

Place Value: Hard Practice Paper 6 Answers

Q#	Answer	Explanation
1	B	Multiplying by 100,000 moves every digit five places to the left. The 7 starts in the ten-thousandths place, so it lands five columns along in the tens place, giving 70.
2	B	Rounding to the nearest hundred thousand is decided by the ten-thousands digit, which is 9. As it is 5 or more the hundred-thousands digit rounds up, and 9 hundred-thousands carries over into a whole extra million.
3	D	Reading each one gives 1,110 for MCX, 610 for DCX, 410 for CDX, 140 for CXL and 91 for XCI. Only MCX begins with M, so only it passes a thousand.
4	D	The 8 is in the tenths place and the 5 in the hundredths. After the swap the 5 holds the tenths and the 8 the hundredths, while the 6 stays in the thousandths, giving 34.586.
5	C	Rounding to one decimal place is decided by the hundredths digit, so a number rounds to 8.4 if it lies from 8.35 up to just below 8.45. The lowest point of that band is 8.35, which rounds up because it is exactly halfway.
6	A	Four ten-thousands is 40,000 and six hundreds is 600, and $40,000 + 600 = 40600$. The others come to 40,060, then 4,600, 4,060 and 400,600.
7	C	Hundredths are the second digit after the decimal point. In Q's 2.048 kg the 4 sits there, so it is worth 0.04 kg. In P it is in the tenths, in R it is a whole kilogram and in S it is in the thousandths.
8	A	The hundreds digit can be any of the nine digits from 1 to 9, and the ones digit can be any of the ten digits from 0 to 9, while the tens digit is fixed. That gives $9 \times 10 = 90$ numbers, such as 105 and 807.
9	E	The whole numbers that round to 250 run from 245 up to 254. Taking the two ends of that run gives the biggest gap, and $254 - 245 = 9$.

10	B	The £20 notes are worth $100 \times 20 = 2000$ pounds, so the £5 notes must make up $3,000 - 2,000 = 1000$ pounds. Since $1,000 \div 5 = 200$, there are 200 of them.
11	D	Find each gap from 0.5: they are 0.009, then 0.02, 0.03, 0.05 and 0.05. The smallest gap belongs to 0.509, which is only nine thousandths away.
12	A	Multiplying by 1,000 slides the digits three places to the left, so 0.0345 becomes 34.5. In that answer the 3 stands in the tens place, so it is worth 30.
13	E	The two numbers are 3,400,000 and 3,600,000, and the gap between them is 200,000. Half of that gap is 100,000, so the middle number is $3,400,000 + 100,000 = 3500000$.
14	C	Reading backwards, the last three digits must be the first three in reverse order, which is 2, 7, 4. Putting them after 472 gives 472,274, and that does read the same either way.
15	E	Adding the digits of each gives $7 + 8 + 9 + 9 = 33$ for the first, then 30, 21, 30 and 27. The largest total is 33, so 7,899 wins even though it is not the largest number.