Assignment of math's methods

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The assignment

Individual assailment the assignment 30 marks

Submission date 05-05-2025

Express the ratio 12:16 in its simplest form.

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To simplify the ratio 12:16:

Find the greatest common divisor (GCD) of 12 and 16.

The GCD of 12 and 16 is

4

.

Divide both terms by 4:

$12 \div 4 = 3$

$16 \div 4 = 4$

Simplified ratio: 3:4.

Divide $120 in the ratio 2:3.

?

To divide $120 in the ratio 2:3:

Add the parts of the ratio:

$2 + 3 =$

5 parts

Find the value of one part:

$\$120 \div 5 =$

$24

Multiply each part:

First part (2 parts): $2 \times \$24 =$

$48

Second part (3 parts): $3 \times \$24 =$

$72

Answer: $48 and $72.

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

The ratio of cats to dogs is 4:7, and there are 28 dogs.

The "dog" part of the ratio is 7.

Set up a proportion:

Solve for

x

(number of cats):

Answer: There are 16 cats.

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

Rate per hour=Total pay/Total hours=240/8=30

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

To check if the ratios 6:9 and 8:12 are proportional, simplify both:

6:9

simplifies by dividing both terms by 3:

8:12

simplifies by dividing both terms by 4:

Since both simplify to 2:3, yes, the ratios are proportional.

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

To find the cost of 5 shirts at the same rate:

First, find the cost of

one shirt

:

Then, multiply by 5:

Answer: $75 for 5 shirts.

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

To find the cost of 12 pens:

Find the cost of

one pen

:

Multiply by 12:

Answer: $24 for 12 pens

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

To find the ratio of boys to the total number of students:

Total number of students = 18 boys + 12 girls =

30 students

Ratio of boys to total =

18

/

30=

3/

5

Answer: 3:5

Find 25% of 480

.

?

To find 25% of 480: $25\% = 25/100 = 1/4$. $1/4 \times 480 = 120$

Answer: 120

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

Let the original price be x.

Since there's a 20% discount, the jacket is sold for 80% of the original price:

$0.80 \times X = 150$

Solve for x:

$x = 150/0.80 = 187.50$

Answer: The original price was $187.50

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

To calculate 5% commission on $2,000:

$Commission = 5/100 \times 2000 = 0.05 \times 2000 = 100$

Answer: $100 commission

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

Let the original number be x.

Given:

60% of x=180?0.60×x=180

Solve for x:

x=180/0.60=300

Answer: The original number is 300

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

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To find simple interest, use the formula:

Simple Interest=P×R×T/100

P=

1200

(principal)

R=

5%

(rate)

T=

3

years

SI=1200×5×3/100=18000/100=180

Answer: $180 in simple interest

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

?

To find the total amount with compound interest, use the formula:

A=P×(1+R/100)^t

P=

2000

(principal)

R=

10%

(rate)

T

=

3

years

A=2000×(1+10/100)^3=2000×(1.10)^3l

A=2000×1.331=266

Answer: $2,662 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?

To find the total amount to be repaid using simple interest,

SI=P×R×T/100

P=2000

R=6%

T=2

years

SI=2000×6×2/100=24000/100=240

Total=Principal+Interest=2000+240=2240

Answer: $2,240 to be repaid