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Anshul Sir

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1. निम्नलिखित छूट योजनाओं के तहत ₹1,500 अंकित मूल्य वाली एक पुस्तक के विक्रय मूल्य (₹ में) के बीच कितना अंतर होगा?

(i) प्रत्येक 20% की दो क्रमिक छूट = 36%

(ii) 30% और 10% की दो क्रमिक छूट = 37%

What will be the difference between the selling prices (in ₹) of a book with a marked price of ₹1,500 under the following discount schemes?

(i) Two successive discounts of 20% each

(ii) Two successive discounts of 30% and 10%

1. 18

2. 20

3. 12

4. 15

$$a + b - \frac{ab}{100}$$

$$1500 \times \frac{1}{100} = 15$$

2. वह छोटी से छोटी प्राकृतिक संख्या ज्ञात कीजिए, जो 26, 8,
11 और 13 से विभाज्य हो।

Find the smallest natural number which is divisible
by 26, 8, 11, and 13.

~~1. 1201~~

~~2. 1082~~

~~3. 1126~~

4. 1144

3. एक पंखे का विक्रय मूल्य ₹7,392 है। यदि लाभ प्रतिशत 32% है, तो पंखे का क्रय मूल्य (₹ में) कितना है?

The selling price of a fan is ₹7,392. If the profit percentage is 32%, what is the cost price (in ₹) of the fan?

1. 5,200
2. 4,800
3. 5,400
4. 5,600

$$132\% \longrightarrow 7392$$

$$1\% \longrightarrow \frac{7392}{132}$$

$$100\% \longrightarrow \frac{7392 \times 100}{132}$$

$$= 5600$$

5. 2.8 और 0.7 का मध्यानुपाती ज्ञात कीजिए।

Find the mean proportional between 2.8 and 0.7.

1. 1.2

2. 1.9

3. 1.8

4. 1.4

$$\sqrt{\frac{28}{10} \times \frac{7}{10}} = \sqrt{\frac{4 \times 7 \times 7}{100}}$$

$$= \frac{2 \times 7}{10} = 1.4$$

- 6 मनोज शहर A से शहर B तक यात्रा करता है। यदि मनोज अपनी कार को अपनी सामान्य चाल की चाल पर चलाता है, तो वह शहर B तक 36 मिनट देरी से पहुँचता है। यदि मनोज अपनी कार सामान्य चाल से चलाता, तो शहर A से शहर B तक यात्रा करने में उसे कितना समय (मिनट में) लगता?

Manoj travels from city A to city B. If Manoj drives his car at $\frac{1}{5}$ of his usual speed, he reaches city B late by 36 minutes. If Manoj had driven his car at his usual speed, how much time (in minutes) would he have taken to travel from city A to city B?

1. 9
2. 18
3. 7
4. 14

$$\begin{aligned} \text{Speed} &= 5 : 1 \\ \text{Time} &= 1 : 5 \\ &\quad \swarrow \quad \searrow \\ &\quad 9 \text{ min} \quad \text{---} \text{ } \times 9 \rightarrow 36 \text{ min} \end{aligned}$$

8. $(3 + \sqrt{2})$ और $2\sqrt{7}$ का तृतीयानुपाती ज्ञात कीजिए।

Find the third proportional to $(3 + \sqrt{2})$ and $2\sqrt{7}$

1. $(12 + \sqrt{8})$

2. $(12 - \sqrt{8})$

3. $4(3 - \sqrt{2})$

4. $2(3 + \sqrt{2})$

$$\begin{aligned} \frac{2\sqrt{7} \times 2\sqrt{7}}{(3 + \sqrt{2})} &= \frac{28}{(3 + \sqrt{2})} \times \frac{(3 - \sqrt{2})}{(3 - \sqrt{2})} \\ &= \frac{28(3 - \sqrt{2})}{7} \\ &= 4(3 - \sqrt{2}) \end{aligned}$$

9. यदि किसी घन की कोर को तीन गुना कर दिया जाए, तो उसका आयतन, उसके मूल आयतन से _____ गुना हो जाता है।

If the edge of a cube is tripled, its volume becomes _____ times its original volume.

1. 9
2. 27
3. 64
4. 8

$$a = 1$$

$$\text{Volume} = 1^3 = 1$$

$$a = 3$$

$$3^3 = 27$$

$$\text{Volume} = a^3$$

$$\text{L.S.A.} = 4a^2$$

$$\text{T.S.A.} = 6a^2$$

10. एक विश्वविद्यालय में 500 फैकल्टी मेंबर्स (केवल पुरुष और महिला) हैं, जिनमें से 60% महिलाएँ हैं। महिलाओं की औसत लंबाई 162 cm और पुरुषों की औसत लंबाई 168 cm है। विश्वविद्यालय के फैकल्टी की औसत लंबाई (cm में) कितनी है?

In a university, there are 500 faculty members (only male and female), out of which 60% are females. The average height of females is 162 cm and the average height of males is 168 cm. What is the average height (in cm) of the faculty of the university?

