Fractions, Decimals & Percentages: Hard Practice Paper 8 Answers

Q#	Answer	Explanation
1	B	The pattern in the table goes up by 0.25 in the decimal column each time, so after 0.375 comes 0.625. Checking directly, 5 ÷ 8 = 0.625, and multiplying by 100 makes that 62.5%.
2	B	Turn them all into decimals: 0.35, about 0.333, 0.375 and 0.34. In order smallest first those are 0.333, 0.34, 0.35 and 0.375, which is 1/3, then 34%, then 0.35, then 3/8.
3	A	After the increase you have all of the original, which is 1, plus another 0.15 of it, making 1.15 lots altogether. So multiplying by 1.15 does the whole job in one step. Multiplying by 0.15 would only find the increase itself.
4	A	Taking 20% away leaves 80% of the amount, and 80% written as a decimal is 0.8. So multiplying by 0.8 gives the reduced amount straight away, while multiplying by 0.2 would only give the part removed.
5	A	Take £100 as an example. Adding 25% gives £125, and taking 20% off £125 removes £25, bringing it back to £100. The percentages differ because the 20% is worked out on the larger amount.
6	B	Work out the cost of 500 g from each. The small pack is £1.20. The medium holds three lots of 500 g, so each costs 3.30 ÷ 3 = 1.10 pounds. The large holds four lots, so each costs 4.60 ÷ 4 = 1.15 pounds. The medium pack is the cheapest for the same weight.
7	D	The question asks what fraction 1/2 is of 2/3, so work out 1/2 ÷ 2/3. Turning the second fraction over gives 1/2 × 3/2, which is 3/4. Three quarters written as a percentage is 75%.
8	C	Start inside. Ten per cent of 800 is 80, so 40% is 80 × 4 = 320. Then one eighth of 320 is 320 ÷ 8 = 40, so five eighths is 40 × 5 = 200.
9	C	A day is 24 hours, so the fraction is 9/24. Both numbers divide by 3, giving 9 ÷ 3 = 3 on top and 24 ÷ 3 = 8 underneath, so the answer is 3/8.

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10	E	Put both into the same units first: 2.5 kg is 2,500 g. The fraction is then 400/2500, and dividing both by 25 gives 16/100, which is 16%.
11	D	After the first cut 80% is left, and after the second cut 90% of that remains, so the £108 is 0.8 × 0.9 = 0.72 of the original. One hundredth of the original is therefore 108 ÷ 72 = 1.5 pounds, so the original price was 1.5 × 100 = 150 pounds.
12	C	One eighth of £240 is £30, so Ali gets 30 × 3 = 90 pounds. Ten per cent of £240 is £24, so Bella gets 24 × 4 = 96 pounds. Together they take 90 + 96 = 186 pounds, leaving 240 − 186 = 54 pounds.
13	B	Compare the price of one pen. In the first deal it is 500 ÷ 3, which is about 167 pence, and in the second it is 800 ÷ 5 = 160 pence. The second is cheaper for each pen, so 5 for £8 is the better buy.
14	B	Round the numbers to something easy: 39% is close to 40% and 61 is close to 60. Ten per cent of 60 is 6, so 40% is 6 × 4 = 24. The exact answer, 23.79, is indeed very near it.
15	D	One eighth of the pupils is 360 ÷ 8 = 45, so three eighths is 45 × 3 = 135 pupils walk.

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