# Maths Questions for CLAT Exam.

## CLAT Maths Quiz 37

**Directions: Read the following Questions carefully and choose the right answer:**

**1.**

$$\left[\left\{\left(\frac{7}{3}+\frac{5}{2}-\frac{1}{6}\right)\div 2\frac{1}{3}\right\}\times 2\frac{3}{7}\right]\div\left(\frac{5}{7}-3\frac{4}{7}-2\right)=?$$

A. – 2 B. 2 C. – 1 D. 1

**2. The least number which, when divided by 35 leaves the remainder 25, and on division by 45 leaves the remainder 35 and on division by 55 leaves the remainder 45 is**

A. 3465 B. 3475 C. 3445 D. 3455

**3. Three years ago, the average age of a family of 5 members was 17 years. A baby was born, but the average age of the family is still the same today. The present age of the baby is**

A. 5 years B. 3 years C. 2 years D. 6 years

**4. Of the total amount received by Nirdosh, 20% was spent on purchases and 5% of the remaining amount was spent on transportation. What was the initial amount if she is left with Rs. 1520?**

A. Rs. 2000 B. Rs. 2500 C. Rs. 3300 D. Rs. 3500

**5. At what simple interest rate shall a sum of money double itself in 4 years?**

A.20% B. 25% C. 28% D. 30%

**6. 5 Kg of wheat flour is mixed with 500 gm of sugar extract. What is the ratio of sugar extract to the rest of the mixture, after adding 1.5 kg of water?**

A. 1 : 5 B. 4 : 7 C. 1 : 13 D. 5 : 9

**7. Oil costs Rs. 100 per kg. After adulterating it with another oil that costs Rs. 50 per kg. Ashwani sells the mixture at Rs. 96 per kg, making a profit of 20%. In what ratio does he mix the two oils?**

A. 1 : 2 B. 2 : 3 C. 3 : 2 D. 2 : 1

**8. Two men and 3 boys can complete a piece of work in 10 days while 3 men and 2 boys can complete the same work in 8 days. In how many days can 2 men and 1 boy complete the same work?**

A. 11 days B. 12.5 days C. 14 days D. 15.5 days

**9. A thief is spotted by a policeman at a distance of 200 m. If the speed of the thief is 10km/hr, and that of the policeman is 12 km/hr, how long will the policeman have to run to catch the thief?**

A. 1.6 km B. 1.5 km C. 1.2 km D. 2 km

**10. A person has only 25-paise and 50-paise coins. In total he has 40 coins and the value of them is Rs. 12.50. Find the number of 50-paise coins he has.**

A. 8 B. 6 C. 7 D. 10

**Correct Answers:**

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

**Explanations:**

**1.**

$$\left[\left\{\left(\frac{7}{3}+\frac{5}{2}-\frac{1}{6}\right)\div 2\frac{1}{3}\right\}\times 2\frac{3}{7}\right]\div\left(\frac{5}{7}-3\frac{4}{7}-2\right)=?$$

$$=\left[\left\{\left(\frac{7}{3}+\frac{5}{2}-\frac{1}{6}\right)\div 2\frac{1}{3}\right\}\times 2\frac{3}{7}\right]\div\left(\frac{5}{7}-3\frac{4}{7}-2\right)$$

$$=\left[\left\{\left(\frac{7}{3}+\frac{5}{2}-\frac{1}{6}\right)\div\frac{7}{3}\right\}\times\frac{17}{7}\right]\div\left(\frac{5}{7}-\frac{25}{7}-2\right)$$

$$=\left[\left\{\left(\frac{14+15-1}{6}\right)\div\frac{7}{3}\right\}\times\frac{17}{7}\right]\div\left(\frac{5-25-14}{7}\right)$$

$$=\left[\left\{\frac{28}{6}\div\frac{7}{3}\right\}\times\frac{17}{7}\right]\div\left(\frac{-34}{7}\right)=\left[\left\{\frac{28}{6}\times\frac{3}{7}\right\}\times\frac{17}{7}\right]\div\left(\frac{-34}{7}\right)$$

$$=\left[2\times\frac{17}{7}\right]\div\left(\frac{-34}{7}\right)=\frac{34}{7}\times\left(\frac{-73}{347}\right)=-1$$

Hence, option C is correct..