1. 176.4

2. 164.4

3. 125.4

4. 146.4

$$W = 500 \times \frac{60}{100} = 300$$

$$M = 200$$

$$300 \times 162 = 48600$$

$$200 \times 168 = 33600$$

$$\text{Avg} = \frac{82200}{500} = 164.4$$

11. मूल्यांकन कीजिए: $(-9) - (-60) \div (-15) + (-3) \times 7$

Evaluate: $(-9) - (-60) \div (-15) + (-3) \times 7$

1. -34

2. -33

3. -37

4. -36

$-9 - 4 - 21$

-34

12. किसी मूलधन पर 8% की वार्षिक दर से 4 वर्ष की अवधि के लिए साधारण ब्याज ₹824 है। मूलधन (₹ में) ज्ञात कीजिए।

The simple interest on a principal at an annual rate of 8% for a period of 4 years is ₹824. Find the principal (in ₹).

1. 2575
2. 2573
3. 2577
4. 2571

$$S.I. = \frac{P \times R \times T}{100}$$

$$\frac{103}{824} = \frac{P \times \cancel{8} \times \cancel{4}}{\cancel{100} 25}$$

$$P = \boxed{2575}$$

13. यदि x का $2\% = 348$ है, तो x _____ के बराबर है।

If 2% of $x = 348$, then x is equal to _____.

1. 34900

2. 17500

3. 17400

4. 34800

$$x \times \frac{2}{100} = 348$$

$$x = 17400$$

15. निम्नलिखित का मान ज्ञात कीजिए। $\left[(50 \div 5) \times \left\{ \frac{72}{3} + \frac{12}{1} \times (8 - 7) \right\} \right]$

Find the value of the following: $\left[(50 \div 5) \times \left\{ \frac{72}{3} + \frac{12}{1} \times (8 - 7) \right\} \right]$

1. 360

2. 355

3. 357

4. 342

10×36

360

16. यदि 5% वार्षिक ब्याज दर से तीन वर्षों के चक्रवृद्धि ब्याज तथा साधारण ब्याज का अंतर ₹244 है, तो मूलधन (₹ में) ज्ञात कीजिए।

If the difference between the compound interest and simple interest for three years at an annual interest rate of 5% is ₹244, then find the principal (in ₹).

1. 33200
2. 32000
3. 32420
4. 31425

$$P = \frac{D \times (100)^2}{R^2} \times \frac{100}{300 + R}$$

$$= \frac{244 \times 100 \times 100}{25} \times \frac{100}{305}$$

$$= 32000$$

17. सचिन ने 152 कुर्सियाँ बेचीं और उसे 52 कुर्सियों के विक्रय मूल्य के बराबर लाभ हुआ। उसका लाभ प्रतिशत कितना है?

Sachin sold 152 chairs and made a profit equal to the selling price of 52 chairs. What is his profit percentage?

1. 47%
2. 62%
3. 57%
4. 52%

$$SP = 152$$

$$P = 52$$

$$CP = 100$$

$$52\%$$

18. एक व्यक्ति 78km/hr की चाल से कोलकाता से अहमदाबाद जाता है तथा उसी मार्ग से 91km/hr की चाल से कोलकाता वापस आता है। पूरी यात्रा के दौरान उसकी औसत चाल (km/hr में) ज्ञात कीजिए।

A person goes from Kolkata to Ahmedabad at a speed of 78 km/hr and returns to Kolkata by the same route at a speed of 91 km/hr. Find his average speed (in km/hr) during the entire journey.

1. 81

2. 84

3. 85

4. 78

$$\text{Avg Speed} = \frac{2 \times S_1 \times S_2}{S_1 + S_2}$$

$$= \frac{2 \times \overset{6}{\cancel{78}} \times \overset{7}{\cancel{91}}}{\cancel{169} \cancel{13}}$$

$$= 84$$

19. दो संख्याओं का LCM और HCF क्रमशः 168 और 14 है। यदि उनमें से एक संख्या 42 है, तो दूसरी संख्या ज्ञात कीजिए।

The LCM and HCF of two numbers are 168 and 14 respectively. If one of the numbers is 42, find the other number.

1. 58

2. 54

3. 56

4. 57

$$I \times II = LCM \times HCF$$

$$\cancel{42}^3 \times II = \cancel{168}^{56} \times \cancel{14}$$

$$II = 56$$

20. मंदार, केतन और तुषार का औसत वज़न 45 kg है। यदि मंदार और केतन का औसत वज़न 43 kg है और केतन और तुषार का औसत वज़न 48 kg है, तो केतन का वज़न (kg में) ज्ञात कीजिए।

The average weight of Mandar, Ketan, and Tushar is 45 kg. If the average weight of Mandar and Ketan is 43 kg and the average weight of Ketan and Tushar is 48 kg, find the weight (in kg) of Ketan.

1. 57

2. 47

3. 67

4. 62

$$N \times A = T$$

$$M + K + T = 45 \times 3 = 135$$

$$M + K = 43 \times 2 = 86$$

$$K + T = 48 \times 2 = 96$$

$$182 - 135 = 47$$

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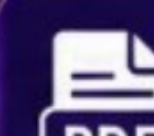
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