

Ratio & Proportion: Medium Practice Paper 8 Answers

Q#	Answer	Explanation
1	C	Thirty biscuits is two and a half times twelve, because $30 \div 12 = 2.5$. So the butter needed is $100 \times 2.5 = 250$ grams.
2	A	Both sides must be in the same unit, and 3 kg is 3,000 g. The ratio 750 : 3,000 divides by 750 to give 1 : 4.
3	A	Each symbol stands for 4 vehicles, so there are $5 \times 4 = 20$ cars and $3 \times 4 = 12$ vans. The ratio 20 : 12 divides by 4 to give 5 : 3, which is the same as the ratio of the symbols.
4	C	The speeds are $240 \div 3 = 80$ and $350 \div 5 = 70$ kilometres each hour. The first train is faster by $80 - 70 = 10$ km/h.
5	D	One pencil costs $2.96 \div 8 = 0.37$ pounds. Five pencils therefore cost $0.37 \times 5 = 1.85$ pounds.
6	C	The job is worth $4 \times 45 = 180$ minutes of work by one pump. Shared between six pumps it takes $180 \div 6 = 30$ minutes.
7	B	The largest number is the 5 parts, so one part is $45 \div 5 = 9$. The three numbers make $2 + 3 + 5 = 10$ parts altogether, which is $10 \times 9 = 90$.
8	D	The real bus is 12 m, which is 1,200 cm. The model is fifty times smaller, so it is $1,200 \div 50 = 24$ centimetres long.
9	B	The room is 6 squares by 4 squares on the plan. Each square is 0.5 m, so the room is really 3 m by 2 m, and $3 \times 2 = 6$ square metres.
10	E	Music is the tallest bar at 36 pupils and drama the shortest at 12. The ratio 36 : 12 divides by 12 to give 3 : 1.
11	E	The milk is 3 parts, so one part is $900 \div 3 = 300$. The flour is 4 parts, which is $4 \times 300 = 1200$ grams.
12	B	In one minute the printer prints $150 \div 4 = 37.5$ pages. In ten minutes it prints $37.5 \times 10 = 375$ pages.

13	A	The drink is made of $1 + 3 = 4$ equal parts, and the juice is one of them. A quarter of a hundred is $100 \div 4 = 25$, so the drink is 25% juice.
14	E	The Paris price in pounds is $60 \div 1.2 = 50$ pounds. The London price is £45, so London is cheaper by $50 - 45 = 5$ pounds.
15	D	Work out the goals for each game played: $12 \div 8 = 1.5$, then $15 \div 12 = 1.25$ and $20 \div 16 = 1.25$. Ali scores 1.5 goals a game, the best of the three, even though Cal has scored the most goals.