

Max's Market Multiplication Challenge

Learning objective: To multiply two-digit and three-digit numbers by a one-digit number using formal written layout and mental strategies.

Max the monkey is helping at the local community market. Use your multiplication skills to help him calculate the totals for the stallholders. Show your working out clearly for each calculation.

Max is visiting the market stalls to check the stock. At the fruit stall, Farmer Higgins has 7 crates of gala apples, and each crate contains 48 apples. Next door, the bakery has 6 trays of artisan sourdough loaves, with 125 loaves baked in total across all trays. Max loves to solve these puzzles by partitioning the numbers to make them easier to manage. 'If I have 48 times 7,' Max says, 'I can multiply 40 by 7 and 8 by 7, then find the sum!' He knows that being accurate with his times tables helps him finish his work quickly so he can get back to his favourite puzzle book.

Word bank: multiplicand · product · partitioning · column method · estimate · commutative

1. Farmer Higgins has 7 crates with 48 apples in each. How many apples does he have in total? Show your partitioning method. (2 marks)

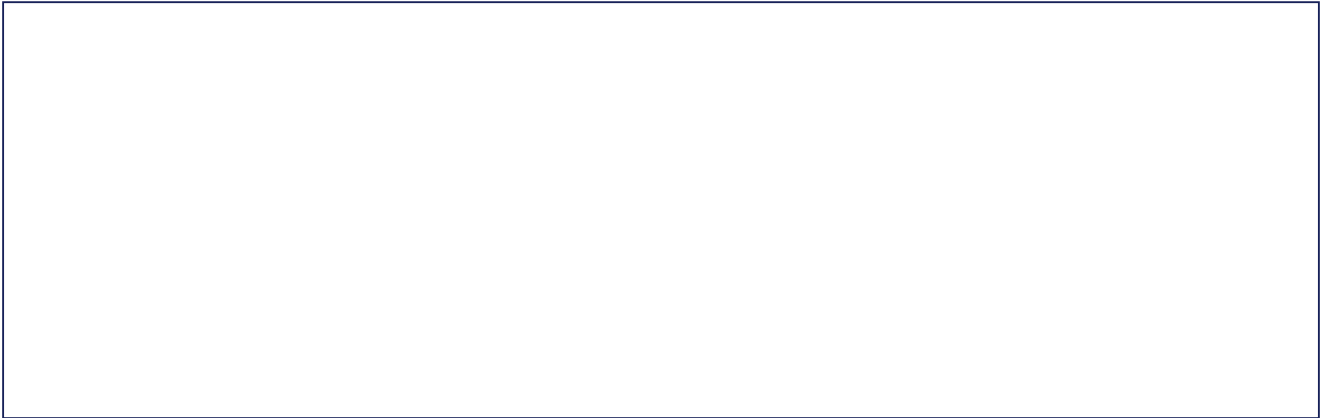
2. The bakery sells sourdough loaves for £3 each. If they sell 125 loaves in a day, calculate the total revenue in pounds (£). (2 marks)

3. Max finds a box containing 8 packs of wildflower seeds. Each pack costs £14. Calculate the total cost using the formal column multiplication method. (2 marks)

4. Explain why partitioning 48 into 40 and 8 makes it easier to multiply by 7. Justify your reasoning using mathematical vocabulary. (3 marks)

5. Compare and contrast the product of 15×6 and 16×5 . What do you notice about the relationship between these two calculations? (3 marks)

Draw: Draw a scene at the market where Max is counting crates of fruit. Include labels showing the multiplication sums he is solving on his clipboard.



Extension challenge: What might happen if the bakery decided to increase the price of each sourdough loaf by £1? Create a new multiplication word problem for your partner to solve based on this price change, and provide the answer key.