**2.** Difference between divisor and remainder = 35 – 25 = 45 – 35 = 55 – 45 = 10.

LCM of 35, 45, 55 = 5 × 7 × 9 × 11 = 3465

Required Number = 3465 – 10 = 3455

Hence, option D is correct.

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**3.** Total sum of ages of family members 3 years ago = 17 × 5 = 85 years.
Total sum of present ages of family members = 85 + 3 × 5 + x, where x is the age of the baby.

$$\text{Present average} = \frac{85 + 3 \times 5 + x}{6} = 17$$

$\Rightarrow x = 102 - 100 = 2$ years

Hence, option C is correct.

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**4.** Let Rs. 100 be the sum. 20% is spent on purchases.
Hence we are left with Rs. 80.
Five percent of 80 is 4.
Hence the remaining amount is Rs. 76.

We are given that the remaining amount is Rs. 1520. Hence 76 corresponds to Rs. 1520 and hence 100 corresponds to

$$= \frac{100 \times 1520}{76} = \text{Rs. } 2000$$

Hence, option A is correct.

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**5.** An important point to be noted here is that the amount received by the lender is doulbe the amount given.

i.e., Interest = Principal.

So, if x is the Principal, then x is also the simple interest.

$$\therefore x = \frac{x \times R \times 4}{100} \Rightarrow R = \frac{100}{4} = 25\%$$

Hence, option B is correct.

**6.** We first need to convert all figures into one single unit.

Wheat flour = 5 kg

Water = 1.5 Kg

Sugar extract = 500 gm = 0.5 kg

Total weight of the mixture = 7 kg

Total weight of the mixture without sugar extract = 6.5 kg

Ratio of sugar extract to the rest of the mixture.

$= \frac{0.5}{6.5} = 1 : 13$

Hence, option C is correct.

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**7.** Let the ratio be x : 1 for Rs. 100 per kg and Rs. 50 per kg oil.

Total CP = Rs. (100x + 50)

Total SP = Rs. 96 (x + 1)

$96 (x + 1) = (100x + 50) \times \frac{120}{100}$

$\Rightarrow 96 \times 5 (x + 1) = 6 \times 50 (2x + 1)$

$\Rightarrow 8 (x + 1) = 5 (2x + 1)$

$\Rightarrow 8x + 8 = 10x + 5 \Rightarrow 2x = 3 \Rightarrow x = \frac{3}{2}$

Required ratio is 3 : 2

Hence, option C is correct.

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**8.** Let 1 man's 1 day's work be x.

Let 1 boy's 1 day's work be y.

$2x + 3y = \frac{1}{10}$ and $3x + 2y = \frac{1}{8}$

On solving, we get $x = \frac{7}{200}$ and $y = \frac{1}{100}$

(2 men + 1 boy's) 1 day's work $= 2 \times \frac{7}{200} + 1 \times \frac{1}{100} = \frac{16}{200} = \frac{2}{25}$

Thus, 2 men and 1 boy can finish the work in $\frac{25}{2}$ or 12.5 days

Hence, option B is correct.

**9.** Relative speed of the policeman = 2 km/hr
Time taken by the policeman to cover the additional

$$200 \text{ m} = \frac{200}{1000} \times \frac{1}{2} \text{ hr} = \frac{1}{10} \text{ hr}$$

Within $\frac{1}{10}$ hr, distance covered by the policeman

$$= 12 \times \frac{1}{10} = 1.2 \text{ km.}$$

Hence, option C is correct.

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**10.** Suppose that he has x number of 25-paise coins and y number of 50-paise coins.

Then, $x + y = 40$ .....(i)

and $\frac{1}{4}x + \frac{1}{2}y = 12.50$

$\Rightarrow x + 2y = 50$ .....(ii)

Subtracting (i) from (ii), we get

$$\begin{array}{r} x + 2y = 50 \\ x + y = 40 \\ - \quad - \quad - \\ \hline y = 10 \end{array}$$

So, he has 10 fifty-paise coins.

Hence, option D is correct.