

Max's Market Stall: Ratio and Proportion Challenge

Learning objective: To solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.

Help Max the monkey organise his fruit stall. Read the passage below and use your knowledge of ratios to calculate the correct quantities for his orders. Show your working out clearly.

Max is busy setting up his fruit stall for the weekend market. To make his famous fruit smoothies, he follows a strict recipe to ensure the perfect flavour. For every 3 red apples, he must add 2 green pears. Max sells his fruit in special bundles. A 'Standard Bundle' contains 5 pieces of fruit in total. He also creates 'Large Party Packs' for his customers, which are scaled up versions of his standard bundles. Max needs your help to ensure his proportions remain exactly the same so his smoothies taste delicious every time.

Word bank: ratio · proportion · equivalent · quantity · simplify · scale factor

1. If Max uses 12 red apples in a large smoothie batch, how many green pears does he need to keep the ratio 3:2? (2 marks)

2. Max creates a fruit display with a ratio of 4 bananas to 5 oranges. If he has 20 oranges, how many bananas are in the display? (2 marks)

3. A 'Standard Bundle' costs £4.50 and contains 5 pieces of fruit. If a customer wants to buy 15 pieces of fruit, how much will it cost them if the proportion remains the same? (2 marks)

4. Max has 30 pieces of fruit in total. If the ratio of strawberries to blueberries is 2:3, how many strawberries does he have? (3 marks)

5. Explain why it is important for Max to use a ratio when scaling up his fruit bundles for a large party. (2 marks)

Draw: Draw a basket containing a ratio of 3 yellow lemons to 4 purple plums. Colour them accurately and label the ratio clearly at the bottom of your drawing.



Extension challenge: Max decides to offer a 'Super-Size' bundle which contains 50 pieces of fruit. If the ratio of apples to pears is still 3:2, calculate exactly how many apples and how many pears are in this bundle.