Maths Questions for CLAT Exam

CLAT Maths Quiz 29

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

1. Mohit starts shopping on PayTm & for every shopping of Rs 100, he gets a cashback of 1% on Marked price of an item. He ordered a mobile of Rs 6000 & gets 10% discount as a first time user and also gets a gift worth Rs 799. Calculate his gain or loss%, if he sold the mobile to Rohit at Rs 4600.

A. loss of 1.29%

B. Gain of 1.29%

C. Gain of 2.29%

D. loss of 2.29%

2. At what rate percentage per annum will the simple interest on a sum of money be 7/9 of the amount in 7 years?

A. 10%

B. 20%

C. 40%

D. 50%

3. A can type 100 pages in 20 hours; A and B can type 600 pages in 80 hours. In how much time can B type 40 pages?

A. 15 hours

B. 16 hours

C. 14 hours

D. 12 hours

4. When a number is divided by 1881 the remainder is 757. What will be the remainder when it is dividend by 33?

A. 30

B. 31

C. 27

D. 13

5. B was born when A was 4 years 7 months old and C was born when B was 3 years 4 months old. When C will be 5 years 2 months old then there average age will be.

A. 8 years 11 months

B. 7 years 6 months

C. 8 years 7 months

D. 7 years 9 months

6. In a school the ratio of boys to girls is 4 : 3 and ratio of girls to teachers is 8 : 1. The ratio of students to teachers is

A. 58 : 5

B. 56 : 3

C. 57 : 6

D. 56 : 9

7. The difference of two numbers is 20% of the larger number, if the smaller number is 20, the larger number is

A. 15

B. 20

C. 25

D. 28

8. A cistern is normally filled in 8 hours but takes another 2 hours longer to fill because of a leak in its bottom. If the cistern is full, the leak will empty it in

A. 35 hours

B. 38 hours

C. 40 hours

D. 42 hours

9. A train 180 m long moving at the speed of 20 m/s, over - takes a man moving at the speed of 10m/sec in the same direction. The train passes the man in

A. 20 seconds

B. 18 seconds

C. 22 seconds

D. 25 seconds

10. If base and height of parallelogram are in ratio of 2 : 3 and area of parallelogram is 600 m2. Find height of parallelogram.

A. 28 m

B. 30 m

C. 32 m

D. 36 m

Correct Answers:

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

Explanations:

1. Total discount = Cash back amount + 10% discount as first time user + gift
Total amount = 60 + 600 + 799 = 1459,

Actual cost price = 6000 – 1459 = 4541,

Selling price = 4600, Gain = 59

$$\text{Gain \%} = \frac{59}{4541} \times 100 = 1.29\%$$

Hence, option (B) is correct.

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

$$\text{As, Amount} = P + \frac{PRT}{100}$$

So, According to given condition :-

$$\Rightarrow \text{S.I.} = \frac{7}{9}(\text{Amount})$$

$$\frac{PRT}{100} = \frac{7}{9}\left(P + \frac{PRT}{100}\right)$$

$$\frac{PRT}{100} = \frac{7P}{9}\left(1 + \frac{RT}{100}\right)$$

$$\frac{R}{100} = \frac{1}{9} + \frac{RT}{900}$$

$$\frac{R}{100} - \frac{7R}{900} = \frac{1}{9} \Rightarrow \frac{900R - 700R}{90000} = \frac{1}{9}$$

$\Rightarrow$ 200 R = 10,000

R = 50%

Hence, option (D) is correct.

3. A can type 400 pages in 80 hours. So B can type 200 pages in 80 hours.

B can type 1 page in $\frac{80}{200} = \frac{2}{5}$ hours

B can type 40 pages in $\frac{2}{5} \times 40 = 16$ hours

Hence, option (B) is correct.

4. Here, 1881 is exactly divisible by 33.

Hence, the required remainder is obtained on dividing 757 by 33
remainder = 31

Hence, option (B) is correct.

5. When age of C = 5 years 2 months

Age of B will be = 5 years 2 months + 3 years 4 months

= 8 years 6 months

& the age of A = 4 years 7 months + 8 years 6 months = 13 years 1 month

$$\text{Average} = \frac{\text{26 years 9 months}}{3} = \frac{26\frac{9}{12}}{3} = 8 \text{ years } 11 \text{ months}$$

Hence, option A is correct.

6. B : G = 4 : 3

G : T = 8 : 1

So,

B : G : T = 4 : 3

3 : 1

= 32 : 24 : 3

So, the required ratio is = (32 + 24) : 3 = 56 : 3

Hence, option B is correct.

7. Let the larger number be x

as per question = x – 20 = 20% of x

$$x - 20 = \frac{x}{5}$$

$$x - \frac{x}{5} = 20$$

$$\frac{5x - x}{5} = 20$$

= 5x – x = 100 ⇒ 4x = 100

x = 25

So, the larger number is 25.

Hence, option C is correct.

8. In normal condition

8 hours → fill 1 cistern

so, in 1 hours → 1/8 cistern filled

due to leakage,

10 hour → fill 1 cistern.

1 hours → 1/10 part of cistern filled.

Now, the part emptied in 1 hour

$$\Rightarrow \frac{1}{8} - \frac{1}{10} = \frac{5-4}{40} = \frac{1}{40}$$

So, the leak will empty the cistern in 40 hours.

Hence, option C is correct.

9. Relative speed of man and train = 20 – 10 = 10 m/s

$$\text{Reqd. time} = \frac{180}{10} = 18 \text{ seconds}$$

Hence, option B is correct.

10. Let base of parallelogram be 2x.

∴ Height of triangle = 3x

Where, x is any constant

Area of parallelogram = base × height

∴ 600 = (2x) × (3x)

∴ 600 = 6 x^2

∴ x^2 = 100

∴ x = 10m

Now, Height of parallelogram = 3x = 3 × 10 = 30m.

Hence, option (B) is correct.