

Max's Mathematical Multiplication Challenge

Learning objective: To demonstrate fluency, reasoning, and problem-solving skills across the 6, 7, 9, 11, and 12 times tables.

Read each question carefully. Show your working out in the space provided to ensure you gain maximum marks. You have 30 minutes to complete this assessment.

Max the monkey is preparing for the Great Jungle Market. He needs to organise his fruit stall using his knowledge of multiplication. Help Max calculate his inventory and solve his pricing puzzles.

Word bank: Product · Multiple · Factor · Array · Equation · Inverse

1. Max has 8 baskets. Each basket contains 7 mangoes. Write an equation to show how many mangoes Max has in total and calculate the product. (2 marks)

2. Max is selling bunches of bananas for £6 each. If he sells 12 bunches, how much money will he make? Show your calculation. (2 marks)

3. Complete the sequence: 9, 18, 27, ____, ____, 54. Explain the rule you used to find the missing numbers. (3 marks)

4. Max says, 'I know that $6 \times 8 = 48$, so I can easily work out 6×80 .' Explain how Max uses his knowledge of place value to solve this. What is the answer? (3 marks)

5. Compare and contrast the 6 times table and the 12 times table. Use the word 'double' in your justification. (4 marks)

6. Max has 84 coconuts. He wants to put them into equal groups of 7. Use the inverse operation to prove how many groups he will have. (3 marks)

7. Justify this statement: 'All multiples of 9 are also multiples of 3.' Provide an example to support your reasoning. (3 marks)

8. Max wants to create a display of 110 pineapples. He decides to arrange them in an array. Design two different possible arrays for the 110 pineapples. Explain why your arrays are correct using multiplication equations. (5 marks)

Draw: Draw an array representing 4×7 using small circles to represent Max's jungle fruit.

Extension challenge: Imagine a scenario where Max changes his prices. If he sells 12 items at £9 each and 7 items at £11 each, calculate his total earnings. If he gives £20 to a friend, how much does he have left? Show your step-by-step reasoning. Total: /25