Ratio & Proportion: Medium Practice Paper 6 Answers

Q#	Answer	Explanation
1	B	Find the amount for one person first: 200 ÷ 4 = 50 grams. Ten people therefore need 50 × 10 = 500 grams of rice.
2	B	Both sides must be in the same unit before the ratio can be simplified. Two metres is 200 cm, so the ratio is 40 : 200, and dividing both sides by 40 gives 1 : 5.
3	E	Half the pupils walk, which is 24, and the cycling sector is a sixth, which is 8. The ratio 24 : 8 divides by 8 to give 3 : 1.
4	D	Work out what fraction of each mix is red. They are 3/7, 2/5, 3/8, 1/3 and 4/11, which as decimals are about 0.43, 0.4, 0.375, 0.33 and 0.36. The largest is 3 : 4.
5	C	One metre costs 1.50 ÷ 2 = 0.75 pounds, which the second row agrees with because 0.75 × 5 = 3.75. So 7 metres cost 0.75 × 7 = 5.25 pounds.
6	A	The same number of teeth must pass the meeting point on each wheel. The small wheel moves 8 × 15 = 120 teeth, so the large wheel turns 120 ÷ 20 = 6 times.
7	A	The two shares make 3 + 5 = 8 equal parts altogether, and the green beads are 3 of them. So the fraction that is green is 3/8, not 3/5, which compares green with yellow rather than with the whole bag.
8	D	PQ runs from 1 to 7 across the grid, so it is 6 squares long. Each square stands for 2 m, so the real length is 6 × 2 = 12 metres.
9	E	Each pound is worth 1.30 dollars, so sixty pounds are worth 60 × 1.30 = 78 dollars.
10	A	One litre takes 40 ÷ 5 = 8 seconds. Twelve litres therefore take 8 × 12 = 96 seconds.
11	C	The journey is 60 × 3 = 180 kilometres long. At the slower speed it takes 180 ÷ 45 = 4 hours, which is longer, as a slower speed always must be.

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12	B	The older brother has the 5 parts, so one part is 120 ÷ 5 = 24 pounds. The prize is 3 + 5 = 8 parts, which is 8 × 24 = 192 pounds.
13	D	Compare the cost of 100 ml in each: 2.40 ÷ 2 = 1.2 pounds, then 4.40 ÷ 4 = 1.1 and 5.75 ÷ 5 = 1.15. The medium bottle is cheapest at £1.10 for 100 ml.
14	E	The class is made of 1 + 4 = 5 equal parts and the left-handers are one of them. One fifth of a hundred is 100 ÷ 5 = 20, so 20% are left-handed.
15	C	Reading the bars, strawberry sold 20 and vanilla sold 30. The ratio 20 : 30 divides by 10 to give 2 : 3, and strawberry must be written first because the question asks for it first.

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