

Max's Magnificent Multiples and Fabulous Factors

Learning objective: To identify, find, and write factors and multiples of numbers up to 100.

Read the information below about Max the monkey's math puzzles. Use your knowledge of multiplication tables to answer the questions. Show your working out clearly.

Max the monkey loves to organize his collection of rainforest fruit. He knows that a factor is a number that divides into another number exactly, leaving no remainder. For example, the factors of 12 are 1, 2, 3, 4, 6, and 12 because they all fit into 12 perfectly. Max also loves multiples! A multiple is the result of multiplying a number by a whole number. If you count in 5s (5, 10, 15, 20...), you are listing the multiples of 5. Max is currently sorting 24 bananas into equal piles for his friends. Because 24 can be divided by 1, 2, 3, 4, 6, 8, 12, and 24, he has lots of different ways to share them!

Word bank: factor · multiple · product · divide · multiply · remainder

1. List all the factor pairs of 18. (2 marks)

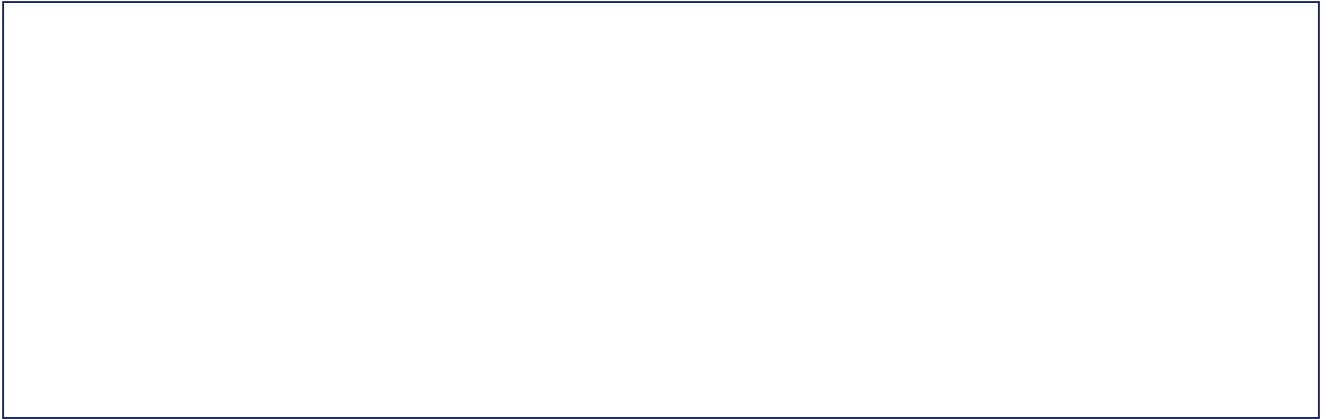
2. Max has 30 stickers. Is 7 a factor of 30? Explain how you know. (2 marks)

3. Write the first five multiples of 8. (2 marks)

4. Max bought 4 bags of nuts. Each bag cost £6. What is the total cost, and is this total a multiple of 4? (2 marks)

5. Find a number between 20 and 30 that is a multiple of both 3 and 4. (2 marks)

Draw: Draw Max the monkey holding a sign that shows a factor rainbow for the number 16.



Extension challenge: Max has 48 shiny pebbles. Can you find all the different ways he could arrange them into equal rows? List the factor pairs that show these possible arrangements.