Max’s Market Challenge: The Great Addition Expedition

Learning objective: To solve multi-step addition problems involving large numbers and decimal values (pounds and pence) in a real-world context.

Max the monkey is helping the local market stallholders calculate their daily takings. Use your knowledge of column addition to solve these complex puzzles. Ensure you align your decimal points carefully and remember to regroup (carry over) when your digits exceed nine. Show your working out clearly for each calculation.

Word bank: Column addition · Regrouping · Decimal point · Total · Place value · Sum · Exchange

1. The fruit stall sold a box of organic apples for £12.45 and a punnet of raspberries for £4.89. What was the total amount taken by the stallholder? (2 marks)

2. Max helped the florist calculate the cost of a bouquet. The lilies cost £15.60, the roses cost £12.75, and the ribbon cost £3.40. Calculate the total cost of the items. (2 marks)

3. Explain why it is vital to keep the decimal point in the same column when adding numbers like £12.45 and £4.89. What might happen if you misalign them? (3 marks)

4. Compare and contrast adding £10.00 + £5.50 and £10.00 + £5.05. Explain why the placement of the zero is significant in the second calculation. (3 marks)

5. Justify your answer: If you add two numbers together that both have two decimal places, will the total always have two decimal places? Provide an example to support your reasoning. (3 marks)

6. A baker sells a loaf of bread for £2.35 and a cake for £8.90. If a customer buys three loaves and one cake, calculate the total spend. (3 marks)

Draw: Draw a market stall scene featuring Max the monkey holding a clipboard. Include labels for the items sold with original prices in pounds and pence to create your own addition challenge.

Extension challenge: Create your own 'Market Receipt' challenge. Choose four items with different prices. Write a word problem that requires a peer to add three of those items together, including at least one item that costs over £10.00. Challenge them to find a combination of items that totals exactly £20.00.