

Max's Prime Number Puzzle Hunt

Learning objective: To identify, describe, and recognize prime numbers up to 100.

Help Max the monkey solve these number puzzles by using your knowledge of factors and prime numbers. Remember, a prime number has exactly two factors: 1 and itself.

Word bank: prime number · composite number · factor · multiple · divisible · product

1. Max has a basket of numbered apples: 2, 9, 13, 21, and 29. List all the prime numbers from his basket. (2 marks)

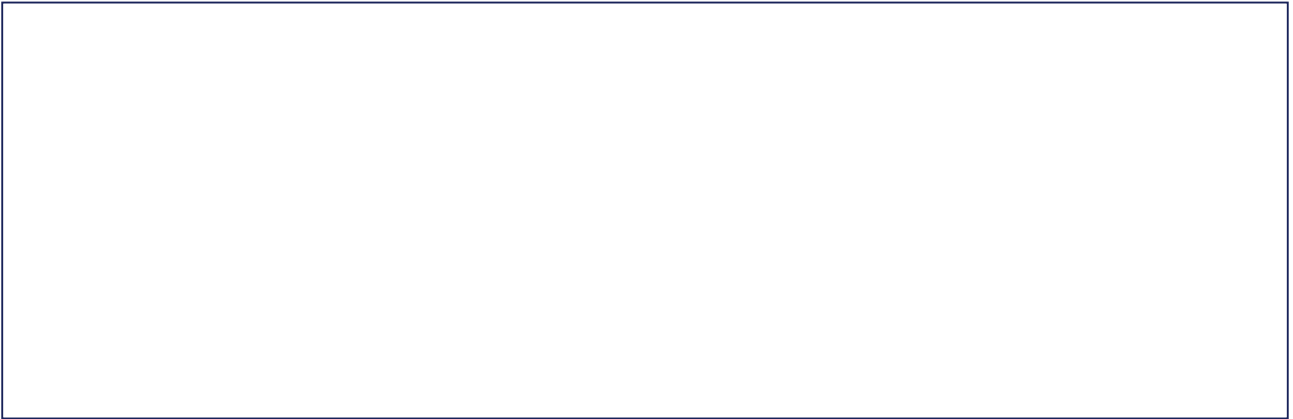
2. Explain why the number 1 is not considered a prime number. (2 marks)

3. Max says, 'All prime numbers are odd.' Is he correct? Use an example to prove or disprove his statement. (2 marks)

4. Find the two prime numbers that add together to make 20. (Hint: They are both less than 20.) (2 marks)

5. Zara is buying art supplies. She finds a set of brushes for £7 and a sketchbook for £11. Both prices are prime numbers. If she buys both, what is the total cost in pounds (£)? Is the total cost a prime number? (3 marks)

Draw: Draw a 'Prime Number Tree' where the leaves are numbered circles. Color the leaves that are prime numbers green and the leaves that are composite numbers brown.



Extension challenge: Challenge: Investigate 'Twin Primes', which are pairs of prime numbers that have a difference of 2 (e.g., 3 and 5). Can you find three more pairs of twin primes less than 50?