

Max's Magnificent Fraction Fair

Learning objective: To add and subtract fractions with the same denominator and calculate fractions of amounts involving money.

Max the monkey is organising a charity fair! Use your mathematical skills to help him calculate the costs and portions of his delicious fairground treats. Show all your working out clearly.

Max has 40 cupcakes to sell. He has also prepared trays of fruit skewers and jugs of lemonade for the visitors.

Word bank: denominator · numerator · equivalent · fraction · total · calculate · portion · remainder

1. Max sold $\frac{3}{8}$ of his 40 cupcakes in the morning and $\frac{2}{8}$ in the afternoon. What fraction of the cupcakes were sold in total? How many cupcakes remain unsold? (3 marks)

2. A box of 20 luxury biscuits costs £12.00. Max wants to sell them in smaller portions of $\frac{1}{4}$ of a box. How many biscuits are in one portion, and what would be the price of one portion if the cost is split equally? (3 marks)

3. Leo the lion bought $\frac{5}{12}$ of a tray of fruit skewers. If the tray originally held 36 skewers, how many did Leo buy? Explain how you calculated this. (3 marks)

4. Compare $\frac{4}{6}$ and $\frac{2}{3}$. Are these fractions equivalent? Justify your answer using a diagram or a mathematical explanation. (3 marks)

5. Max has a budget of £80.00 for fair supplies. He spends $\frac{3}{5}$ of his budget on decorations. How much money does he have left for snacks? (3 marks)

Draw: Draw a circular pizza split into 12 equal slices. Colour $\frac{1}{4}$ of the pizza blue and $\frac{1}{3}$ of the pizza red. How many slices are left uncoloured?



Extension challenge: Max wonders: 'What might happen to the price of a single cupcake if I decided to increase the quantity of cupcakes in a pack while keeping the total price the same?' Write a short paragraph justifying your prediction using your knowledge of denominators.