

Max's Magnificent Fraction Festival

Learning objective: To recognise, find, and write fractions of a discrete set of objects and solve problems involving unit and non-unit fractions.

Help Max the monkey solve his fraction puzzles! Remember to show your working out clearly. Use your knowledge of times tables to help you find equal groups.

Max has been busy organising his fruit collection for the annual forest fair. He has 24 pieces of fruit in total: 12 bananas, 8 oranges, and 4 mangoes.

Word bank: numerator · denominator · equivalent · fraction · whole · part · total · divide

1. Max wants to give $\frac{1}{4}$ of his total fruit collection to Ellie the elephant. How many pieces of fruit will Ellie receive? Explain your method. (2 marks)

2. What fraction of the total collection are the mangoes? Write your answer as a fraction in its simplest form. (2 marks)

3. Max decides to sell $\frac{3}{4}$ of his 8 oranges at the market. How many oranges does he have left for himself? (2 marks)

4. If Max puts his 12 bananas into 3 equal piles, what fraction of the total banana collection is in one pile? (2 marks)

5. Justify your answer: Is $\frac{2}{8}$ of the total fruit collection the same amount as $\frac{1}{4}$ of the total? Use evidence from the fruit numbers to support your reasoning. (3 marks)

Draw: Draw a basket containing 24 fruits (12 bananas, 8 oranges, and 4 mangoes). Label the different fractions of the basket to show the contents clearly.



Extension challenge: What might happen if Max invited more friends and needed to divide his 24 pieces of fruit into sixths instead of quarters? Compare the size of a 'quarter' portion to a 'sixth' portion. Why does the value of the fraction change when the denominator increases?