Year 11 Ratio and Proportion Questions #2

1. Share $80 in the ratio 1 : 7

2. Of 300 km of roads, 240 km had been sealed. Find the ratio of sealed to unsealed road.

3. A length of ribbon is cut in the ratio of 2 : 3. If the ribbon was 60 cm before being cut, what is the length of the shorter part?

4. Of 68 dancers, 48 were female. Find the ratio of male dancers to female dancers.

5. 40 people are travelling on a bus. If the ratio of adults to children is 1 : 7, how many adults are there on the bus?

6. Find the larger share if $65.50 is divided in the ratio 2 : 3

7. A carpet store sold 54 pure wool carpets and 9 wool blend carpets in a month. How many pure wool carpets are sold for each blended one?

8. Jenny pays $2 and Jack pays $3 to buy a $5 lottery ticket. This ticket wins a prize of $2,000. How much of this prize does Jack get if they split according to how much they paid initially?

9. In a flock of sheep, 36 gave birth to twins and 24 gave birth to single lambs. What ratio of lambs were one of a pair of twins to those born as singles?

10. Shares in a company were bought for $30,000 by a father and his son. The father paid $24,000, and the son the rest. The shares were sold later for a profit of $6,000. How much should the son receive when the shares were sold?

11. If a scale model of a house is at 1 : 25, how many centimetres on the model represent one metre in the actual building?

12. Two investors bought and sold an apartment, making a profit of $40,000. If they agreed to split the profits in a ratio of 1 : 3 how much profit did each one make?

13. A photocopier is set to reduce in the ratio of 3 : 2. A diagram of width 15 cm is copied. What will be the width of the copied diagram?

14. Anne and Mary share a full time job: Anne works 25 hours a week and Mary works 15 hours. What does the full salary have to be so that Anne earns at least $30,000 a year?

15. A plan of a kitchen was made using the scale 1 : 20. If the plan was 22 cm long, how long was the actual kitchen?

Answers Year 11 Ratio and Proportion Questions #2

1. 1 + 7 = 8 parts. Each part is = $80 ÷ 8 = $10. Split 1: 7 = **$10 : $70**

2. Sealed to unsealed = 240 : 60 = **4 : 1**

3. 2 + 3 = 5 parts. Each part = 60 ÷ 5 = 12 cm. 2 parts = 2 x 12 = **24 cm**.

4. Male to Female = 20 : 48 = **5 : 12**.

5. 1 + 7 = 8 parts. Each part = 40 ÷ 8 = 5. One part is adult = **5 adults**.

6. 2 + 3 = 5 parts. Each part = $65.50 ÷ 5 = $13.1. Three parts = 3 × $13.1 = $**39.30**

7. Blend to pure = 54 : 9 = 6 : 1. So **6 pure for each blended.**

8. Jack gets 3 parts of 5. $3/5$ of $2,000 = **$1,200**

9. 72 twins were born (2 × 36) and 24 singles. Ratio of twins : singles = 72 : 24 = **3 : 1**

10. F : s = 24 : 6 = 4 : 1. $1/5$ of $6,000= **$1,200**

11. 1 cm represents 25 cm. So **4 cm** (= 100 cm)

12. $40,000 divided 1 : 3 = **$10,000 and $30,000**

13. Each 3 cm in the original becomes 2 cm. 15 cm is 5 lots of 3 cm → 5 lots of 2 cm = **10 cm**

14. Anne : Mary = 25 : 15. Anne's 25 parts = $30,000, so each part is 30,000 ÷ 25 = $1,200.
    All 40 parts (25 + 15) = 40 × 1,200 = **$48,000**

15. 22 cm represents 20 × 22 cm = 440 cm = **4.4 m**