

# Max's 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.*

Read the information below about Max the monkey's fruit stall. Use your knowledge of ratio and proportion to answer the questions. Remember to show your working out!

Max the monkey is organising his fruit stall for the forest market. He knows that for every 2 bananas he sells, he must include 3 satsumas in a fruit bag. This is a ratio of 2:3. Max also makes 'Monkey Smoothies'. His perfect recipe uses 4 strawberries for every 1 scoop of yoghurt. If Max wants to make a larger batch, he always keeps the proportions exactly the same to ensure the smoothies taste delicious.

*Word bank: Ratio · Proportion · Relationship · Scale · Quantity · Equivalent · Multiplier · Share*

**1. Max is making fruit bags. If he puts 6 bananas in a bag, how many satsumas does he need to keep the ratio of 2:3 the same? (2 marks)**

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**2. For his smoothies, Max uses 4 strawberries for 1 scoop of yoghurt. If Max uses 12 strawberries, how many scoops of yoghurt does he need? (2 marks)**

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**3. If a bag of fruit costs £2 for 5 pieces of fruit, how much would 15 pieces of fruit cost? Explain your method. (3 marks)**

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**4. Max has 20 satsumas. If he uses the ratio 2 bananas to 3 satsumas, can he make an exact number of bags? Why or why not? (2 marks)**

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**5. If 3 apples cost £1.20, how much would 6 apples cost? Show your calculation. (2 marks)**

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**Draw: Draw a fruit bag that shows the ratio of 2 bananas to 3 satsumas, and then draw a second bag that is double the size (4 bananas to 6 satsumas).**



*Extension challenge: Max wants to create a new smoothie recipe with a ratio of 3 blueberries to 2 raspberries. If he uses 15 blueberries, how many raspberries does he need? What if he wanted to make a batch using 20 raspberries; how many blueberries would he need then?*