Fractions, Decimals & Percentages: Hard Practice Paper 2 Answers

Q#	Answer	Explanation
1	C	After a 30% discount the price is 70% of the original. So 70% = £63, which means 10% = £63 ÷ 7 = £9. The original price (100%) is £9 × 10 = £90.
2	C	If 5/9 is 40, then 1/9 is 8, so the number is 8 × 9 = 72. Then 2/3 of 72 is 72 ÷ 3 × 2 = 48.
3	C	10% of 480 is 48, so 30% is 144. 5% is 24, so 35% is 168. Then 480 − 168 = 312.
4	C	Change to improper fractions: 3 1/3 = 10/3 and 2 1/4 = 9/4. Then 10/3 × 9/4 = 90/12 = 7 1/2.
5	A	As decimals: 7/10 = 0.7, 0.705, 0.71, 71.5% = 0.715 and 5/7 ≈ 0.714. The smallest is 0.7, which is 7/10.
6	E	Take a starting price of £100. A 10% increase gives £110. A 20% decrease of £110 is £22, leaving £88. That is £12 less than £100, so it is a 12% decrease.
7	C	To divide by a fraction, turn it upside down and multiply: 7/8 × 16/7 = 112/56 = 2.
8	C	0.045 × 2 = 0.09, and multiplying by 100 as well gives 9. Check: 45 × 200 = 9000, and 0.045 is 45 ÷ 1000, so the answer is 9000 ÷ 1000 = 9.
9	D	If 40% is 90, then 10% is 90 ÷ 4 = 22.5. The total (100%) is 22.5 × 10 = 225 people.
10	B	Multiply top and bottom by 25 to make thousandths: 17/40 = 425/1000 = 0.425.
11	C	First find 3/10 of 120: 120 ÷ 10 = 12, and 12 × 3 = 36. Then 5/6 of 36: 36 ÷ 6 = 6, and 6 × 5 = 30.
12	D	After a 60% increase the total is 160% of the original. So 160% = 96, which means 10% = 96 ÷ 16 = 6. The original (100%) is 6 × 10 = 60.
13	B	The decrease is 50. As a fraction of the starting number that is 50/250 = 1/5, and 1/5 = 20%.

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14	B	Use twentieths: 2/5 = 8/20 and 1/4 = 5/20, so the bracket is 13/20. Then 1 − 13/20 = 20/20 − 13/20 = 7/20.
15	D	One bun needs 0.75 ÷ 12 = 0.0625 kg. For 20 buns that is 0.0625 × 20 = 1.25 kg.

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