Rounding & Estimating: Medium Practice Paper 9 Answers

Q#	Answer	Explanation
1	B	£2.99 is 1p less than £3. Four lots of £3 is 4 × 3 = 12, so £12. Each magazine was rounded up by 1p, so the estimate is 4p too much: 12.00 − 0.04 = 11.96. The exact cost is £11.96.
2	E	100 is 1 more than 99, so 6 × 100 is six lots of 1 too many. Priya must subtract 6: 600 − 6 = 594, and 6 × 99 = 594.
3	E	To the nearest metre, the tenths digit 4 rounds 3.46 m down to 3 m. To the nearest 10 cm means one decimal place, and the hundredths digit 6 rounds 3.46 m up to 3.5 m. The difference is 3.5 − 3 = 0.5, and 0.5 m is 50 cm.
4	A	The nearest penny means two decimal places. The third decimal digit is 6, which is 5 or more, so the second decimal digit rounds up from 6 to 7. Each friend pays £23.67.
5	C	The hundred thousands digit is 4. The digit to its right, the ten thousands digit, decides the rounding. It is 4, which is less than 5, so the number rounds down to 2,400,000. It is tempting to round 49,500 up to 50,000 first, but rounding in two steps gives the wrong answer.
6	B	4.5 has a tenths digit of 5, so it rounds up to 5, a change of 0.5. That is the biggest change rounding to a whole number can ever make. The others change by less: 7.2 goes to 7 (0.2), 9.8 goes to 10 (0.2), 3.45 goes to 3 (0.45) and 6.61 goes to 7 (0.39).
7	E	Rounded to the nearest pound the prices are £2, £1, £4 and £2, and 2 + 1 + 4 + 2 = 9, so the estimate is £9. The exact total is 1.85 + 1.15 + 3.60 + 2.45 = 9.05, which is £9.05. The estimate is only 5p too low.
8	C	Round each number to the nearest 10 and multiply. 62 is about 60 and 38 is about 40, and 60 × 40 = 2,400, so an answer of more than 3,000 cannot be right. The other estimates are 50 × 20 = 1,000, 50 × 20 = 1,000, 30 × 30 = 900 and 70 × 10 = 700, which are all close to the answers given.

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9	D	The halves on either side of 7.3 are 7 and 7.5. From 7 to 7.3 is 0.3, but from 7.3 to 7.5 is only 0.2, so 7.3 is nearer to 7.5.
10	C	All five numbers are very close to 200, so the total is about 5 × 200 = 1,000. Spotting that the numbers cluster around one value is quicker than rounding and adding them one at a time.
11	C	31 rounds to 30, so it is out. 35 and 36 are not prime, because 35 is 5 × 7 and 36 is even. That leaves 37 and 39. Doubling 37 gives 74, whose ones digit 4 rounds it down to 70. Doubling 39 gives 78, which rounds up to 80, and 39 is not prime either because it is 3 × 13. The number is 37.
12	B	10 × 2.4 = 24, so ten ropes use 24 m and leave 1 m over. An eleventh rope would need 11 × 2.4 = 26.4 metres, which is more than 25 m. Part of a rope is no use, so the answer must be rounded down to 10.
13	D	7.9 is very close to 8, because its tenths digit is 9. 418 is close to 400, and 400 is easy to divide by 8. The estimate is 400 ÷ 8 = 50, and the exact answer is about 53. Rounding 7.9 down to 7 or up to 10 changes it far too much.
14	A	4.8 is close to 5 and 21.5 is close to 20, so the answer must be near 5 × 20 = 100. Of the five places the point could go, only 103.2 is close to 100.
15	E	Round 24 up to 25 to make the working easy. 60 × 60 = 3,600 seconds in an hour, which is about 3,600, and 25 × 3,600 = 90,000. The exact answer is 24 × 3,600 = 86,400, which is close to 90,000.

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