

Max's Market Stall Challenge

Learning objective: To identify factors and multiples, recognise prime numbers, and solve multi-step problems involving money.

Max the monkey is organising his fruit stall for the school fair. He needs your help to arrange his produce into equal bundles. Read the clues below and help Max solve his mathematical puzzles to ensure his stall is ready for the customers.

Word bank: Factor · Multiple · Prime · Composite · Product · Remainder

1. Max has 24 juicy apples. He wants to put them into equal bags with no apples left over. List all the possible factors of 24. Explain why 7 cannot be a factor of 24. (3 marks)

2. Max is selling punnets of strawberries for £3 each. He wants to display the total cost for 1 to 6 punnets. List the first six multiples of 3. If a customer spends £18, how many punnets did they buy? (2 marks)

3. Max has a special crate containing a prime number of pears. The number of pears is between 10 and 20. Which two numbers could it be? Justify your answer. (3 marks)

4. A box of oranges costs £5. If Max sells 4 boxes, what is the total? Is this total a multiple of 5? Explain your reasoning. (2 marks)

5. Compare and contrast the properties of a 'factor' and a 'multiple'. Use an example with the number 12 to support your explanation. (3 marks)

6. What might happen if Max tried to arrange 13 blueberries into equal rows of 2? Explain the result using the term 'remainder'. (2 marks)

Draw: Draw a display for Max's stall showing three different ways to group 12 bananas into equal bunches. Label each bunch with the number of bananas inside.



Extension challenge: Design a 'Fruit Bundle' price list for Max. Create three bundles using factors of 36. For each bundle, state the number of items and the total price (using £), ensuring the price per item is a whole number. Justify why your chosen number of items is a factor of 36.