

Ratio & Proportion: Medium Practice Paper 1 Answers

Q#	Answer	Explanation
1	D	There are $2 + 3 + 4 = 9$ parts, so one part is $£90 \div 9 = £10$. The largest share is 4 parts, which is $4 \times £10 = £40$.
2	B	The difference between the parts is $5 - 3 = 2$ parts, so 2 parts = 14 and one part = 7. The smaller number is 3 parts, which is $3 \times 7 = 21$.
3	C	In the 6-pack each carton costs $270 \div 6 = 45\text{p}$. In the 10-pack each costs $420 \div 10 = 42\text{p}$. The difference is $45 - 42 = 3\text{p}$.
4	D	Each person needs $450 \div 6 = 75$ g of pasta, so 10 people need $10 \times 75 = 750$ g.
5	E	The difference is $5 - 3 = 2$ parts, so 2 parts = 24 and one part = 12. Altogether there are 8 parts, which is $8 \times 12 = 96$ counters.
6	C	The real distance is $4 \times 25\,000 = 100\,000$ cm. Since $100\,000$ cm = 1000 m = 1 km, the churches are 1 km apart.
7	D	Multiply the number of pounds by the exchange rate: $40 \times 1.15 = 46$ euros.
8	B	The job takes $3 \times 8 = 24$ painter-hours. Shared between 4 painters that is $24 \div 4 = 6$ hours. More painters means less time, so this is inverse proportion.
9	C	If $\frac{2}{5}$ are boys then $\frac{3}{5}$ are girls, so for every 2 boys there are 3 girls, giving the ratio $2 : 3$.
10	C	There are $2 + 3 + 4 = 9$ parts, so one part is $63 \div 9 = 7$ sweets. The middle share is 3 parts, which is $3 \times 7 = 21$.
11	C	In one hour the car travels $150 \div 2 = 75$ km, so in 5 hours it travels $5 \times 75 = 375$ km.
12	D	Half the perimeter is one length plus one width, which is 35 cm and equals $5 + 2 = 7$ parts. One part is $35 \div 7 = 5$ cm, so the length is $5 \times 5 = 25$ cm.

13	C	There are $2 + 7 = 9$ parts, so one part is $900 \div 9 = 100$ ml. The juice is 2 parts, which is $2 \times 100 = 200$ ml.
14	B	One machine makes $400 \div 5 = 80$ items an hour, so 8 machines make 640 items an hour. In half an hour they make $640 \div 2 = 320$ items.
15	D	There are $7 + 4 = 11$ parts, so one part is $66 \div 11 = 6$. The larger number is 7 parts, which is $7 \times 6 = 42$.