Answers

1	(d)	**2**	(b)	**3**	(d)	**4**	(a)	**5**	(b)	**6**	(b)	**7**	(b)	**8**	(c)	**9**	(a)	**10**	(b)
11	(d)	**12**	(d)	**13**	(b)	**14**	(b)	**15**	(c)	**16**	(c)	**17**	(c)	**18**	(a)	**19**	(c)	**20**	(b)
21	(b)	**22**	(c)	**23**	(d)	**24**	(b)	**25**	(c)	**26**	(a)	**27**	(d)	**28**	(b)	**29**	(b)	**30**	(c)
31	(a)	**32**	(d)	**33**	(d)	**34**	(b)	**35**	(b)	**36**	(b)	**37**	(b)	**38**	(c)	**39**	(d)	**40**	(b)
41	(d)	**42**	(d)	**43**	(d)	**44**	(b)	**45**	(c)	**46**	(c)	**47**	(c)	**48**	(d)	**49**	(d)	**50**	(c)
51	(d)	**52**	(d)	**53**	(d)	**54**	(d)	**55**	(a)	**56**	(c)	**57**	(c)	**58**	(d)	**59**	(a)	**60**	(c)
61	(c)	**62**	(b)	**63**	(b)	**64**	(a)	**65**	(a)	**66**	(c)	**67**	(a)	**68**	(c)	**69**	(b)	**70**	(b)
71	(c)	**72**	(d)	**73**	(a)	**74**	(b)	**75**	(b)	**76**	(b)	**77**	(d)	**78**	(a)	**79**	(a)	**80**	(b)

Hints and Solutions

1. (d) Except option (d), in all the other options, letters 'K', 'I' and 'T' are used but in option (d) letter 'C' is used in place of letter 'T'.

2. (b) Except figure (b), in all the other figures, an angle of 90° is marked within the triangle.

3. (d) Except figure (d), all the other figures are same and can be obtained by rotating the other figure.

4. (a) Except figure (a), in all the other figures, a small line is intersecting the side of the square but in figure (a), the small line is intersecting the diagonal inside the square.

5. (b) Answer figure (b) is exactly the same as the question figure.

Question Figure | Answer Figure (b)

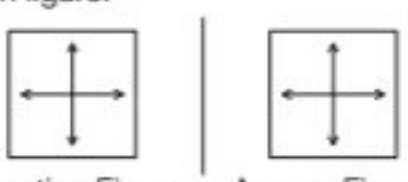
6. (b) Answer figure (b) is exactly the same as the question figure.

Question Figure | Answer Figure (b)

7. (b) Answer figure (b) is exactly the same as the question figure.

Question Figure | Answer Figure (b)

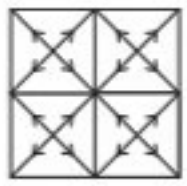
8. (c) Answer figure (c) is exactly the same as the question figure.



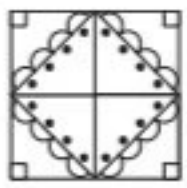
Question Figure | Answer Figure (c)

9. (a) Answer figure (a) will complete the pattern of the question figure.

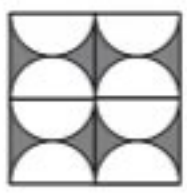
10. (b) Answer figure (b) will complete the pattern of the question figure.



11. (d) Answer figure (d) will complete the pattern of the question figure.



12. (d) Answer figure (d) will complete the pattero of the question figure.



13. (b) In each step, the given figure is rotating 90° in anti-clockwise direction.

Hence, answer figure (b) will complete the given series.

14. (b) In each step all the four designs are moving from one corner to the other in clockwise direction. Also, each design is rotating 90° in clockwise direction. Hence, answer figure (b) will complete the given series.

15. (c) A sign of multiplication (×) and a sign of circle (O) is increasing alternatively. Hence, answer figure (c) will complete the given series.

16. (c) In each step, the main figure is inverted and also a sign of cross (×) is increasing within the main figure. Hence, answer figure (c) will complete the given series.

