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Course: *math's methods*

Program:diploma

Class:online

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

ANS: $12/4:16/4=3:4$

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

ANS: $2+3=5$

$2/5 \times 120 = \text{£}48$

$3/5 \times 120 = 72$

$\text{£}48 : \text{£}72$

3: the ratio of cats to dogs in a pet shop is 4:7 if there are 28 dogs how many cats are there?

ANS: $4/7 \times 28 = 16$ cats

4: If person earns $\text{£}240$ for working 8 hours what is rate of pay per hour ?

ANS: $240/8 = 30$ per hours

5: are the ratio 6:9 and 8:12 proportional

ANS: $6:9 = 6/9 = 2/3$

$8:12 = 8/12 = 2/3$ since both simplifies to the same fraction the ratios are proportional

6: if 3 shirts cost $\text{£}45$ how much would 8 hour, what is the rate of pay per hour?

ANS: $45/3 = 15 \times 5 = 75$

7: if 5 pens cost $\text{£}10$ how much do 12 pens cost ?

ANS: $10/5 = 2 \times 12 = 24$

12 pens cost $\text{£}24$

8: a class has 18 boys and 12 girls what is ratio of boys to total number of students?

ANS: total numbers students $= 18 + 12 = 30$ students

The ratio of boys to the total number of students $= 18:30 = 3:5$

9: find 25% of 480?

ANS: 25% of 480 $= 25/100 \times 480 = 0.25 \times 480 = 120$

10: a jacket is sold for $\text{£}150$ after a 20% discount, what was the original price?

the selling price is 80%

$150/0.80 = 187.50$ the original price was 187.50

11: a sale person earns a 5% commission on sale if they sell goods worths $\text{£}2000$, how much commission do they earn

ANS: commission: $5/100 \times 2000 = 0.05 \times 2000 = 100$

The sale person earns $\text{£}100$ in commission

12: if 60% of a number is 180. What is the original number?

ANS: given that 60% of x=180

$$0.60x=180$$

$$X=180/0.60=300$$

13:the simple interest on 1200 at rate of 5%per annum for 3years?

ANS: simple interest = $P \times R \times T / 100$

$$P=1200$$

$$R=5$$

T=number of years

$$SI=1200 \times 5 \times 3 / 100 = 18000 / 100 = 180$$

So \$180 interest in 3years

14:asum of\$2000 is invested at 10%per annum for 3 years compounded annually find the total amount?

ANS: $A = P(1 + R/M)$ A=amount of 3years

$$A=2000(1+10/100)^3$$

$$P=2000 \quad =2000(1.10)^3$$

$$R=1 \quad A=2000 \times 1.331 = 2662$$

T=3 years

15:Aloan of 2000 is given for 2years at a rate of 6%per annum. what is the total amount to be repaid at the end of the period?

ANS: $SI = P \times R \times T / 100$

$$\text{Where } SI = 2000 \times 6 \times 2 / 100 = 24000 / 100 = 240$$

$$P=2000 \quad \text{Total} = P + SI = 2000 + 240 = 2240$$

R=6 total amount to be repaid is &2240

T=2years

