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Express the ratio 12:16 in its simplest form.

Ans; To simplify the ratio 12:16, divide both numbers by their greatest common divisor (GCD).

The GCD of 12 and 16 is

4

.

12

/

4=3

16

/

4=

4

.

Simplest form: **3:4**.

Divide $120 in the ratio 2:3.

Ans; To divide $120 in the ratio 2:3

2+3=5

120/5=24 per part

2 x 24=48

3 x 24= 72

Final answer is 48:72

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

Ans;

28/4= 7

4 x 4= 16

There are 16 cats in a pet shop.

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

Ans:

Rate per hour= 240/8 =30

So, the rate of pay is $30 per hour.

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

Ans;

6/9= 2/3

8/12=2/3

Since both simplify to the same fraction, yes, 6:9 and 8:12 are proportional.

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

Ans;

45/3=15

15 x 5=72

So, 5 shirts would cost $75 at the same rate.

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

Ans;

10/2=5

2 × 12=24

So, 12 pens would cost $24.

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

Ans ; 18/30 = 3/5

The ratio is 3:5

9. Find 25% of 480.

Ans; 25/100 X 480 = 120

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

Ans; 0.8x = 150

X= 150/0.8= 187.5

The original price is 187.5

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

Ans; 5/100 × 2000=0.05

0.05×2000=100

The commission earned is $100.

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

Ans

0.16x=180

X=180/0.16=300

The original number is 300.

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

Ans; 1200×5(3)/100=1800

1800/100= 180

The simple interest is $180.

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

Ans;

$200(1+10/100)^3 = 2000(1.1)^3$

$2000 \times 1331 = 2662$

The total amount after 3 years is $2,662.

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?

Ans; $2000 \times 6 (2)/100 = 24000$

24000/100=240

2000+240=2240

The total amount to be repaid is $2,240.