

## ANSWER SET - 58

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

## EXPLANATION - 58

- (1) Lawyer is related to court. Similarly, **Teacher** is related to school.
- (3)  $\begin{array}{c} \text{K M O} \\ \text{H J L} \\ \hline -3 \end{array}$   
Similarly,  
 $\begin{array}{c} \text{E G I} \\ \text{B D F} \\ \hline -3 \end{array}$
- (3)  $5 \times (-1) \times 4 = -20$   
Similarly,  
 $-8 \times (-1) \times 4 = 32$
- (3) Except **Plate**, other are used to cut the food.
- (4)  $\begin{array}{cccc} \text{A E I} & \text{J N R} & \text{S W A} & \text{F J M} \\ \text{L L L} & \text{L L L} & \text{L L L} & \text{L L L} \\ -4 +4 & -4 +4 & +4 +4 & +4 +3 \end{array}$
- (2) Except **421**, other are square number.
- (4) Difference between both dates,  
 $= 21 + 30 + 31 + 30 + 31 + 31 + 30 + 31 + 15$   
 $= 250$   
 $= 35 \text{ weeks} + 5 \text{ days}$   
Hence, required day  
 $= \text{Friday} + 5 \text{ days}$   
 $= \text{Wednesday}$
- (4) **210**  $\neq$  **80 + 90 + 50**  
or **210**  $\neq$  **80 + 90 + 30**
- (4) **CARES**
- (4)  $\begin{array}{c} \text{M I G R N T} \quad \text{L H F Q Z M S} \\ \hline -1 \end{array}$   
Similarly,  
 $\begin{array}{c} \text{L O G I T E C H} \quad \text{K N F H S D B G} \\ \hline -1 \end{array}$
- (3) **Senile**  $\rightarrow$  3 Consonant.
- (1) **X X X X X X O**
- (4)  $\begin{array}{cccccc} \frac{3}{5} & \frac{7}{5} & \frac{11}{5} & \frac{15}{5} & \frac{19}{5} & \frac{23}{5} \\ \hline +\frac{4}{5} & +\frac{4}{5} & +\frac{4}{5} & +\frac{4}{5} & +\frac{4}{5} & +\frac{4}{5} \end{array}$

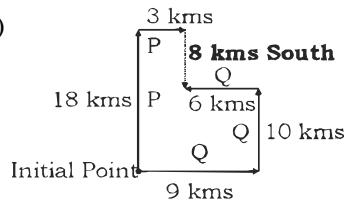
- (2)  $36 \times 4 \div 25 + 6 - 130$   
Change the symbol, as per given details,  
 $36 \div 4 - 25 \times 6 + 130 = -11$

$$15. (3) \frac{11+27}{2} = 19$$

$$\frac{12+40}{2} = 19$$

$$\frac{40+50}{2} = 45$$

- (1)



- (4) **I. True II. False**

- (2)  $21 + 95 = 116$

$$87 + 11 = 98$$

$$90 + 45 = 135$$

- (2) **ATQ,**

$$\frac{60}{x+y} + \frac{20}{x-y} = 4$$

$$\left[ \frac{1}{x+y} = u, \frac{1}{x-y} = v \right]$$

$$\Rightarrow 60u + 20v = 4 \text{ --- (i) and,}$$

$$\frac{40}{x+y} + \frac{40}{x-y} = 6$$

$$\Rightarrow 40u + 40v = 6 \text{ --- (ii)}$$

from equation (i) and (ii),

$$u = \frac{1}{40} \text{ and } v = \frac{1}{8}$$

then  $x + y = 40$  --- (iii) and

$x - y = 8$  --- (iv),

from equation (iii) and (iv),

$y = 16$  and  $x = 24$

Hence, the speed of stream = **16 kmph**

- (2) **ATQ,**

$$\text{New selling price} = \frac{3800}{76} \times 130 =$$

**₹6500**

- (3) **ATQ,**

Required distance

$$= 2 \times \frac{22}{7} \times 28 \times 10 = 1760 \text{ cm}$$

- (2) **ATQ,**

Total surface area

$$= 2 \times \frac{22}{7} \times \frac{14}{2} \times \frac{14}{2} + 2 \times \frac{22}{7} \times \frac{14}{2} \times 15$$

