

Max's Magnificent Magnitude Challenge

Learning objective: To read, write, order and compare numbers up to at least 1,000,000 and determine the value of each digit.

Max the monkey is organising a jungle marketplace. He needs your help to sort the prices of his items. Use your knowledge of place value to complete the tasks below. For each question, ensure you consider the value of every digit and justify your mathematical reasoning.

Word bank: ten thousand · hundred thousand · digit · place value · ascending · descending · partition

1. Max is selling a basket of golden mangoes for £456,230. Write this number in words and partition it into its constituent parts (e.g., 400,000 + 50,000...). (2 marks)

2. Compare the prices of two items: a silk rug costing £782,405 and a woven basket costing £782,504. Which item is more expensive? Justify your answer by explaining which place value column determines the difference. (2 marks)

3. Max has a special price for a rare map: £300,000 + 40,000 + 700 + 50 + 2. Write this as a single digit number. What is the value of the digit '4' in this number? (2 marks)

4. Order these four jungle prices from smallest to largest: £654,321; £645,321; £654,123; £645,123. Explain your strategy for ordering these numbers. (3 marks)

5. Max wants to increase the price of a decorative lantern from £129,999 by exactly ten thousand. What will the new price be? Explain the 'carrying' process across the place value columns. (3 marks)

6. What might happen to the value of the number 892,105 if you swapped the digits in the hundred thousands and the tens columns? Show your working. (3 marks)

Draw: Draw a large place value chart that goes from the ones column up to the hundred thousands column. Inside the columns, draw Max the monkey holding a sign that shows the number 572,834.



Extension challenge: Design your own 'Jungle Price List' with five items, each costing over £100,000. Write a short paragraph for a classmate explaining how you used place value to ensure your prices are listed in clear, descending order. Challenge: Create a 'mystery price' where the digit in the ten-thousands column is double the digit in the thousands column, and the number is greater than £500,000.