

Max's Market Stall: A Measurement Challenge

Learning objective: To solve multi-step problems involving the conversion of metric units (km, m, cm, mm, l, ml, kg, g) and calculations involving money (£ and p).

Max the monkey is organising a charity market to buy new books for the library. Use your knowledge of metric measures and currency to help him solve these logistical puzzles. Ensure you show your working out clearly, including units for every answer.

Word bank: convert · millilitres · kilograms · equivalent · capacity · mass · calculate · decimal notation

1. Max is selling jars of honey. Each jar holds 250ml. If he sells 12 jars, what is the total capacity sold in litres? Explain your conversion method. (3 marks)

2. A sack of potatoes has a mass of 4.5kg. Max sells them in 500g bags. How many bags can he fill? Justify your answer using your knowledge of mass. (3 marks)

3. Max needs to create a banner that is 2.4 metres long. He has a piece of ribbon that is 85cm long. How much more ribbon does he need in millimetres to complete the banner? (3 marks)

4. If apples cost £1.20 per kilogram and Max sells 3.5kg of apples, how much total profit does he make? Show your calculation. (2 marks)

5. Compare and contrast the process of converting between grams and kilograms with the process of converting between millimetres and metres. What is the common factor? (4 marks)

6. What might happen if Max accidentally measured his ingredients in millilitres instead of centilitres? Explain the impact on his final measurements. (3 marks)

Extension challenge: Design a new stall for Max. Create a price list that requires customers to calculate the cost of items sold by mass (e.g., £ per 100g) and write one 'Greater Depth' challenge question for a classmate to solve.