Fractions, Decimals & Percentages: Hard Practice Paper 1 Answers

Q#	Answer	Explanation
1	C	After a 20% reduction the price is 80% of the original. So 80% = £36, which means 10% = £36 ÷ 8 = £4.50. The original price (100%) is £4.50 × 10 = £45.
2	D	If 3/7 is 21, then 1/7 is 21 ÷ 3 = 7. So 5/7 is 7 × 5 = 35.
3	B	15% of 240 is 36, so the increase gives 276. Then 15% of 276 is 41.4, and 276 − 41.4 = 234.6. The answer is not 240 because the second 15% is taken from a larger number.
4	C	First find 3/5 of 400: 400 ÷ 5 = 80, and 80 × 3 = 240. Then 5/8 of 240: 240 ÷ 8 = 30, and 30 × 5 = 150.
5	E	As decimals: 4/7 ≈ 0.5714, 0.58, 0.583, 7/12 ≈ 0.5833 and 58.5% = 0.585. The largest is 0.585, which is 58.5%.
6	B	After a 25% increase the total is 125% of the original. So 125% = 150, which means 25% = 150 ÷ 5 = 30. The original (100%) is 30 × 4 = 120.
7	D	Change 1 1/4 to the improper fraction 5/4. Dividing by 1/2 is the same as multiplying by 2: 5/4 × 2 = 10/4 = 2 1/2.
8	B	'Of' means multiply: 1/3 × 3/5 = 3/15, which simplifies to 1/5.
9	C	After year 1: 10% of £500 is £50, giving £550. After year 2: 10% of £550 is £55, giving £605. The second year's interest is larger because it is worked out on £550.
10	C	Multiply both numbers by 10 to give 2.4 ÷ 6 = 0.4. Check: 0.4 × 0.6 = 0.24.
11	D	The increase is £6. As a fraction of the original price that is 6/40, and 6 ÷ 40 = 0.15, which is 15%.
12	B	Write both as eighths: 1/4 = 2/8 and 1/2 = 4/8. The value halfway between 2/8 and 4/8 is 3/8.

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13	C	Use twelfths: 2/3 = 8/12, 3/4 = 9/12 and 1/2 = 6/12. So 8/12 + 9/12 − 6/12 = 11/12.
14	C	If 15% is 12, then 5% is 4 and 100% is 80. 40% of 80 is 8 × 4 = 32.
15	D	3/4 = 6/8, so the water added is 6/8 − 3/8 = 3/8 of the tank. If 3/8 is 15 litres, then 1/8 is 5 litres, so the full tank is 5 × 8 = 40 litres.

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