Year 4 Mathematics Assessment: Exploring Decimals

Learning objective: To recognise, write, and compare decimal equivalents of tenths and hundredths, and to solve decimal problems involving money.

Read each question carefully. Max the monkey has provided some helpful hints, but you must show your working out to gain full marks. Use a pencil and ruler where necessary.

Max the monkey is organising a fruit market for the BookFlik friends. He has been busy labelling his produce with prices in Australian dollars and cents and sorting his stock into neat rows of ten and one hundred.

Word bank: decimal point · tenths · hundredths · equivalent · place value · fraction · partition

1. Max has 0.7 of a crate of bananas. Write this decimal as a fraction. If he adds another 0.2 of a crate, what is the total as a decimal? (2 marks)

2. Write the decimal 0.45 in a place value grid. Which digit represents the tenths and which digit represents the hundredths? (2 marks)

3. Compare these decimals using the symbols <, > or =. Explain your reasoning: A) 0.6 and 0.60. B) 0.8 and 0.08. (3 marks)

4. Max is selling apples for £1.25. If Zara the zebra buys two apples, how much change does she get from a £5 note? (3 marks)

5. Partition the number 4.62 into its constituent parts (ones, tenths, and hundredths). (2 marks)

6. If a ruler is 1 metre long and is divided into 100 equal parts, what decimal of a metre is 35 centimetres? Justify your answer by linking centimetres to hundredths. (3 marks)

7. Max wants to buy a basket costing £8.50. He has five £1 coins and six 50p coins. Does he have enough money? Show your calculation clearly and justify your answer. (3 marks)

8. Creative Writing Task: Max is designing a new fruit display. He wants to create a sequence of prices that increase by 0.15 each time, starting at £1.10. Write down the first five prices in his sequence. Explain the pattern you have used and what might happen if the sequence continued past £2.00. (4 marks)

Draw: Draw a representation of 0.35 using a 10x10 grid. Shade the correct number of squares to show the value of the decimal.

Extension challenge: Total: /25. Greater Depth Challenge: If 0.1 is equivalent to 1/10, explain why 0.10 is equivalent to 10/100. How does the position of the decimal point change the value of a number when multiplied by 10 or 100?