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Date Interpretation Table Chart Questions for IBPS PO Pre, SBI PO Pre, IBPS Clerk Mains, SBI Clerk Mains, IBPS SO Pre and RRB Scale I Pre Exams.

Word Problems Quiz 4

Direction: Study the following questions carefully and choose the right answer.

1. Shilpa took a loan of Rs. 15,00,000 to purchase a car. The company charges compound interest at 20% per annum. She promised to make the payment after three years. But for the last year of loan tenure, the company increased the rate of interest by 25% from the previous one. Then the extra amount which she had to pay is what per cent of the amount of loan taken by her?

A. 8.3% B. 7.9% C. 8.7% D. 7.2% E. None of these

2. There are three members in a family – husband, wife and their son. Husband's age is thrice his son's age and wife is three years younger than his husband. What is the respective ratio of ages of son, husband and wife if their average age is 41?

A. 17 : 9 : 18 B. 15 : 4 : 12 C. 6 : 18 : 17 D. 4 : 12 : 15 E. None of these

3. There are 3 points P, Q and R in a straight line, such that point Q is equidistant from points P and R. A man can swim from point P to R downstream in 24 hours and from Q to P upstream in 16 hours. Find the ratio of speed of man in still water to speed of stream?

A. 5 : 1 B. 6 : 1 C. 5 : 3 D. 7 : 1 E. None of these

4. Instead of normal weighing scale a shopkeeper used forged scale. He used 1.4 kg scale while buying and 840g scale while selling, what will his overall profit percentage, if in the end he offers 10% discount?

A. 50% B. 48% C. 40% D. 38% E. None of these

5. From 'A' kg of pure tea a shopkeeper removes A% of the mixture (Either pure tea or adulterated tea) and replaces it with same quantity of adulteration. If he repeated this process once more and now the amount of pure tea remaining in the mixture is (90% of 40% of A) kg, then find the value of A.

A. 60% B. 50% C. 40% D. 30% E. None of these

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6. **A work is started by a man and it is assumed that he will finish the work in 11 days if working alone. Each subsequent day a new man joined the work. In how many days the four times the original work will be completed, if after the 8th day from the starting of the work no new man will be further added?**

A. 11 B. 10 C. 9 D. 8 E.None of these

7. **Ajeet purchased 100 books of quantitative aptitude for his book store. He sold 20% of total books at a profit of 10%, 37.5% of remaining at a profit of 15%, 80% of the remaining at a profit of 8% and remaining at a profit of 20%. If he sold all the books at a profit of 16% he would have gained Rs.1505 more, then find the cost price of each book.**

A. Rs. 250 B. Rs. 375 C. Rs. 350 D. Rs. 450 E. None of these

8. **In an office some persons are officers and some are non-officer. The number of officers is 30. The average salary of officers is Rs.1040 and that of non-officers is Rs.400. If the average salary of entire staff in office (officers + Non – officers) is Rs.500 per month, then what is the average of total number of employees (officers + Non – officers) in the office?**

A. 49 B. 89 C. 92 D. 96 E. None of these

9. **A, B, C, and D are four friends. In which B and C are brothers. 360 sweets are divided among them. A gets 200/3 % of B. B gets 40% of C and C gets 75% of D. Then what is the difference between the number of sweets received by brothers and the number of sweets received by others?**

A. 44 B. 34 C. 24 D. 14 E. None of these

10. **In a school number of students in 6th and 7th class is in the ratio 6 : 11. If 60% of total students in class 6 are boys and 52% of total students in class 7 are boys, then find total girls in both the class together is approximately what percentage of total students in both the classes?**

A. 39.4 B. 45.2 C. 49.9 D. 35.6 E. None of these

Correct Answers:

1	2	3	4	5	6	7	8	9	10
C	C	D	A	C	C	C	D	C	B

Explanations:

1. The rate of interest for first two years = 20% per annum

The rate of interest for last one year = 125% of 20 = 25%

According to question-

$\Rightarrow 1500000 \times (1.2)^2 \times (1.25) - 1500000\ (1.2)^3$

$\Rightarrow 1500000 \times (1.8 - 1.728)$

$\Rightarrow 1500000 \times 0.072$

$\Rightarrow 108000$

Reqd. % $= \frac{108000}{1500000} \times 100 = 7.2\%$

Hence, option C is correct.

2. Let son's age = x

Husband's age = 3x

Wife's age = 3x – 3

According to question-

$\Rightarrow x + 3x + (3x - 3) = 41 \times 3$

$\Rightarrow 7x = 126$

$\Rightarrow X = 18$

Son's age = 18 years

Husband's age = 18 × 3 = 54 years

Wife's age = 18 × 3 – 3 = 51 years

Required ratio = 18 : 54 : 51 = 6 : 18 : 17

Hence, option C is correct.