17. (c) In second figure the design ▦ appeared in all the blocks except the block which is diagonally opposite to the block which has design ▦ in first figure. Following the same pattern from figure third to forth answer figure (c) will replace the question mark.

18. (a) From the first figure to the second, lines meeting all the corners with each other are drawn with in the figure. Similarly, in third figure on drawing the lines from one corner to the others, we get answer figure (a).

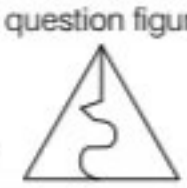
19. (c) The topmost curved line in first figure is inverted in second figure. Similarly, the topmost design (⌐) in third figure will be inverted in four figure as shown in answer figure (c).

20. (b) From first figure to second figure, the lower design within the circle is placed inside the upper design. Similarly, from third figure to fourth the lower designed i.e. circle within the triangle will be placed inside the upper design i.e. square as shown in answer figure (b).

21. (b) Answer figure (b) will complete the incomplete square given in question figure.

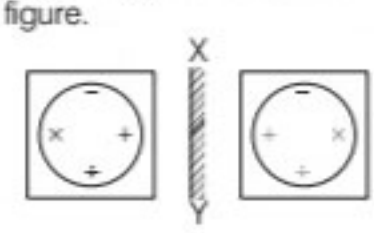
22. (c) Answer figure (c) will complete the incomplete square given in question figure.

23. (d) Answer figure (d) will complete the incomplete triangle given in question figure.

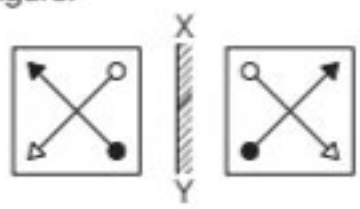


24. (b) Answer figure (b) will complete the incomplete circle given in question figure.

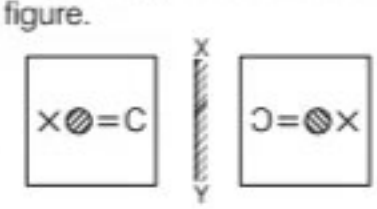
25. (c) Answer figure (c) is the correct mirror image of the question figure.



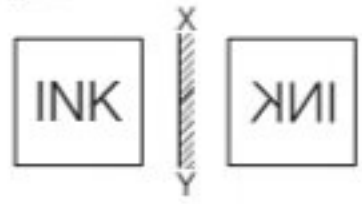
26. (a) Answer figure (a) is the correct mirror image of the question figure.



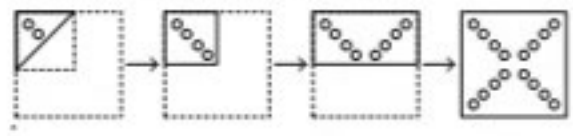
27. (d) Answer figure (d) is the correct mirror image of the question figure.



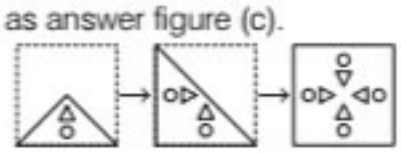
28. (b) Answer figure (b) is the correct mirror of the question figure.



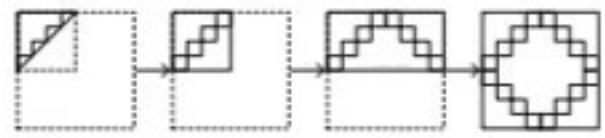
29. (b) After unfolding the folded and punched sheet it will look like as answer figure (b).



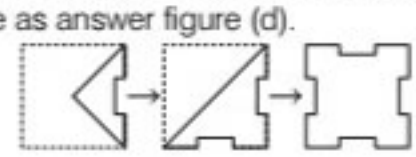
30. (c) After unfolding the folded and punched sheet it will look like as answer figure (c).



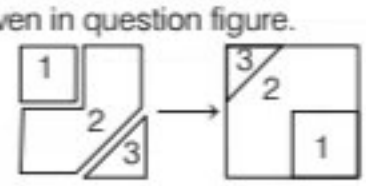
31. (a) After unfolding the folded and punched sheet it will look like as answer figure (a).



