Max’s Market Challenge: Mastering Division

Learning objective: To divide numbers up to four digits by a one-digit number using the formal written method of short division, including interpretating remainders.

Help Max the monkey solve the market inventory problems. Use the formal bus stop method to calculate your answers. Remember to show your working out clearly.

Max is helping the local market stall owners organise their stock. He loves to find the most efficient way to share items into equal groups. Today, the fruit seller has 1,248 juicy apples that need to be packed into boxes of 6. Meanwhile, the baker has baked 2,545 buttery biscuits to be shared equally among 7 hampers for the village fair. Max needs your help to ensure every box and hamper is perfectly packed without any confusion.

Word bank: quotient · remainder · divisor · dividend · partition · calculate

1. If Max packs 1,248 apples into 6 boxes, how many apples will be in each box? Explain the method you used. (2 marks)

2. The baker has 2,545 biscuits to share among 7 hampers. How many biscuits go into each hamper, and how many are left over as a remainder? (2 marks)

3. If a crate of 4,328 satsumas is shared equally between 8 stalls, how many satsumas does each stall receive? (2 marks)

4. Justify your answer: Is it possible to share 1,500 coins equally between 9 children without any remainder? Support your reasoning with a calculation. (3 marks)

5. Compare and contrast the process of dividing 1,200 by 4 and 1,200 by 8. What do you notice about the relationship between the divisors and the quotients? (3 marks)

6. What might happen if Max had 3,000 items to share among 7 stalls, but he insisted on having no remainders? How could he adjust his distribution? (3 marks)

Draw: Draw a scene featuring Max the monkey carefully placing apples into boxes at a colourful market stall, with labels showing your division calculations nearby.

Extension challenge: Imagine you are the manager of the market. Create your own word problem involving a four-digit number divided by a single digit, ensuring the answer includes a remainder. Then, write a short paragraph explaining how you would decide what to do with the leftover items in a real-world scenario.