

Mastering Magnitudes: A Year 5 Assessment on Rounding

Learning objective: To round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000, and to round decimals with two decimal places to the nearest whole number and to one decimal place.

Read each question carefully. Show your working out where possible to gain method marks. Ensure all monetary values are expressed in pounds and pence.

Max the monkey is helping the forest community organise their annual harvest festival. He needs to round large numbers of acorns and calculate the costs of supplies in pounds and pence for his budget spreadsheet.

Word bank: round · nearest · integer · decimal place · estimate · approximation · significant · interval

1. Max has collected 45,672 acorns. Round this number to the nearest 10, the nearest 100, and the nearest 1,000. (3 marks)

2. The cost of a crate of sun-dried berries is £12.87. Round this price to the nearest pound (£). Explain your reasoning. (2 marks)

3. A population of fireflies was counted at 145,500. If we round this to the nearest 100,000, we get 100,000. If we round to the nearest 10,000, we get 150,000. Explain why these two answers are different. (3 marks)

4. Identify the smallest whole number that rounds to 4,500 when rounded to the nearest 100. (2 marks)

5. Nova the owl observed 824,999 stars. Round this number to the nearest 10,000. (2 marks)

6. Compare and contrast rounding 7.45 to one decimal place versus rounding 7.45 to the nearest whole number. Justify your results. (4 marks)

7. Max spends £45.49 on decorations and £32.82 on fruit. Round each individual amount to the nearest pound, then add them together to estimate the total cost. Show your calculation. (4 marks)

8. Max is planning a festival for 500,000 guests. He claims that any number between 450,000 and 549,999 will round to 500,000 when rounded to the nearest 100,000. Write a short persuasive argument to prove or disprove his claim, using mathematical evidence. (5 marks)

Draw: Draw a number line between 400 and 500, marking the position of 448 and 452. Use arrows to show which decade each number rounds to when rounded to the nearest 10.



Extension challenge: Total: /25