



**ALPHA UNIVERSITY BORAMA**

**Assignment of math's methods**

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**The assignment: Individual assignments**

Express the ratio 12:16 in its simplest form.

Answer:

12:16

=

3:4

Divide \$120 in the ratio 2:3.

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

Cats

=

4

×

4

=

16

cats

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

Answer:  $\$240 \div 8 = \$30$  per hour

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

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

5

×

\$15

=

\$75

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

12

×

\$2

=

\$24

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

Ratio

=

18:30

=

3:5

Find 25% of 480.

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

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

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

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

**Answer:**

$$\text{SI} = (\text{P} \times \text{R} \times \text{T}) / 100 = (1200 \times 5 \times 3) / 100 = \$180$$

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

**Answer:**

$$\text{A} = \text{P}(1 + \text{r}/100)^t = 2000(1 + 0.10)^3 = 2000 \times 1.331 = \$2,662$$

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?

**Answer:**

$$\text{SI} = (2000 \times 6 \times 2) / 100 = \$240$$

$$\text{Total} = 2000 + 240 = \$2,240$$