

Max's Market Stall: Mastering Ratio and Proportion

Learning objective: To understand, calculate, and compare ratios and proportions in real-world contexts, including scaling quantities and finding missing values.

Help Max the monkey manage his market stall by solving these ratio puzzles. Show your working clearly for each calculation.

Max is selling fruit baskets at the village market. He needs your help to ensure his stock is prepared correctly using specific ratios.

Word bank: Ratio · Proportion · Scale factor · Quantity · Equivalent · Simplest form

1. Max makes a fruit basket with a ratio of 3 apples to 2 oranges. If he uses 12 apples, how many oranges does he need to keep the same proportion? (2 marks)

2. A bag of mixed nuts costs £4.00 for 500g. Max wants to sell a larger bag weighing 1.5kg. Using proportion, what should the price of the larger bag be? (2 marks)

3. In a batch of 20 fruit kebabs, 8 are strawberry and 12 are grape. Write the ratio of strawberry to grape kebabs in its simplest form. (2 marks)

4. Max's 'Super Smoothie' recipe uses a ratio of 4 parts strawberry juice to 1 part banana juice. If he has 500ml of banana juice, how much strawberry juice does he need to make the smoothie? (2 marks)

5. A box contains blue and red marbles in a ratio of 2:5. If there are 35 marbles in total, how many are red? Explain your method. (3 marks)

Draw: Draw a basket of fruit for Max containing strawberries and grapes in a ratio of 3:2, showing exactly 15 pieces of fruit in total.



Extension challenge: Max decides to change his smoothie recipe to a ratio of 3:2. If he uses 900ml of strawberry juice, how much banana juice is required now? Compare this to the original recipe—does he need more or less banana juice than before?