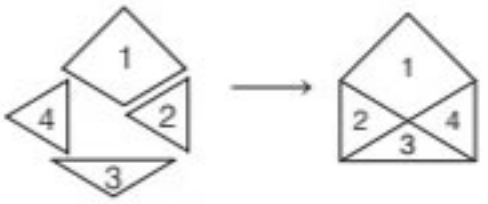
32. (d) After unfolding the folded and punched sheet it will look like as answer figure (d).



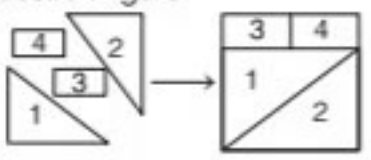
33. (d) Answer figure (d) can be formed from the cut-out pieces given in question figure.



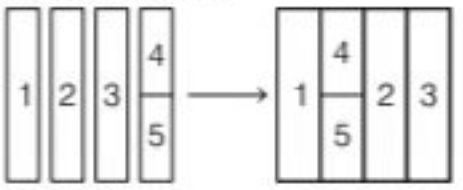
34. (b) Answer figure (b) can be formed from the cut pieces given in question figure.



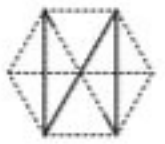
35. (b) Answer figure (b) can be formed from the cut pieces given in question figure.



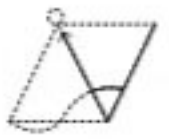
36. (b) Answer figure (b) can be formed from the cut pieces given in question figure.



37. (b) The question figure is embedded in answer figure (b).

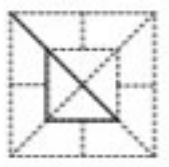


38. (c) The question figure is embedded in answer figure (c).



39. (d) The question figure is embedded in answer figure (d).

40. (b) The question figure is embedded in answer figure (b).



41. (d) The greatest 7-digit number = 9999999

The smallest 4-digit number = 1000

∴ Required difference (difference of these both numbers) = 9999999 – 1000 = 9998999

42. (d) The greatest 6-digit number = 999999

The greatest 5-digit number = 99999

∴ Required difference (difference of these both number) = 999999 – 99999 = 900000

43. (d) Option (a), $50 - (100 \div 4) = 50 - 25 = 25$, this option is not the answer.

option (b), $20 + (20 \div 4) = 20 + 5 = 25$, this option is not the answer.

option (c), $10 + (5 \times 2) + (10 - 5)$

$= 10 + 10 + 5 = 25$, this option is not the answer.

Option (d), $24 + (2 \times 1) = 24 + 2 = 26 \neq 25$, this option is the answer.

44. (b) $\left(3\frac{7}{11} \times \frac{11}{5}\right) \div \left(\frac{3}{7} \times x\right) = \frac{4}{3}$

$\Rightarrow \left(\frac{40}{11} \times \frac{11}{5}\right) \div \left(\frac{3x}{7}\right) = \frac{4}{3}$

$\Rightarrow 8 \times \frac{7}{3x} = \frac{4}{3}$

$\Rightarrow 12x = 8 \times 7 \times 3$

$\Rightarrow x = \frac{8 \times 7 \times 3}{12} = 14$

45. (c) Prime factors of 45, 60 and 75

$45 = 3 \times 3 \times 5$; $60 = 2 \times 2 \times 3 \times 5$; $75 = 3 \times 5 \times 5$

$\therefore$ HCF $= 3 \times 5$ [to take common factors]

$= 15$

LCM $= 2 \times 2 \times 3 \times 3 \times 5 \times 5$

(to take the higest power of prime factor)

$= 900$

∴ Sum of HCF and LCM = 15 + 900 = 915

46. (c) $\frac{3}{8} \div \left(\frac{5}{3} - \frac{1}{6}\right) + \frac{5}{8} = \frac{3}{8} \div \left(\frac{10-1}{6}\right) + \frac{5}{8}$

