

What is the percentage area of the bank..



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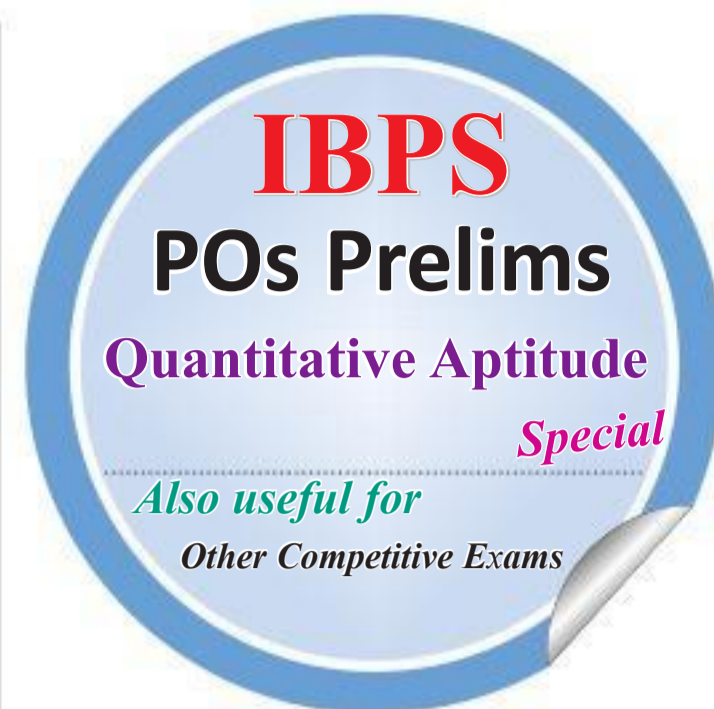
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MODEL QUESTIONS

Directions (Q.No.1-5): Study the following information and answer the questions that follow.

The premises of a bank are to be renovated. The renovation is in terms of flooring. Certain areas are to be floored either with marble or wood. All rooms/halls and pantry are rectangular. The area to be renovated comprises of a hall for customer transaction measuring 23 m by 29 m, branch manager's room measuring 13 m by 17 m, a pantry measuring 14 m by 13 m, a record keeping cum server room measuring 21m by 13 m and locker area measuring 29 m by 21 m. The total area of the bank is 2000 square meters. The cost of wooden flooring is Rs. 170/- per square meter and the cost of marble flooring is Rs. 190/- per square meter. The locker area, record keeping cum server room and pantry are to be floored with marble. The branch manager's room and the hall for customer transaction are to be floored with wood. No other area is to be renovated in terms of flooring.

- What is the respective ratio of the total cost of wooden flooring to the total cost of marble flooring?
a) 1879 : 2527 b) 1887 : 2386
c) 1887 : 2527 d) 1829 : 2527
e) 1887 : 2351
- If the four walls and ceiling of the branch managers room (The height of the room is 12 meters) are to be painted at the cost of Rs. 190/- per square meter, how much will be the total cost of renovation of the branch manager's room including the cost of flooring?
a) Rs. 1,36,800/-
b) Rs. 2,16,660/-
c) Rs. 1,78,790/-
d) Rs. 2,11,940/-
e) None of these
- If the remaining area of the bank is to be carpeted at the rate of Rs. 110/- per square meter, how much will be the increment in the total cost of renovation of bank premises?
a) Rs. 5,820/- b) Rs. 4,848/-
c) Rs. 3,689/- d) Rs. 6,890/-
e) None of these
- What is the percentage area of the bank that is not to be renovated?
a) 2.2 b) 2.4
c) 4.2 d) 4.4
e) None of these
- What is the total cost of renovation



tion of the hall for customer transaction and the locker area ?

- Rs. 2,29,100/-
- Rs. 2,30,206/-
- Rs. 2,16,920/-
- Rs. 2,42,440/-
- None of these

Directions (Q.No. 6-10): What should come in place of the question mark (?) in the following questions?