$$= 308 + 660 = 968 \text{ cm}^2$$

- (3) **ATQ,**

Required discount

$$= 56 + 14 - \frac{56 \times 14}{100} = 62.16\%$$

- (1) **ATQ,**

$$x = 2 - y$$

$$x^2 = 3 + y^2$$

$$\Rightarrow (2 - y)^2 = 3 + y^2$$

$$\Rightarrow 4 + y^2 - 4y = 3 + y^2$$

$$\Rightarrow y = \frac{1}{4} \Rightarrow x = 2 - \frac{1}{4} = \frac{7}{4}$$

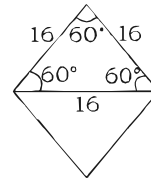
$$\text{Hence } xy = \frac{1}{4} \times \frac{7}{4} = \frac{7}{16}$$

- (4) **ATQ,**



$$\angle ADC = 180^\circ - (90^\circ - 23^\circ) = 113^\circ$$

- (2) **ATQ,**



$$\text{then, } 2 \times \frac{\sqrt{3}}{4} \times 16 \times 16 = \frac{d_1 \times 16}{2}$$

$$\Rightarrow d_1 = 16\sqrt{3}$$

Hence, Area of equilateral triangle

$$= \frac{\sqrt{3}}{4} \times 16\sqrt{3} \times 16\sqrt{3} = 192\sqrt{3} \text{ cm}^2$$

- (2) **ATQ,**

$$236.544 = P \times \left( \frac{8}{100} \right)^2 \left( \frac{308}{100} \right)$$

$$P = 12000$$

Hence, Required amount = **₹12000**

- (3) **ATQ,**

$$\frac{\cos A + \cos B}{\sin A + \sin B}$$

$$= \frac{2 \cos \left( \frac{A+B}{2} \right) \cos \left( \frac{A-B}{2} \right)}{2 \sin \left( \frac{A+B}{2} \right) \cos \left( \frac{A-B}{2} \right)}$$

$$= \frac{\cos \left( \frac{A+B}{2} \right)}{\sin \frac{A+B}{2}} = \cot \left( \frac{A+B}{2} \right)$$

