

Max's Magnificent Math Challenge: Place Value Adventure

Learning objective: To consolidate understanding of place value in 4-digit numbers, including ordering, partitioning, and identifying the value of digits.

Help Max the monkey solve these puzzles! Read each question carefully and write your answer clearly. Some questions require you to choose the best option, while others ask for a short explanation.

Answer Key: 1) C, 2) True, 3) 4,000, 4) B, 5) False (It is 600), 6) 3,452, 7) A, 8) 1,000, 9) 7,205 is greater than 7,025 because it has two hundreds instead of zero, 10) 9,999. Greater Depth Reasoning: To justify why the value changes, explain that the position of the digit determines its magnitude (e.g., a 5 in the hundreds column is worth 10 times more than a 5 in the tens column).

Word bank: thousands · hundreds · tens · ones · partition · digit · place value · greater than · less than

1. Max has 4,528 coconuts. What is the value of the digit 5 in this number? A) 5, B) 50, C) 500, D) 5,000 * (1 mark)

2. True or False: In the number 8,193, the digit 8 represents eight thousand. (1 mark)

3. What is the value of the thousands digit in the number 4,921? (1 mark)

4. Which of these numbers is the smallest? A) 3,210, B) 3,012, C) 3,120, D) 3,201 * (1 mark)

5. True or False: In the number 2,674, the digit 6 has a value of 60. (1 mark)

6. Max writes a number in expanded form: $3,000 + 400 + 50 + 2$. Write the total number as a numeral. (1 mark)

7. Which digit is in the tens place in the number 7,843? A) 4, B) 8, C) 7, D) 3 * (1 mark)

8. If you add 1,000 to 5,672, what is the new number? (1 mark)

9. Explain why 7,205 is greater than 7,025. (1 mark)

10. What is the largest 4-digit number you can make using the digits 9, 9, 9, and 9? (1 mark)

Draw: Draw a set of four 'Place Value Towers' labelled Thousands, Hundreds, Tens, and Ones. Show the number 2,413 by drawing the correct number of blocks in each tower.



Extension challenge: 1. Explain why the value of the digit '4' changes when you move it from the tens column to the hundreds column. 2. Compare and contrast the numbers 5,600 and 5,060. 3. Justify your answer: Is it possible for a 4-digit number starting with 8 to be smaller than a 4-digit number starting with 7? Explain your reasoning. 4. What might happen to the value of 4,528 if you swapped the thousands digit and the tens digit? 5. Create your own 4-digit number puzzle for a friend, ensuring the digit 0 is used in one of the middle columns. 6. If you have £1,000, £100, £10 and £1 notes, how many of each would you need to make exactly £4,321?