

Max's Market Stall: A Percentages Challenge

Learning objective: To demonstrate mastery of percentages, including equivalence between fractions, decimals, and percentages, and applying percentage calculations to real-world financial contexts.

Read each question carefully. Max the monkey is helping at the local market today—use your mathematical skills to help him manage his stock and sales. Show all your working out to gain full marks.

Max has set up a stall at the village market. He has 100 pieces of fruit to sell. 25% are crisp red apples, 0.4 are juicy pears, and the rest are golden bananas. He also has a sign offering a 10% discount on any purchase over £5.00.

Word bank: percentage · fraction · decimal · equivalent · proportion · calculate · discount · value

1. Express the proportion of pears as a percentage. Explain how you converted the decimal 0.4 into a percentage. (2 marks)

2. What percentage of Max's fruit stock are golden bananas? Show your calculation. (2 marks)

3. If a customer buys a basket of fruit for £8.00, how much money will they save with Max's 10% discount? What will the final price be? (3 marks)

4. Max decides to increase his price of apples from £2.00 to £2.50. Calculate the percentage increase in the price of one apple. (3 marks)

5. Compare and contrast 25% and $\frac{1}{4}$. Why are they considered equivalent, and how might you represent 25% on a hundred-square grid? (4 marks)

6. A customer has £10.00. They want to buy a bag of pears priced at £4.00. Max offers a 'flash sale' of 20% off all pears. Justify whether the customer can afford to buy two bags of pears after the discount is applied. (3 marks)

7. Max wants to donate 5% of his total daily profit to a local garden project. If he makes £120.00 in total sales, calculate his donation amount. Explain the strategy you used to find 5% of £120.00. (3 marks)

8. Creative Writing Task: Max wants to create a new price board. Write a short persuasive paragraph (approx. 75 words) to customers explaining why buying items in a 25% off sale provides better value. Include a mathematical example in your explanation to support your argument. (5 marks)

Draw: Draw a pie chart or a hundred-square grid that represents Max's fruit stock: 25% apples, 40% pears, and 35% bananas. Colour each section differently and label them clearly.



Extension challenge: What might happen to Max's profit if he increased his discount to 50%? Would he sell more fruit? Write a brief reflection on the relationship between price reduction and total volume of sales.
Total: /25