac{\text{HCF}\times\text{LCM}}{\text{First number}} = \frac{38\times 98154}{1558} = 2394$$

63. Total money collected
$= ₹\,2304 = 230400$ paise
As number of students
= Money paid by students
$\therefore$ Number of students in school
$= \sqrt{230400} = 480$

64. More marks $= 22 - 18 = 4$
Required percentage $= \frac{4 \times 100}{25} = 16\%$

65. Cost price $= 30 - 10 = ₹\,20$
Percentage profit $= \frac{\text{Profit} \times 100}{\text{Cost price}}$
$= \frac{10 \times 100}{20} = 50\%$

66. Selling price of washing machine
$= ₹\,13489$
Discount allowed = 18%
Let marked price of washing machine be ₹ x.
$\therefore \quad x - \frac{18x}{100} = 13489$
$\Rightarrow \quad \frac{82x}{100} = 13489$
$\Rightarrow \quad x = \frac{13489 \times 100}{82}$
$\therefore \quad = 16450$
$\therefore$ Marked price of washing machine is ₹ 16450.

67. $\because$ Amount = ₹ 24800
Principal = ₹ 20000
$\therefore$ SI = Amount − Principal
$= 24800 - 20000$
$= ₹\,4800$
Rate of interest $= \frac{\text{SI} \times 100}{P \times T}$
$= \frac{4800 \times 100}{20000 \times 2} = 12\%$

68. Let the total journey be x km.
Then, $\frac{x}{3}$ is covered at 25 km/h, $\frac{x}{4}$ is at 30 km/h.
Rest of the distance $= x - \frac{x}{3} - \frac{x}{4}$
$= \frac{12x - 4x - 3x}{12} = \frac{5x}{12}$ at the speed of 50 km/h.
$\therefore$ Total time of journey
$= \frac{x}{75} + \frac{x}{120} + \frac{5x}{12 \times 50}$
$= \frac{18x}{600} = \frac{3x}{100}$ h
Average speed $= \frac{x}{\frac{3x}{100}} = \frac{100}{3} = 33\frac{1}{3}$ km/h

69. $\because$ Empty part of the drum $= 1 - \frac{2}{3} = \frac{1}{3}$
If $\frac{1}{3}$ part requires = 50 L
Then, 1 part requires $= 50 \div \frac{1}{3} = 50 \times 3 = 150$ L

70. Time $= \frac{\text{Distance}}{\text{Speed}} = \frac{350}{75} = \frac{14}{3}$ h $= 4\frac{2}{3}$ h
$= 4$ h 40 min

71. Time of start from Delhi = 9 : 10 am
Reaching time at Chandigarh = 4 : 20 pm
Time from 9 : 10 to 12 : 00 = 2 h 50 min
From 12 : 00 to 4 : 20 = 4 h 20 min
Total time taken = 7 h 10 min

72. Let numbers be $2x$ and $3x$.
Then, $\frac{2x + 9}{3x + 9} = \frac{3}{4}$
$\Rightarrow \quad 4(2x + 9) = 3(3x + 9)$
$\Rightarrow \quad 8x + 36 = 9x + 27$
$\Rightarrow \quad 9x - 8x = 36 - 27$
$\Rightarrow \quad x = 9$
$\therefore$ Numbers are $2 \times 9 = 18$
and $3 \times 9 = 27$

73. Volume of the box $= 3 \times 3 \times 3 = 27$ cu m

74. Side of the square $= \frac{\text{Perimeter}}{4} = \frac{48}{4} = 12$ m
Area of the square = Side × Side
$= 12 \times 12 = 144$ m^2

75. Previous total $= 20 \times 18 = 360$
New case $= 360 - 3 \times 20$
$= 360 - 60 = 300$
$\therefore$ New average $= \frac{300}{20} = 15$