$= \frac{3}{8} \times \frac{6}{9} + \frac{5}{8} = \frac{1}{4} + \frac{5}{8}$

$= \frac{2+5}{8} = \frac{7}{8}$

47. (c) $15 - 15 \div 15 \times 6 = x$

$\Rightarrow 15 - 15 \times \frac{1}{15} \times 6 = x$

$\Rightarrow 15 - 1 \times 6 = x$

$\Rightarrow 15 - 6 = x \Rightarrow x = 9$

48. (d) $0.9 \div (0.3 \times 0.3)$

$= 0.9 \div (0.09)$

$= \frac{0.9}{0.09} = \frac{90}{9} = 10$

49. (d) According to the question,

C = 5% more than 150

$= 150 + 150 \times \frac{5}{100}$

$= 150 + 7.5 = 157.5$

and B = 10% less than $C = 157.5 - 157.5 \times \frac{10}{100}$

[$\because C = 157.5$]

$= 157.5 - 15.75$

$= 141.75$

50. (c) 5% of 10% of 175 g

$$= 175 \times \frac{10}{100} \times \frac{5}{100}$$

$$= \frac{175 \times 5}{1000} = \frac{875}{1000} = 0.875 \text{ g}$$

51. (d) $49.6 \times 10.2 - 7.1 \times 29.7 - 5.1 \times 20.1$

$$= 50 \times 10 - 7 \times 30 - 5 \times 20$$

[to take value in nearest integer]

$$= 500 - 210 - 100$$

$$= 500 - 310 = 190$$

52. (d) Length of park = 1500 m

Breadth of park = 750 m

Cover distance in 1 round of park = Perimeter of park

$$= 2 \text{ (Length + Breadth)}$$

$$= 2(1500 + 750)$$

$$= 2 \times 2250 = 4500 \text{ m}$$

∴ Cover distance in 4 rounds = 4 × cover distance in 1 round = $4 \times 4500 = 18000$ m

$$= \frac{18000}{1000} \text{ km} \quad [\because 1 \text{ km} = 1000 \text{ m}]$$

$$= 18 \text{ km}$$

To take time in complete 4 rounds of park of cyclist

$$= \frac{\text{Distance}}{\text{Speed}} = \frac{18}{4.5} = \frac{180}{45} = 4 \text{ h}$$

53. (d) Let total number of birds be x,

According to the question,

$$\frac{x}{4} + \frac{x}{5} + 22 = x$$

$$\Rightarrow \quad \frac{5x + 4x}{20} + 22 = x$$

$$\Rightarrow \quad x - \frac{9x}{20} = 22$$

$$\Rightarrow \quad \frac{20x - 9x}{20} = 22$$

$$\Rightarrow \quad \frac{11x}{20} = 22$$

$$\Rightarrow \quad x = \frac{22 \times 20}{11} = 40$$

Hence, total number of birds are 40.

Number of birds in their nest = $\frac{1}{5} \times x$

$$= \frac{1}{5} \times 40 = 8$$

Hence, the birds in their nest are 8.

