ALPHA UNIVERSITY BORAMA

Assignment of math's methods

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The assignment

Individual assailment the assignment 30 marks

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1:To simplify the ratio 12:16, we find the greatest common divisor (GCD) of both numbers. The GCD of 12 and 16 is 4.

Now, divide both numbers by 4:
12 \ 4 = 3
16 \ 4 = 4
So, the simplified ratio is 3:4

2: divide $120 in the ratio 2:3:

1. Add the parts of the ratio:
2 + 3 = 5 parts

2. Find the value of one part:
$120 ÷ 5 = $24 per part

3. Multiply to find each share:

First share (2 parts): 2 × $24 = $48

Second share (3 parts): 3 × $24 = $72

First share = $48

Second share = $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?

Cats : Dogs = 4 : 7

2. Find how many times 7 fits into 28:
28 ÷ 7 = 4

3. Multiply the cat part by 4:
4 × 4 = 16 cats

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

240 \div 8 = 30

So, the person earns $30 per hours
5:Are the ratios 6:9 and 8:12 proportional?

6:9 ? divide both by 3 ? 2:3

8:12 ? divide both by 4 ? 2:3

6: If 3 shirts cost $45, how much would 5 shirts cost at the same rate?
45 ÷ 3 = $15 per shirt

Now, multiply by 5:

5 × $15 = $75
Answer: 5 shirts would cost $75.

7: If 5 pens cost $10, how much do 12 pens cost?
10 ÷ 5 = $2 per pen

Now, multiply by 12:
12 × $2 = $24
Answer: 12 pens would cost $24.

8: 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?
18:30
Boys: 18
- Girls: 12
- Total students = 18 + 12 = 30

18 ÷ 6 = 3

30 ÷ 6 = 5
Answer: The simplified ratio is 3:5

9:Find 25% of 480.

25% of 480 = (25/100) × 480

Now, multiply:

= 0.25 × 480
= 120

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

0.80x = 150

Divide both sides by 0.80:

x = \frac{150}{0.80} = 187.50

Answer: 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 earn?
0.80x = 150

Divide both sides by 0.80:

x = \frac{150}{0.80} = 187.50

Answer: The salesperson earns $100 in commission.

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

60\% \text{ of } x = 180 \Rightarrow 0.60x = 180

Divide both sides by 0.60:

x = \frac{180}{0.60} = 300
13-Find the simple interest on $1,200 at a rate of 5% per annum for 3 years.

\text{Simple Interest} = \frac{P \times R \times T}{100}

Where:

P = Principal = $1,200

R = Rate = 5%

T = Time = 3 years
\text{SI} = \frac{1200 \times 5 \times 3}{100} = \frac{18,000}{100} = 180

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

Interest =2000*6*2/100=240 so A=2000+240=2240

So, at the end of **2 years**, the total repayment amount will be **$2,240**.

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?

A=200*(1+10/100)3

A=2000(1.1)3

A=2000*1.331

A=2662