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1. Express the ratio 12:16 in its simplest form.

Simplify 12:16

Divide both by 4:

12:16 = 3:4

Simplified ratio: 3:4.

2. Divide $120 in the ratio 2:3

Total parts = 2 + 3 = 5

Each part = 120 ÷ 5 = 24

2 parts = 2 × 24 = $48

3 parts = 3 × 24 = $72

Answer: $48 and $72

3. The ratio of cats to dogs in a pet shop is 4:7. If there are 28 dogs, how many cats are there?

Ratio of cats to dogs is 4:7. Dogs = 28

we can find the number of cats by setting up a proportion:

7/4?=28/x?

4×28=7×x?112=7x?x=112/7?=16

or

7 parts = 28 ? 1 part = 4

4 parts = 4 × 4 = 16 cats

Number of cats: 16 cats.

4. If a person earns $240 for working 8 hours, what is the rate of pay per hour?

$240 for 8 hours

Rate per hour = 240 ÷ 8 = $30/hour

Rate of pay per hour: $30 per hour.

5. Are the ratios 6:9 and 8:12 proportional?

=6:9 = 2:3, (simplify by dividing both by 3)

=8:12 = 2:3, (simplify by dividing both by 4)

Answer: Yes, they are proportional.

6. If 3 shirts cost $45, how much would 5 shirts cost at the same rate?

3 shirts = $45 ? 1 shirt = 45 ÷ 3 = $15

5 shirts = 5 × 15 = $75

So the Cost of 5 shirts: $75.

7. If 5 pens cost $10, how much do 12 pens cost?

5 pens = $10 ? every one is 1 pen = $2

So 12 pens = 12 × 2 = $24

The Cost of 12 pens: $24.

8. A class has 18 boys and 12 girls. What is the ratio of boys to the total number of students?

Boys = 18, Girls =] 12, Total = 30

The total number of students in the class is 18+12=30
The ratio of boys to the total number of students is:

18:30.

30/18?=5/3?

Ratio of boys to tot al students: 3:5.

9. 25% of 480.

To find 25% of 480, multiply 480 by 25/100 ? or 0.25:

480×0.25=120

So the correct answer is of these equation 25% of 480: 120.

10. 10. A jacket is sold for $150 after a 20% discount. What was the original price?

Uqaado qiimaha originalka or original price x
The jacket was sold for 80% of the original price (since 100% - 20% = 80%).

$150 after 20% discount ? paid 80% of original

0.80*x=150

x=150/0.80 ?=187.5-0

Original price: $187.50,

11. A salesperson earns a 5% commission on sales. If they sell goods worth $2,000, how much commission do they earn?

To find the commission, multiply the sales by the commission rate:

5/100?*2000=0.05×2000=100

Commission earned: $100.

12. If 60% of a number is 180, what is the original number?

Let the original number be xxx.
60% of x is 180, so:

0.60*x=180

X=180/0.60?=300

So Original number: 300.

13. Find the simple interest on $1,200 at a rate of 5% per annum for 3 years.

Simple Interest = P × R × T ÷ 100

Where:

P=1200 (principal),

R=5 (rate),

T=3 (time).

14. A sum of $2,000 is invested at 10% per annum for 3 years compounded annually. Find the total amount.

Use the compound interest formula:

A=P(1+R/100?)t

Where:

P=2000 (principal),

R=10 (rate),

T=3 (time).

15. A loan of $2,000 is given for 2 years at a rate of 6% per annum. What is the total amount to be repaid at the end of the period?

Use the simple interest formula.

Simple Interest = P×R×T/100

Where:

P=2000,

R=6,

T=2.