

Ratio & Proportion: Hard Practice Paper 2

Q1. $A : B = 3 : 4$ and $B : C = 6 : 7$. What is $A : C$ in its simplest form?

- A. $3 : 7$ B. $9 : 14$ C. $14 : 9$ D. $6 : 7$ E. $4 : 7$

Q2. Two numbers are in the ratio $3 : 5$. When 4 is added to each, the new ratio is $5 : 8$. What is the larger of the original numbers?

- A. 36 B. 40 C. 48 D. 60 E. 64

Q3. Eight pumps empty a pool in 6 hours. How many pumps would be needed to empty the same pool in 4 hours?

- A. 6 B. 10 C. 12 D. 14 E. 16

Q4. £1400 is shared between three charities in the ratio $2 : 5 : 7$. How much does the charity with the largest share receive?

- A. £200 B. £350 C. £500 D. £700 E. £980

Q5. A recipe for 6 people uses 750 g of potatoes. How many grams of potatoes are needed for 15 people?

- A. 1250 g B. 1500 g C. 1875 g D. 1900 g E. 2250 g

Q6. A shop mixes tea costing £6 per kg with tea costing £9 per kg in the ratio $2 : 1$. What is the cost per kilogram of the mixture?

- A. £6.50 B. £7.00 C. £7.50 D. £8.00 E. £8.50

Q7. A map has a scale of 1 : 50 000. A road is 15 km long. How long is the road on the map?

- A. 15 cm B. 24 cm C. 30 cm D. 50 cm E. 75 cm

Q8. In a school the ratio of boys to girls is 7 : 5. If 24 more girls joined, there would be equal numbers of boys and girls. How many boys are in the school?

- A. 60 B. 72 C. 84 D. 96 E. 144

Q9. Four machines produce 600 items in 5 hours. How many items would 6 machines produce in 8 hours, working at the same rate?

- A. 720 B. 960 C. 1200 D. 1440 E. 1800

Q10. Amy, Ben and Chris share some sweets in the ratio 4 : 5 : 6. Chris gets 12 more sweets than Amy. How many sweets were shared altogether?

- A. 45 B. 60 C. 75 D. 90 E. 120

Q11. In a school $\frac{3}{8}$ of the pupils are boys and the rest are girls. What is the ratio of boys to girls?

- A. 3 : 8 B. 8 : 3 C. 3 : 5 D. 5 : 3 E. 1 : 2

Q12. An alloy weighing 5 kg contains copper and tin in the ratio 7 : 3. How much tin must be added so that the ratio becomes 7 : 5?

- A. 0.5 kg B. 1 kg C. 1.5 kg D. 2 kg E. 2.5 kg

Q13. Two similar rectangles have sides in the ratio 2 : 5. The area of the smaller rectangle is 12 cm². What is the area of the larger rectangle?

- A. 30 cm² B. 48 cm² C. 60 cm² D. 75 cm² E. 300 cm²

Q14. A cyclist rides for 1 hour at 12 km/h and then for 2 hours at 18 km/h. What is the average speed for the whole journey?

- A. 14 km/h B. 15 km/h C. 16 km/h D. 17 km/h E. 18 km/h

Q15. £1 is worth \$1.28. A jacket costs \$96. What is its price in pounds?

- A. £64 B. £72 C. £75 D. £80 E. £123

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