**ALPHA UNIVERSITY BORAMA**

**Assignment of math’s methods**

**Name: abdishakuor Mohamed nuur faculty account and financial ID 556**

**The assignment**

**Individual assailment the assignment 30 marks**

**Submission date 05-05-2025**

1. Express the ratio 12:16 in its simplest form.

12:16

3:4

1. Divide $120 in the ratio 2:3.

**solution**

add the ratios 2+3=

to find the number of ratio 2 2 x120 = 48

5

to find the number of ratio 3 3x120 = 72

5

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

**Solution**

**Let x is number of cats**

**4 x 7x=112 16 cats**

**7 28**

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

**Solution**

240 = 30 per hour

8

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

6:9 and 8:12

2:3 2:3

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

45 =15

3

5x15=75 5shirts cost will be 75

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

10/5 = 2 12x2 = 24 12 pens cost will 24

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

the ratio of the total number of students is 18+12 = 30 18:30 = 3:5

1. Find 25% of 480.

**Answer**

25 x480 = 120

100

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

Let original price = x  
20% of x = discount → Selling price = x - 0.2x = 0.8x  
0.8 = 150 → x = 150/0.8=187.5= 187.5  
→ **$187.50**

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

5​×2000=100

100  
**100 commission**

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

0.6x180 x=180= 300

0.6 0.6 0.6

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

Si= p\*r\*t 1200\*5\*3 180

100

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

**Solution**

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **Amount at beginning of year** | **Compound interest** | **Amount end year** |
| **1** | **$2000** | **10%2000=200** | **2000+200=2200** |
| **2** | **2200** | **10%2200=220** | **2200+220=2420** |
| **3** | **2420** | **10%2420=242** | **2420+242=2662** |

1. 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?

Sim=p\*r\*t 2000\*6\*2 240

100