

# Max's Magnificent Square Number Challenge

*Learning objective: To identify, calculate, and apply square numbers up to  $12 \times 12$ , as per Grade 4 National Curriculum expectations.*

Join Max the monkey as he swings through the jungle! He loves solving math puzzles. Answer these 10 questions to help Max find his way to the highest branch. Read each question carefully and write your answers clearly.

Answer Key: 1) C (16), 2) True, 3) 25, 4) A (49), 5) False ( $6 \times 6 = 36$ ), 6) 100, 7) B (81), 8) True, 9) 144, 10) 9. Explanation for parents: A square number is the result of multiplying a whole number by itself. For example,  $5 \times 5 = 25$ .

*Word bank: Square · Product · Multiply · Array · Integer · Calculation*

1. 1. Max has an array of 4 rows of 4 bananas. How many bananas does he have in total? A) 8, B) 12, C) 16\*, D) 20 (1 mark)

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2. 2. True or False: 9 is a square number because  $3 \times 3 = 9$ . (1 mark)

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3. 3. What is 5 squared (written as  $5^2$ )? (1 mark)

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4. 4. Which of these is a square number? A) 49\*, B) 50, C) 52, D) 54 (1 mark)

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5. 5. True or False: 30 is a square number. (1 mark)

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6. 6. If you calculate  $10^2$ , what is the answer? (1 mark)

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7. 7. What is the square of 9? A) 18, B) 81\*, C) 72, D) 90 (1 mark)

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8. 8. True or False: Every square number has a factor pair that are the same number. (1 mark)

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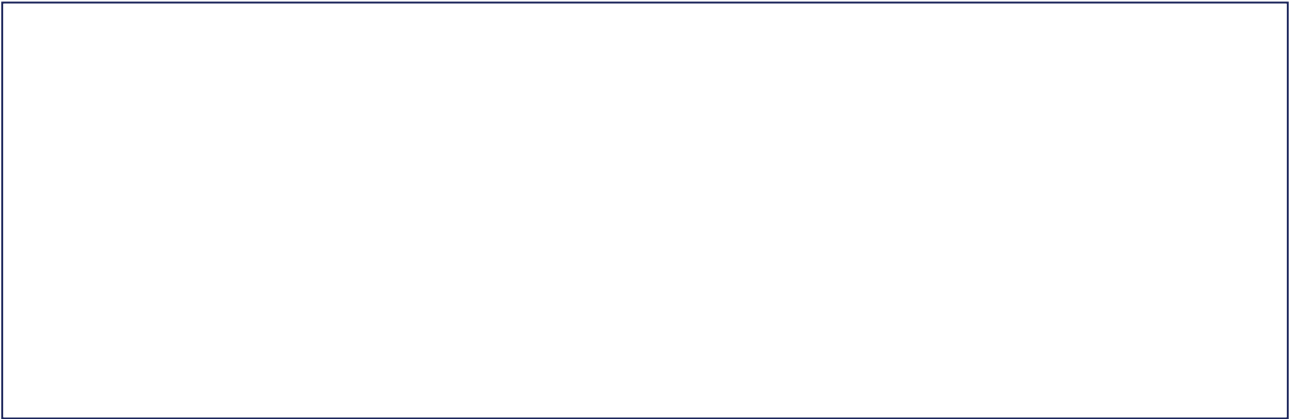
9. 9. What is  $12 \times 12$ ? (1 mark)

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10. 10. Which number must you square to get 81? (1 mark)

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**Draw:** Draw Max the monkey sitting next to a square array of 9 coconuts arranged in a 3x3 pattern.



*Extension challenge: Max wants to buy some fruit! If a square-shaped basket costs £1 for every square number of apples it holds, how much would a basket holding  $6^2$  apples cost? Show your working.*