



TestLife 11+



Maths Worksheets

11+ Ratio & Proportion

Worksheet

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Ratio & Proportion – Questions

1. Simplify the ratio (6 : 18).

2. Write the ratio of red balls to blue balls if there are 8 red balls and 12 blue balls.

3. A recipe uses flour and sugar in the ratio (3 : 2). If 9 cups of flour are used, how many cups of sugar are needed?

4. Divide £30 in the ratio (2 : 3).

5. The ratio of boys to girls in a class is (5 : 4). If there are 20 boys, how many girls are there?

6. Write the ratio of 15 minutes to 1 hour in its simplest form.



7. A bag contains apples and oranges in the ratio (4 : 1). If there are 25 fruits in total, how many are apples?

8. The ratio of cats to dogs is (7 : 5). How many dogs are there if there are 35 cats?

9. Simplify the ratio (24 : 36 : 12).

10. A map uses a scale where 1 cm represents 5 km. How many kilometres does 7 cm represent?

11. Two numbers are in the ratio (3 : 5). If their total is 64, what is the larger number?

12. Share 48 sweets between Ali and Ben in the ratio (5 : 3).



13. The ratio of blue pens to black pens is (2 : 7). If there are 63 black pens, how many blue pens are there?

14. A drink is mixed using water and juice in the ratio (6 : 1). How much water is needed to mix with 4 litres of juice?

15. The ratio of length to width of a rectangle is (4 : 3). If the length is 20 cm, what is the width?

16. A class has boys and girls in the ratio (9 : 11). If there are 40 pupils in total, how many are girls?

17. The ratio of the number of £1 coins to 50p coins in a box is 3 : 2. If there are 10 fifty-pence coins, how many £1 coins are there?



18. A picture is enlarged so that the ratio of the original picture to the enlarged picture changes from $1 : 5$ to $1 : 10$.

If the original picture length was 6 cm, what is the new length?

19. The ratio of red, blue, and green beads is ($2 : 3 : 5$). If there are 40 beads in total, how many are green?

20. A car travels 120 km in 3 hours. How far will it travel in 5 hours at the same speed?

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RATIO AND PROPORTION – ANSWER KEY

1. Answer: 1 : 3
Explanation: Divide both numbers by 6.
2. Answer: 2 : 3
Explanation: $8 : 12 \div 4 = 2 : 3$.
3. Answer: 6 cups
Explanation: 3 parts = 9 cups, so 1 part = 3 cups. Sugar is 2 parts, so $2 \times 3 = 6$ cups.
4. Answer: £12 and £18
Explanation: Total parts = 5. $\pounds 30 \div 5 = \pounds 6$ per part. 2 parts = £12, 3 parts = £18.
5. Answer: 16 girls
Explanation: 5 parts = 20 boys, so 1 part = 4. Girls = $4 \times 4 = 16$.
6. Answer: 1 : 4
Explanation: 15 minutes : 60 minutes = 15 : 60, which simplifies to 1 : 4.
7. Answer: 20 apples
Explanation: Total parts = 5. $25 \div 5 = 5$ per part. Apples = $4 \times 5 = 20$.
8. Answer: 25 dogs
Explanation: 7 parts = 35 cats, so 1 part = 5. Dogs = $5 \times 5 = 25$.
9. Answer: 2 : 3 : 1
Explanation: Divide all numbers by 12.
10. Answer: 35 km
Explanation: 1 cm represents 5 km, so 7 cm = $7 \times 5 = 35$ km.
11. Answer: 40
Explanation: Total parts = 8. $64 \div 8 = 8$. Larger number = $5 \times 8 = 40$.
12. Answer: Ali = 30, Ben = 18
Explanation: Total parts = 8. $48 \div 8 = 6$. Ali = $5 \times 6 = 30$, Ben = $3 \times 6 = 18$.
13. Answer: 18 blue pens
Explanation: 7 parts = 63, so 1 part = 9. Blue pens = $2 \times 9 = 18$.



14. Answer: 24 litres

Explanation: Water : Juice = 6 : 1. If juice is 4 litres, water = $6 \times 4 = 24$ litres.

15. Answer: 15 cm

Explanation: 4 parts = 20 cm, so 1 part = 5 cm. Width = $3 \times 5 = 15$ cm.

16. Answer: 22 girls

Explanation: Total parts = 20. $40 \div 20 = 2$. Girls = $11 \times 2 = 22$.

17. Answer: 15 £1 coins

Explanation: 2 parts = 10 coins, so 1 part = 5. £1 coins = $3 \times 5 = 15$.

18. Answer: 12 cm

Explanation: The scale doubles, so $6 \text{ cm} \times 2 = 12 \text{ cm}$.

19. Answer: 20 green beads

Explanation: Total parts = 10. $40 \div 10 = 4$. Green beads = $5 \times 4 = 20$.

20. Answer: 200 km

Explanation: 120 km in 3 hours = 40 km per hour. In 5 hours: $5 \times 40 = 200$ km.

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