Test answers - Place value to 10 000 000 and rounding

Year: Year 6 · Duration: 40 minutes · /20

Answer to Question 1 (3 marks)

a. Split into millions, thousands and ones: 5 | 308 | 462. **Five million, three hundred and eight thousand, four hundred and sixty-two**. (1 mark)
b. Counting from the right: 2 ones, 6 tens, 4 hundreds, 8 thousands, 0 ten thousands, 3 hundred thousands. The 3 is worth **300 000**. (1 mark)
c. Add 1 to the ten thousands digit (0 becomes 1): **5 318 462**. (1 mark)

Answer to Question 2 (4 marks)

a. Look at the ten thousands digit, 8: round the hundred thousands up from 4 to 5: **2 500 000**. (1 mark)
b. Look at the thousands digit, 7: round up from 8 to 9 ten thousands: **2 490 000**. (1 mark)
c. Look at the hundred thousands digit, 4: it is less than 5, so round down to **2 000 000**. (1 mark)
d. 2.5 million is 2 500 000, exactly the population rounded to the nearest 100 000, so **yes, it is reasonable**. (1 mark)

Answer to Question 3 (4 marks)

a. Order from the most negative: **Moscow −15, Oslo −8, Berlin −2, Rome 2, Madrid 6**. (1 mark)
b. From −15 up to 0 is 15 degrees and from 0 to 6 is 6 more: 15 + 6 = **21 degrees**. (1 mark)
c. Count down 5 from −2: −3, −4, −5, −6, −7. Answer: **−7°C**. (1 mark)
d. −8 + 10: 8 steps up to 0, then 2 more, giving 2°C, which is **Rome**. (1 mark)

Answer to Question 4 (4 marks)

a. Any crowd from 46 500 upwards rounds to 47 000 (46 499 would round to 46 000). Smallest: **46 500**. (1 mark)
b. 47 500 would round up to 48 000, so the largest is **47 499**. (1 mark)
c. Even the largest possible crowd, 47 499, is one less than the 47 500 seats, so **at least one seat was empty**. (2 marks)

Answer to Question 5 (5 marks)

a. Most: **August**. Fewest: **September**. (1 mark)
b. **1 800 000, 2 300 000, 2 700 000, 1 100 000**. (1 mark)
c. 1 800 000 + 2 300 000 + 2 700 000 + 1 100 000 = **7 900 000**. (1 mark)
d. Exact total: 1 845 200 + 2 310 750 = 4 155 950; + 2 679 480 = 6 835 430; + 1 134 570 = **7 970 000**. The difference is 7 970 000 − 7 900 000 = **70 000**. (2 marks)