1.

12:16 simplifies to 3:4 (Divide both terms by 4)

2.

$120 in the ratio 2:3 ? Total parts = 2 + 3 = 5

Each part = 120 ÷ 5 = $24

? 24×2=$48 and 24×3= $72

3.

Ratio of cats to dogs = 4:7

If there are 28 dogs:

28 ÷ 7 = 4 ? Cats = 4 × 4 = 16 cats

4.

$240 ÷ 8 hours = $30 per hour

5.

6:9 = 2:3, 8:12 = 2:3 ? Both equal ? Yes, proportional

6.

3 shirts = $45 ? 1 shirt = $15

5 shirts = 5 × $15 = $75

7.

5 pens = $10 ? 1 pen = $2

12 pens = 12 × $2 = $24

8.

Total students = 18 + 12 = 30

Ratio of boys to total = 18:30 → Simplifies to 3:5

9.

25% of 480 = (25/100) × 480 = 120

10.

Let original price be x

20% discount → Sold at 80% of original

0.8x = 150 → x = 150 ÷ 0.8 = $187.50

11.

5% of $2,000 = (5/100) × 2000 = $100

12.

60% of number = 180

0.6 × number = 180 → number = 180 ÷ 0.6 = 300

13.

Simple Interest = (P × R × T)/100

= (1200 × 5 × 3)/100 = $180

14.

Compound Interest formula: A = P(1 + R/100)^T

= 2000 × (1 + 0.10)^3 = 2000 × 1.331 = $2,662

15.

Simple Interest = (2000 × 6 × 2)/100 = $240

Total = 2000 + 240 = $2,240