



ALPHA UNIVERSITY BORAMA

Assignment of math's methods

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The assignment: math's methods

Individual assailment the assignment **30 marks**

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Express the ratio 12:16 in its simplest form.

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?

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

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

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

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.

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

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?

1. Simplified ratio of 12:16

2. Divide 120 in the ratio 2:3

Total parts = $2 + 3 = 5$

Value of one part = $120 \div 5 = 24$

Shares:

2 parts: $2 \times 24 = 48$

3 parts: $3 \times 24 = 72$

3. Cats to dogs ratio is 4:7; if there are 28 dogs, how many cats?

The cats equals =16

4. 240 for 8 hours; rate per hour?

The pay rate per hour =30/hour

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

6. If 3 shirts cost 45; cost of 5 shirts is:

5 shirts = 75

7. If 5 pens cost 10; cost of 12 pens is:

12 pens cost = 24

8. Class has 18 boys and 12 girls; ratio of boys to total students is:

Ratio = 3:5

9. Find 25% of 480

10. Jacket sold for 150 after 20

The original price will be x.

The original price was =187.50

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

Commission earned will be:

12. 60% of a number is 180; original number?

13. Simple interest on 1,200 at 5

$$SI = (P \times R \times T) \div 100 = (1,200 \times 5 \times 3) \div 100 = 180$$

Simple interest = 180

14. Compound interest on 2,000 at 10% per annum for 3 years

$$A = P(1 + r)^t = 2,000 \times (1 + 0.10)^3 = 2,000 \times 1.331 = 2,662$$

Compound interest = 2662

15. Loan of 2,000 for 2 years at 6% per annum; total repayment?

$$SI = (2,000 \times 6 \times 2) \div 100 = 240$$

$$\text{Total repayment} = 2,000 + 240 = \$2,240$$

$$\text{Total repayment} = 2,240$$