

Max's Market Stall: Exploring Decimals

Learning objective: To recognize, write, and compare decimals with tenths and hundredths, and relate them to tenths and hundredths as fractions and money.

Max the monkey is helping at the local market. Use your knowledge of place value, fractions, and money to help him solve these decimal puzzles. Show your working out clearly.

Max has set up a fruit stall. He sells apples for £0.50, pears for £0.25, and bags of nuts for £1.05. He needs to make sure he understands the value of every coin and decimal amount.

Word bank: decimal point · tenth · hundredth · place value · equivalent · fraction · digit · partition

1. Max has 75p. Write this amount as a decimal in pounds (£). If Max buys a pear for £0.25, how much money does he have left? Write your answer as a decimal. (2 marks)

2. Max says that 0.5 is the same as $\frac{5}{10}$ and $\frac{50}{100}$. Is he correct? Justify your answer by explaining the relationship between tenths and hundredths. (3 marks)

3. Compare these two amounts using the symbols $<$, $>$ or $=$: £1.05 and £1.50. Explain why the position of the digit '5' changes the value of these amounts. (2 marks)

4. Partition the decimal 2.64 into its ones, tenths, and hundredths. How many hundredths are there in total in the number 2.64? (2 marks)

5. If Max increases the price of an apple from £0.50 to £0.75, what is the difference in price? Write your answer as a fraction of a pound. (2 marks)

Draw: Draw a set of coins that equal exactly £1.36. Label the coins and show how you would write this total as a decimal.

Extension challenge: Max wants to create a 'Buy One, Get One Half Price' deal for his pears. If one pear costs £0.40, calculate the total cost for two pears. Then, imagine Max decides to change the price to £0.38 per pear. Explain why it is important to understand hundredths when pricing items for a market stall. What might happen if Max confused 0.4 with 0.04?