3. Let speed of man in still water = x km/h

Speed of current = y km/h

Downstream speed = (x + y) km/h

Upstream speed = (x – y) km/h

Let PQ = QR = A and PR = 2A

So,

$\frac{2A}{x+y} = 24$ and $\frac{A}{x-y} = 16$

By dividing both equations-

$\Rightarrow \frac{2A\,(x-y)}{A\,(x+y)} = \frac{24}{16}$

$\Rightarrow 4x - 4y = 3x + 3y$

$\Rightarrow \frac{x}{y} = \frac{7}{1}$

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Required ratio = Speed of man in still water : Speed of current
$\Rightarrow 7 : 1$
Hence, option D is correct.

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4. Let's say the price of 1000g of goods = Rs.1000
Now he gets 1400g of goods at Rs.1000
Hence CP of shopkeeper for 1 g

$= \frac{1000}{1400} = \text{Rs.}\frac{5}{7}$

CP of shopkeeper for 840g
$= \frac{5}{7} \times 840 = \text{Rs.}600$

Now instead of selling 1000g he sells 840g for Rs.900 (10% discount)
Profit $= \frac{900 - 600}{600} \times 100 = 50\%$
Hence, option A is correct.

5. Initial amount of tea = A kg

Amount of tea removed = A% of A = $A^2/100$

After two operations as given in the question,

Remaining amount of pure tea = (90% of 40% of A)

$= A\left(1 - \frac{A^2}{100A}\right)^2$

$\Rightarrow 0.36A = A\left(\frac{100 - A}{100}\right)^2$

$\Rightarrow 10000 \times 0.36A = A(100 - A)^2$
$\Rightarrow 3600 = (100 - A)^2$
$\Rightarrow 100 - A = 60$
$\Rightarrow A = 40$
Hence, option C is correct.

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6. One day work of a man = 1 unit

Total work = 4 × 11 = 44 units

If on each subsequent day a new man joined -

The work on 2nd day = 2 unit

The work on 3rd day = 3 unit

So on….

Than for the first 8 days the total work = 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 = 36 units

Remaining work = 44 – 36 = 8 units

This remaining 8 unit of work will be completed in 1 more day as 8 men are employed in the work.

Hence total time taken = 8 + 1 = 9 days.

Therefore, option C is correct.

7. Let cost price of each book = 'P'.

Books sold at 10% profit = 20% of 100 = 20

Books sold at 15% profit = 37.50% of 80 = 30

Books sold at 8% profit = 80% of 50 = 40

Books sold at 20% profit = 100 – 20 – 30 – 40 = 10

Total SP of books = [20 × 1.1P] + [30 × 1.15P] + [40 × 1.08P] + [10 × 1.2P] = 22P + 34.5P + 43.2P + 12P = 111.7P

Total SP when all the books are sold at 16% profit = 116% of 100 × P = 116P

Difference = 116P – 111.7P = 1505 (Given)

⇒ 4.3P = 1505

⇒ P = 350

Hence CP of each book = Rs.350

Therefore, option C is correct.

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8. Let the number of non-officers in office = x

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Now, according to question-

⇒ 400x + 1040 × 30 = 500(30 + x)

⇒ 400x + 1040 × 30 = 500 × 30 + 500x

⇒ 100x = 30 (1040 – 500)

⇒ 100x = 30(540)

⇒ x = 162

Reqd. average = $\frac{30 + 162}{2}$ = 96

Hence, option D is correct.

9. A : B = 2 : 3

B : C = 2 : 5

C : D = 3 : 4

A : B : C : D = 12 : 18 : 45 : 60 = 4 : 6 : 15 : 20

The number of sweets received by brothers together

$= \frac{21}{45} \times 360 = 168$

The number of sweets received by others together = 360 – 168 = 192

Required difference = 192 – 168 = 24

Hence, option C is correct.

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10. Let total students in class 6th and class 7th is 6x and 11x respectively.
Total students in both classes = 6x + 11x = 17x

Girls in class 6 = $6x \times \frac{40}{100} = \frac{240x}{100} = 2.4x$

Girls in class 7 = $11x \times \frac{48}{100} = \frac{528x}{100} = 5.28x$

So total girls = 2.4x + 5.28x = 7.68x

Reqd. % = $\frac{7.68x}{17x} \times 100 \Rightarrow 45.2\%$ (approx.)

Hence, option B is correct.

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