54. (d) Amit bought a table = ₹ 1200

Spent on its repair = ₹ 200

∴ Total cost price of table = ₹ (1200 + 200) = ₹ 1400

Selling price of table = ₹ 1680

∴ Profit = Selling price − Cost price $[\because SP > CP]$

$$= 1680 - 1400 = ₹\ 280$$

∴ Profit per cent

$$= \frac{\text{Profit}}{\text{Total cost price}} \times 100$$

$$= \frac{280}{1400} \times 100 = 20\%$$

55. (a) Given, side of square = 16 m

Length of rectangle = 18 m

According to the question,

Perimeter of rectangle = Perimeter of square

$\Rightarrow$ 2 (Length + Breadth) = 4 × side

$\Rightarrow$ 2 (18 + Breadth) = 4 × 16

$$18 + \text{Breadth} = \frac{4 \times 16}{2}$$

$$\Rightarrow \quad \text{Breadth} = 32 - 18 = 14 \text{ m}$$

56. (c) Length of wall = 8 m = 800 cm $[\because 1 \text{ m} = 100 \text{ cm}]$

Breadth of wall = 6 m = 600 cm

Height of wall = 22.5 cm

∴ Volume of wall = Length × Breadth × Height

$= 800 \times 600 \times 22.5 \text{ cm}^3$

Volume of 1 brick = $25 \times 11.25 \times 6 \text{ cm}^3$

∴ Required number of bricks of wall

$$= \frac{\text{Volume of wall}}{\text{Volume of 1 brick}}$$

$$= \frac{800 \times 600 \times 22.5}{25 \times 11.25 \times 6}$$

$$= 6400 \text{ bricks}$$

57. (c) Time for travel begin

$$= \text{Time for reaching place} - 4\frac{1}{2} \text{ h}$$

$$= 2 : 45 \text{ pm} - 4 : 30$$

$$= 14 : 45 - 4 : 30$$

$$= 10 : 15 \text{ am}$$

58. (d) Prime factorisation of 640

2	640
2	320
2	160
2	80
2	40
2	20
2	10
5	5
	1

∴ $640 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 5$

59. (a) Principal = ₹ 1200, Rate = 5% per annum (rate of SI)

Amount = ₹ 1800

∴ Simple interest = Amount − Principal

$$\Rightarrow \quad \frac{P \times r \times t}{100} = 1800 - 1200$$

$$\Rightarrow \quad 1200 \times 5 \times t = 600 \times 100$$

$$\Rightarrow \quad t = \frac{600 \times 100}{1200 \times 5} = 10 \text{ yr}$$

60. (c) $140.75 \times 0.01 = 1.4075$

[decimal in product is the sum of digits after decimal in both numbers]

61. (c) According to the passage, it is important to travel if one wants to get real education. So, option (c) 'travel' is the correct choice.

62. (b) 'Recreational' means 'connected with ways of enjoying oneself when one is not working'. So, its correct synonym will be 'thrilling', which means 'causing excitement and pleasure'.

63. (b) 'Pilgrim' is the suitable word to fill the blank as visiting the pilgrim centres was considered holy in ancient India.

64. (a) According to the passage, people have a feeling of oneness with others if they travel a lot. So, option (a) 'travel' is the correct choice.

65. (a) A sage is a person who is learned and wise.
So, option (a) is the correct choice.

66. (c) Fire fighters are brave and highly trained persons who often put their lives in danger. So, option (c) 'They never put their lives in danger' is not true about the fire fighters.

67. (a) A fire fighter has to prepare to extinguish a fire in minutes. So, option (a) is the correct choice.

68. (c) Idiom 'Put life on line' means 'to put one's life in danger'. So, firefighters put their lives on the line means that they put their lives in danger.

69. (b) To 'operate manually' means 'to work or operate with one's hands'. So, option (b) is the correct choice.

70. (b) The word 'occur' means 'happen or take place'.
So, option (b) 'happen' is the correct choice.

71. (c) Hema lay on her bed because she was wondering what to wear.

72. (d) Hema could not wear any of her clothes because none of them fitted her and were either too tight or too short for her.

73. (a) 'Amassing' means 'to gather or collect something in large amount'. So, option (a) 'collecting' is the correct synonym of the given word.

74. (b) Hema is a charitable person as she wanted to donate all her old clothes.

75. (b) The word 'donate' means 'to give something like money or goods to some cause such as charity'.
So, option (b), 'receive' is its correct antonym which means 'to take or accept something'.

76. (b) The main focus of the passage is to tell us the advantages of cycling. In the passage, the author tells about the benefits of cycling and how it helps in reducing the health related problems.

77. (d) When the writer says that "Cycling is good for the environment". He means that it does not emit any unhealthy gas, can be run without petrol or diesel and does not pollute air.
So, option (d) "It can be ridden by all age groups" is not correct in the context of the given statement.

78. (a) 'Sedentary' means 'involving' little exercise or physical activity'. So, option (a) 'active' is its correct antonym which means 'involving physical effort and action'.

79. (a) A low-impact exercise is one which is not tiring. Cycling is one of the best example of low-impact exercises that can be enjoyed by people of all ages.

80. (b) Regular cycling helps us to reduce fat and strengthen then muscles and remain healthy and preventing serious accidents. It does not help in combine fun with work, so option (b) is the correct choice.