



Techno ACE

Illustrated Answer for Model Question Paper

Mathematics

Class : VIII going to IX

$$\begin{array}{r}
 1. \quad \begin{array}{r} 741 \\ \hline 54 \quad 91 \quad 62 \\ 49 \\ \hline 144 \quad 591 \\ +4 \quad 576 \\ \hline 1481 \quad 1562 \\ \quad 1481 \\ \hline \quad \quad 81 \end{array}
 \end{array}$$

$\therefore 81$

Ans. Ⓓ

$$\begin{aligned}
 2. \quad & \sqrt{41 - \sqrt{21 + \sqrt{19 - \sqrt{9}}}} \\
 & = \sqrt{41 - \sqrt{21 + \sqrt{19 - 3}}} \\
 & = \sqrt{41 - \sqrt{21 + 4}} \\
 & = \sqrt{41 - 5} = \sqrt{36} = 6
 \end{aligned}$$

Ans. Ⓒ

3. Present age of A = $2x$ years
Present age of B = $3x$ years

$$\therefore \frac{2x-10}{3x-10} = \frac{3}{5} \Rightarrow 10x - 50 = 9x - 30$$

$$\therefore x = 20$$

\therefore Their ages are 40 years and 60 years.

Ans. Ⓑ

4. Daughter's age = 10 years
 \therefore Wife's age = 30 years
 \therefore Man's age = 35 years
 \therefore Man's age 10 years back = 25 years.

Ans. Ⓒ

$$\begin{aligned}
 5. \quad & (15 - 86)^2 + 15.86y + (0.13)^2 \equiv (15.86 \pm 0.13)^2 \\
 & \Rightarrow \cancel{15.86}y = \pm 2 \times \cancel{15.86} \times 0.13
 \end{aligned}$$



$$\Rightarrow y = \pm 0.26$$

$$\therefore 100y = \pm 26$$

$$\therefore (100y)^2 = (\pm 26)^2 = 676$$

Ans. (D)

$$6. \text{ C.I} = ₹3000 \left\{ \left(1 + \frac{10}{101} \right)^2 - 1 \right\}$$

$$= ₹3000 \left\{ \left(\frac{11}{10} \right)^2 - 1 \right\}$$

$$= ₹3000 \left(\frac{121}{100} - 1 \right)$$

$$= ₹3000 \times \frac{21}{100} = ₹630$$

$$\therefore \frac{1}{2} \times 630 = \frac{P \times 5 \times 5}{100}$$

$$\therefore P = 1260$$

$$\therefore ₹1260$$

Ans. (B)

7. Two digits perfect square numbers are 16, 25, 36, 49, 64, 81.

\therefore 81 only whose unit digit is a perfect cube.

$$\therefore 1$$

Ans. (A)

8. 8 triangular faces

$$\therefore x = 8$$

Ans. (A)

9.

Ans. (C)

10. $abcdefghi$ is a number consisting 9 digits.

$\therefore \sqrt{abcdefghi}$ will contain 5 digits.

$$\therefore x = 5$$

Ans. (C)

11. Let actual time for her school be x minutes.

\therefore For 7 minutes late, she has taken $(x + 7)$ minutes.

\therefore Distance of school from her house = $\frac{12}{60}(x + 7)$ km.

For 10 minutes early, she has taken $(x - 10)$ minutes.

$$\therefore \text{Distance} = \frac{18}{60}(x-10) \text{ km.}$$

$$\therefore \frac{\cancel{3}18}{\cancel{60}}(x-10) = \frac{\cancel{12}^2}{\cancel{60}}(x+7)$$

$$\Rightarrow 3x - 30 = 2x + 14$$

$$\Rightarrow x = 44$$

\therefore the school starts at 9 a.m.

Ans. ©

12. Total balls = 54. P (specific coloured ball) = $\frac{5}{18} = \frac{15}{54}$

\therefore the colour of ball drawn is red.

Ans. Ⓐ

13. No. of diagonals of polygon of $(n + 1)$ sides

$$= \frac{(n+1)(n+1-3)}{2} = \frac{(n+1)(n-2)}{2}$$

Ans. Ⓑ

14. $x + \frac{1}{x} = 2 \Rightarrow x^2 + 1 = 2x \Rightarrow x^2 - 2x + 1 = 0$

$$\Rightarrow (x - 1)^2 = 0$$

$$\Rightarrow x - 1 = 0$$

$$\Rightarrow x = 1$$

$$\therefore x^{99} + \frac{1}{x^{99}} = 1 + 1 = 2$$

Ans. ©

15. Natural numbers and whole numbers are not closed under subtraction.

$\therefore a$ and c

Ans. ©