- (2) **ATQ,**

$$\frac{\sin^2 A - \sin^2 A}{\cos^2 A} = \frac{\sin^2 A}{\sec^2 A}$$

$$= \frac{\sin^2 A (\sec^2 A - 1)}{\sec^2 A}$$

$$= \frac{\sin^2 A \tan^2 A}{\sec^2 A} = \sin^4 A$$

62. (2) ATQ,

Required Quantity

$$= \frac{112}{8} \times (31 + 28) = 826 \text{ kgs}$$

63. (1) ATQ,

Let the initial price = 8x  
then,

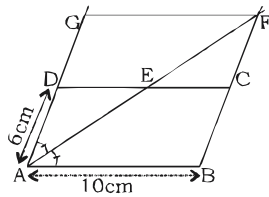
$$\frac{180}{9x} - \frac{180}{8x} = 5$$

$$\frac{180 \times 1}{72x} = 5$$

$$\Rightarrow x = 0.5$$

Hence, Required price =  $0.5 \times 8 = ₹4$

64. (1) ATQ,



Produce AD to G such that  
 $AG \parallel BF$  and  $GF \parallel CD$

then, In  $\triangle AGF$  and  $\triangle ABF$   
AF is common side and

$$\angle GAF = \angle BAF$$

then,  $\triangle AGF \cong \triangle ABF$

now,  $AG = AB$

$$\Rightarrow AG = CD + DG = 10$$

$$\Rightarrow DG = CF = 10 - 6 = 4 \text{ [}\therefore AG = BF\text{]}$$

Hence,  $CF = 4 \text{ cm}$

65. (2) ATQ,

$$\frac{p}{q} = \frac{a+4}{a-4}$$

Squaring on both sides

$$= \frac{p^2}{q^2} = \frac{(a+4)^2}{(a-4)^2}$$

Apply componendo and dividendo rule

$$\frac{p^2 + q^2}{p^2 - q^2} = \frac{(a+4)^2 + (a-4)^2}{(a+4)^2 - (a-4)^2}$$

$$= \frac{2(a^2 + 4^2)}{4 \times a \times 4}$$

$$= \frac{a^2 + 16}{8a}$$

66. (3) ATQ,

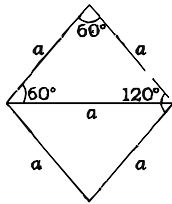
$$\frac{h_1}{h_2} = \sqrt{\frac{\text{Area of 1st triangle}}{\text{Area 2nd triangle}}}$$

$$\Rightarrow \left(\frac{\sqrt[3]{7}}{\sqrt[3]{5}}\right)^2 = \frac{\text{Area of 1st triangle}}{\text{Area 2nd triangle}}$$

$$\Rightarrow \frac{(7)^{\frac{2}{3}}}{(5)^{\frac{2}{3}}} = \frac{\text{Area of 1st triangle}}{\text{Area 2nd triangle}}$$

67. (2) ATQ,

Angles are  $60^\circ, 120^\circ, 60^\circ$  and  $120^\circ$   
opposite angles are equal so it is a parallelogram but these angles fulfill the conditions of a rhombus.



Hence, it is a **rhombus**

68. (3) ATQ,

	A	B
efficient	13	10
time	10	13
	20	26

Hence, Required days = **20 days**

69. (3) ATQ,

$$\sin(4x - y) = 1 = \sin 90^\circ$$

$$\Rightarrow 4x - y = 90^\circ \text{ ---(i) and}$$

$$\cos(2x + y) = \frac{1}{2} = \cos 60^\circ$$

$$\Rightarrow 2x + y = 60^\circ \text{ ---(ii)}$$

from equation (i) and (ii),

$$x = 25^\circ \quad y = 10^\circ$$

$$\text{then, } \tan(25^\circ + 2 \times 10^\circ) = \tan 45^\circ = 1$$

70. (3) ATQ,

Let the larger diagonal =  $100x$

then, square of : area of rhombus  
larger diagonal

$$(100x)^2 : \frac{100x \times 35x}{2}$$

$$40 : 7$$

Hence, Ratio of those = **40 : 7**

71. (2) ATQ,

Required value

$$= \frac{90 \times 100}{(100 - 25)} = 120$$

72. (2) ATQ,

Total present age =  $30 \times 3 + 6 \times 3$   
= 108 years

then, Required age =  $108 - (46 \times 2 + 3 \times 2)$

= **10 years**

73. (2) ATQ,

Required percent

$$= \frac{(750 - 500)}{500} \times 100 = 50$$

74. (4) ATQ,

Required percent

$$= \frac{(600 - 500)}{600} \times 100$$

= **16.66**

75. (1) ATQ,

Required Number

$$= \frac{(410 + 490 + 300)}{3} = 400$$

84. (4) 'afford to see' is the correct option. This means they cannot bear the fact that their children waste their capabilities.

85. (3) 'Resort to' means to take the recourse. (रस्ता अपनाना)

88. (1) 'Need of the hour' is a phrase, so we use as it is given.

92. (2) The correct formula is-

If + had +  $V_3$ , Sub + would + have +  $V_3$

Hence replace 'will' with 'would'.

93. (1) Sentence should be in Simple Past Tense and in Active Voice. Hence replace 'was being' with 'was'.