

Ratio & Proportion: Hard Practice Paper 3

Q1. $A : B = 5 : 2$ and $B : C = 6 : 5$. What is $A : B : C$ in its simplest form?

- A. $5 : 2 : 5$
- B. $15 : 6 : 5$
- C. $5 : 6 : 5$
- D. $10 : 4 : 3$
- E. $15 : 2 : 5$

Q2. £924 is shared between three people in the ratio $3 : 4 : 5$. How much does the person with the middle share receive?

- A. £77
- B. £231
- C. £308
- D. £385
- E. £462

Q3. Three taps fill a tank in 40 minutes. How long would five taps take to fill the same tank?

- A. 20 minutes
- B. 24 minutes
- C. 25 minutes
- D. 30 minutes
- E. 67 minutes

Q4. A biscuit mixture uses sugar and flour in the ratio $2 : 5$. A baker has 350 g of flour but only 100 g of sugar. What is the greatest amount of flour that can be used with the correct ratio?

- A. 200 g
- B. 225 g
- C. 250 g
- D. 280 g
- E. 350 g

Q5. Two numbers are in the ratio $9 : 4$ and their difference is 35. What is their sum?

- A. 63
- B. 77
- C. 84
- D. 91
- E. 105

Q6. Two similar shapes have areas in the ratio 1 : 9. What is the ratio of their corresponding lengths?

- A. 1 : 3 B. 1 : 9 C. 1 : 18 D. 1 : 81 E. 3 : 1

Q7. A 750 ml drink is 20% juice and the rest is water. What is the ratio of juice to water in its simplest form?

- A. 1 : 4 B. 1 : 5 C. 4 : 1 D. 1 : 3 E. 2 : 5

Q8. A car travels 480 km using 40 litres of fuel. How far can it travel on 55 litres?

- A. 495 km B. 550 km C. 600 km D. 660 km E. 720 km

Q9. In a village the ratio of adults to children is 9 : 5. There are 252 adults. How many people live in the village altogether?

- A. 308 B. 336 C. 364 D. 392 E. 448

Q10. The ratio of Tom's savings to Sara's savings is 5 : 3. Tom spends £40 and the ratio becomes 3 : 2. How much has Sara saved?

- A. £120 B. £160 C. £200 D. £240 E. £400

Q11. A shop sells the same rice in three sizes: 250 g for £1.15, 400 g for £1.76 and 1 kg for £4.60. Which size is the best value for money?

- A. 250 g for £1.15
B. 400 g for £1.76
C. 1 kg for £4.60
D. The 250 g and 400 g sizes are equal best
E. All three are equal value

Q12. The four angles of a quadrilateral are in the ratio 2 : 3 : 4 : 6. What is the largest angle?

- A. 48° B. 72° C. 96° D. 120° E. 144°

Q13. Eight people can complete a job in 15 days. They all work for 5 days and then 4 of them leave. How many more days do the remaining people need to finish the job?

- A. 10 days B. 15 days C. 20 days D. 25 days E. 30 days

Q14. A map has a scale of 1 : 200 000. Two cities are 9 cm apart on the map. What is the real distance between them?

- A. 1.8 km B. 9 km C. 18 km D. 20 km E. 180 km

Q15. Five litres of paint are mixed from white and blue paint in the ratio 3 : 2. How much blue paint must be added to make the ratio 1 : 1?

- A. 0.5 litres
B. 1 litre
C. 1.5 litres
D. 2 litres
E. 3 litres