Rounding & Estimating: Hard Practice Paper 7 Answers

Q#	Answer	Explanation
1	C	Each side could be up to half a centimetre shorter than stated, so the smallest sides are 5.5 cm and 3.5 cm. The area is then 5.5 × 3.5 = 19.25 square centimetres.
2	B	Rounding up to 35 people at £20 each gives 35 × 20 = 700 pounds. Both numbers were rounded up, so the estimate is too big, and the true total is 34 × 18.75 = 637.5 pounds.
3	C	To give 5.68 to two decimal places the number must be at least 5.675 and below 5.685, which rules out 5.672, 5.686, 5.691 and 5.669. The value 5.678 is inside that band and also rounds to 5.7.
4	C	Round each number: about 40 times about 20, divided by about 4. Since 40 × 20 = 800 and 800 ÷ 4 = 200, the answer is roughly 200.
5	A	A mass of 2,450 g is exactly halfway between 2,400 and 2,500, and a value on the halfway mark rounds up. So it would be recorded as 2,500 g, which is parcel Q.
6	D	Round to easy numbers: about 6 million people in about 2 million households. Since 6 ÷ 2 = 3, there are roughly 3 people to a household.
7	B	Each book could be up to 3.05 cm wide, so 30 of them could need 30 × 3.05 = 91.5 centimetres. The shelf might be as short as 89.5 cm, so they cannot be certain to fit.
8	D	Round each number to one significant figure: about 0.006 times about 40,000. Since 0.006 × 40000 = 240, the answer is roughly 240.
9	A	Rounding to 350 to the nearest fifty means the number runs from 325 to 374. Rounding to 400 to the nearest hundred means it is at least 350. The overlap is 350 to 374, so the largest whole number is 374.
10	B	The line is straight, and the car covers 45 km each hour. Halfway between the 2 hour and 3 hour points the distance is halfway between 90 and 135, which is about 112 km, so about 110 km.

myfreeschool

11	E	Round 795 to 800, which divides easily by 8. An eighth of 800 is 800 ÷ 8 = 100, so three eighths is 3 × 100 = 300.
12	D	Measuring to the nearest centimetre means the true length is within half a centimetre of 24 cm. Anything from 23.5 cm up to just below 24.5 cm would be recorded as 24 cm.
13	A	Estimating each one gives about 500, 490, 480, 494 and 490. Working the first out exactly, 51 × 9.8 = 499.8, which is only 0.2 away from 500.
14	E	Round both numbers to one significant figure: about 6,000 shared into groups of about 30. Since 6,000 ÷ 30 = 200, the answer is near 200.
15	E	The first two significant figures are the 6 and the 3, so the number is being rounded to the nearest hundred. It runs from 6,250 up to just below 6,350, so the largest whole number is 6,349.

myfreeschool