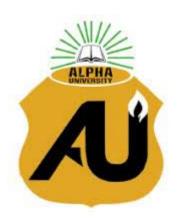**ALPHA UNIVERS**

**DIPLOMA PROGRAM**

**FACAULTY OF**

**Assignment mathematics Method**

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**ID: 1025**

Simplify the ratio 12:16

Divide both terms by 4:

$= 3:4$

Divide $120 in the ratio 2:3

Total parts $= 2 + 3 = 5$

One part $= \$120 \div 5 = \$24$

Shares: $48 and $72

Ratio of cats to dogs is 4:7; if there are 28 dogs, how many cats?

7 parts $= 28$

?

1 part = 4

Cats = 4 × 4 =

16 cats

$240 for 8 hours

?

rate per hour

240 ÷ 8 =

$30/hour

Are 6:9 and 8:12 proportional?

6/9 = 2/3; 8/12 = 2/3

Yes, they are proportional

3 shirts = $45

?

5 shirts?

One shirt = $15

5 shirts = 5 × $15 =

$75

5 pens = $10

?

12 pens?

One pen = $2

12 pens = 12 × $2 =

$24

18 boys, 12 girls

?

ratio of boys to total students

Total = 30; Ratio = 18:30 =

3:5

Find 25% of 480

$25/100 \times 480 =$

120

Jacket sold for $150 after 20% discount

?

original price?

Let original = x:

x ? 0.2x = 150

?

0.8x = 150

?

x = 150 ÷ 0.8 =

$187.50

5% commission on $2,000

0.05 × 2000 =

$100

60% of a number = 180

?

original number?

0.6x = 180

?

x = 180 ÷ 0.6 =

300

Simple Interest on $1,200 at 5% for 3 years

$SI = PRT/100 = (1200×5×3)/100 =$

$180

Compound Interest on $2,000 at 10% for 3 years (compounded annually)

$A = P(1 + r/100)^t = 2000(1.1)^3$ ? $2000 \times 1.331 =$

$2,662

Loan $2,000 for 2 years at 6% p.a.

?

total repayment

$SI = (2000×6×2)/100 = \$240$

Total = 2000 + 240 =

$2,240