

Max's Market Stall: The Great Long Division Challenge

Learning objective: To solve problems involving the division of four-digit numbers by two-digit numbers using formal long division methods, including remainders.

Max the monkey is helping the local market stallholders divide their earnings and stock. Use the formal long division method (bus stop or partition method) to help Max solve the following calculations. Show your full working out for every step. If there is a remainder, express it as a whole number remainder (r).

Word bank: Dividend · Divisor · Quotient · Remainder · Partitioning · Calculation · Exchange · Estimation

1. The apple farmer has 1,456 apples to pack into crates. Each crate holds 12 apples. How many full crates can the farmer fill, and how many apples will be left over? (3 marks)

2. Max found a total of £2,875 in the market charity tin. This needs to be shared equally among 25 local youth clubs. How much money does each club receive? (3 marks)

3. A baker has 3,240 blueberry muffins to sell. If he puts 15 muffins into each box, how many boxes does he need? (3 marks)

4. Explain why it is useful to estimate your answer before starting a long division calculation. How does this help you check for errors? (2 marks)

5. Compare and contrast the process of dividing by a single-digit number versus a two-digit number. What extra steps must you consider? (3 marks)

6. Justify your answer: If you were dividing 4,000 by 16, would the answer be greater or smaller than 200? Explain your reasoning without performing the full division. (2 marks)

Draw: Draw a scene showing Max the monkey standing behind a market stall filled with crates of fruit, with a sign showing a maths equation he is currently solving.



Extension challenge: Max has £5,000 to donate to a project. He wants to divide it between 16 different animal sanctuaries. What might happen if the total does not divide perfectly? Write a short plan explaining how Max should handle the 'leftover' pence to ensure the money is shared fairly.