- 16% of 450 ÷ ? % of 250 = 4.8
a) 12 b) 6
c) 4 d) 10
e) None of these
- 19.5% of 524 = ?
a) 102.18 b) 122.81
c) 120.18 d) 112.81
e) None of these
- $\sqrt{?} - 11 = \sqrt{1521}$
a) $\sqrt{2500}$ b) $(28)^2$
c) $\sqrt{28}$ d) 50
e) None of these

- $700 \div 70 \div 0.5 = ?$
a) 10 b) 2.5
c) 1.5 d) 20
e) None of these
- $12.8 \times 4.5 \times 2.2 = ?$
a) 168.72 b) 126.72
c) 128.27 d) 162.72
e) None of these

Directions (Q.No.11-15): In each of these questions, two equations (I) and (II) are given. You have to solve both the equations and give answer

- if $x > y$ b) if $x \geq y$
c) if $x < y$ d) if $x \leq y$
e) if $x = y$ or no relation can be established between x and y .
- I. $x^2 + 5x + 6 = 0$
II. $y^2 + 3y + 2 = 0$
- I. $4x^2 - 8x + 3 = 0$
II. $2y^2 - 7y + 6 = 0$
- I. $4x + 2y = 51$
II. $15y + 13x = 221$
- I. $x^2 - 14x + 48 = 0$
II. $y^2 + 6 = 5y$
- I. $x^2 - 1 = 0$
II. $y^2 + 4y + 3 = 0$
- The sum of 15% of a positive number and 10% of the same number is 70. What is twice of that number?
a) 440 b) 280
c) 560 d) 140
e) None of these
- Vikram scored 72 per cent marks

in five subjects together, viz; Hindi, Science, Maths, English and Sanskrit together, where in the maximum marks of each subject were 100. How many marks did Vikram score in Science if he scored 80 marks in Hindi, 70 marks in Sanskrit, 76 marks in Maths and 65 marks in English?

- 72 b) 69 c) 59
d) 71 e) None of these
- The respective ratio between Pooja's, Prarthana's and Falguni's monthly income is 53:70: 57. If Prarthana's annual income is Rs. 4,20,000, what is the sum of Pooja's and Falguni's annual incomes? (In some cases monthly income and in some cases annual income is used.)
a) Rs. 5,92,500
b) Rs. 6,83,500
c) Rs. 6,60,000
d) Rs. 7,79,200
e) None of these
- Manhar sold an item for ` 8,400 and incurred a loss of 25%. At what price should he have sold the item to have gained a profit of 40%?
a) Rs. 15,680
b) Rs. 16,220
c) Rs. 14,540
d) Cannot be determined
e) None of these

Key with Solutions

- c;**
Area of customer transaction room = $23m \times 29m = 667$ sq.m
Area of branch manager room = $13m \times 17m = 221$ sq. m
Area of Pantry room = $14m \times 13m = 182$ sq. m
Area of Server room = $21m \times 13m = 273$ sq. m
Area of locker room = $29m \times 21m = 609$ sq. m
Total cost of wooden flooring = Rs. $[(170 \times (667 + 221)) = Rs. (888 \times 170)$
Total cost of marble flooring = Rs. $[(190 \times (182 + 273 + 609)) = Rs. (190 \times 1064)$
Required Ratio = $888 \times 170 : 1064 \times 190 = 1887 : 2527$
- c;**
Area of 4 walls and ceiling of branch managers room = $2(lh + bh) + lb = 2[17 \times 12 + 13 \times 12] + 13 \times 17 = 941$ sq. m
Total cost of renovation = $Rs. 190 \times 941 = Rs. 178790$
- e;**
Total area of bank is 2000 sq. m
Total area of bank to be renovated = 1952 sq. m
Remaining Area = $2000 - 1952 = 48$ sq. m
Total cost Remaining Area to be

- carpeted at the rate of Rs. 110/sq. meter = $Rs. (48 \times 110) = Rs. 5280$
- b;**
percentage area of bank not to be renovated
 $\Rightarrow \frac{\text{Area bank not be renovated}}{\text{Total area of bank}} = \frac{48}{2000} \times 100 = 2.4\%$
 - a;** Total cost of hall of customer transaction = $Rs. (170 \times 667) = Rs. 1,13,390$
Total cost of Locker area = $Rs. (190 \times 609) = Rs. 1,15,710$
Total cost of customer transaction hall + locker area = $Rs. (1,13,390 + 1,15,710) = Rs. 2,29,100$
 - b;**
 $16\% \text{ of } 450 \div ?\% \text{ of } 250 = 4.8$
 $\Rightarrow 450 \times \frac{16}{100} \div 250 \times \frac{?}{100} = 4.8$
 $\Rightarrow 72 \div 2.5 \times ? = 4.8$
 $\Rightarrow 2.5 \times ? = \frac{72}{4.8}$
 $\therefore ? = \frac{72}{4.8 \times 2.5} = 6$
 - a;**
 $? = 19.5\% \text{ of } 524 = 524 \times \frac{19.5}{100} = 102.18$
 - e;**
 $\sqrt{?} - 11 = \sqrt{1521}$
 $\Rightarrow \sqrt{?} - 11 = 39$

