Max’s Mathematical Factors and Multiples Challenge

Learning objective: To identify, describe, and represent factors and multiples of numbers, including finding common factors and common multiples.

Max the monkey is busy organising his jungle fruit collection! Use your knowledge of factors and multiples to help him solve these 10 quick-fire questions. Write your answers clearly.

Answer Key: 1. B (3), 2. False, 3. True, 4. 24, 5. 1, 2, 4, 8, 16, 6. A (12), 7. 13, 8. True, 9. 48, 10. False. Max’s Tip: Remember, a factor is a number that divides into another exactly, while a multiple is what you get after multiplying a number by an integer.

Word bank: Factor · Multiple · Common Factor · Prime Number · Composite Number · Product

1. Which of these is a factor of 15? A) 2, B) 3*, C) 4, D) 6 (1 mark)

2. True or False: 20 is a multiple of 7. (1 mark)

3. True or False: 1 is a factor of every whole number. (1 mark)

4. What is the lowest common multiple (LCM) of 6 and 8? (1 mark)

5. List all the factors of 16. (1 mark)

6. Which number is a common factor of 24 and 36? A) 12*, B) 18, C) 20, D) 24 (1 mark)

7. Identify the prime number from this list: 9, 13, 15, 21. (1 mark)

8. True or False: A prime number has exactly two factors: 1 and itself. (1 mark)

9. Max has 8 piles of 6 bananas. What is the total number of bananas? Is this total a multiple of 8? (1 mark)

10. True or False: 5 is a multiple of 15. (1 mark)

Draw: Draw Max the monkey sitting under a tree, holding a sign that says 'Factors are friends!', with bunches of bananas grouped into arrays to show different factors.

Extension challenge: Max has £12.00 to spend on bananas. If each banana costs 30p, what is the maximum number of bananas he can buy? Explain how factors helped you solve this.