- $\Rightarrow \sqrt{?} = 39 + 11 = 50$
-
- $\therefore ? = (50)^2 = 2500$
- d;**
 $? = 700 \div 70 \div 0.5 = 700 \times \frac{1}{70} \times \frac{1}{0.5} = 20$
 - b;**
 $? = 12.8 \times 4.5 \times 2.2 = 126.72$
 - d;**
I. $x^2 + 5x + 6 = 0$
 $\Rightarrow x^2 + 3x + 2x + 6 = 0$
 $(x+3)(x+2) = 0$
 $x = -3, -2$
II. $y^2 + 3y + 2 = 0$
 $\Rightarrow y^2 + 2y + y + 2 = 0$
 $(y+2)(y+1) = 0$
 $Y = -2, -1$
 $\therefore x \leq y$
 - d;**
I. $4x^2 - 8x + 3 = 0$
 $\Rightarrow 4x^2 - 6x - 2x + 3 = 0$
 $\Rightarrow (2x - 1)(2x - 3) = 0$
 $\therefore x = \frac{1}{2}, \frac{3}{2}$
II. $2y^2 - 7y + 6 = 0$
 $\Rightarrow 2y^2 - 4y - 3y + 6 = 0$
 $\Rightarrow (y - 2)(2y - 3) = 0$
 $\Rightarrow Y = 2, \frac{3}{2}$
 $\therefore x \leq y$
 - a;**
I. $4x + 2y = 51 \dots\dots\dots(1)$
II. $15y + 13x = 221 \dots\dots(2)$
Eq (1) $\times 15$ & eq (2) $\times 2$
 $60x + 30y = 765 \dots\dots(3)$
 $26x + 30y = 442 \dots\dots(4)$
Solve (3) and (4)

- $x = 9.5$
-
- $y = 6.5$
-
- $\therefore x > y$
- a;**
I. $x^2 - 14x + 48 = 0$
 $\Rightarrow x^2 - 8x - 6x + 48 = 0$
 $\Rightarrow (x - 8)(x - 6) = 0$
 $x = 8, 6$
II. $y^2 - 5y + 6 = 0$
 $\Rightarrow y^2 - 3y - 2y + 6 = 0$
 $\Rightarrow (y - 3)(y - 2) = 0$
 $y = 3, 2$
 $\therefore x > y$
 - b;**
I. $x^2 - 1 = 0$
 $\Rightarrow x^2 = 1$
 $x = \pm 1$
II. $y^2 + 4y + 3 = 0$
 $\Rightarrow y^2 + 3y + y + 3 = 0$
 $\Rightarrow (y + 1)(y + 3) = 0$
 $y = -1, -3$
 $\therefore x \geq y$
 - c;**
Let the positive no. be x .
According to question. $15\% \text{ of } x + 10\% \text{ of } x = 70$
 $\Rightarrow x \times \frac{15}{100} + \frac{x \times 10}{100} = 70$
 $\Rightarrow \frac{15x + 10x}{100} = 70$
 $\Rightarrow \frac{25x}{100} = 70$
 $\therefore x = \frac{70 \times 100}{25} = 280$
 \therefore Double of given no.

- $= 280 \times 2 = 560$
- b;**
Total number obtained by Vikram
 $(100 \times 5) \times \frac{72}{100} = 500 \times \frac{72}{100} = 360$
 \therefore Number in science = $360 - (80 + 70 + 76 + 65) = 360 - 291 = 69$
 - c;**
Monthly income of Prarthana's = $\frac{4,20,000}{12} = Rs. 35000$
Monthly income of Pooja and Falgunis = $35000 \times \frac{53+57}{70} = 35000 \times \frac{110}{70}$
= Rs. 55,000
 \therefore Annual income of Pooja and Falgunis = $55000 \times 12 = Rs. 6,60,000$
 - a;**
Cost price of item = $8400 \times \frac{100}{100 - 25} = 8400 \times \frac{100}{75}$
= Rs. 11200
Then item sold profit of 40% SP of item = $11200 \times \frac{100 + 40}{100} = 11200 \times \frac{140}{100} = 11200 \times \frac{140}{100} = Rs. 15680$