

Max's Measurement Marathon

Learning objective: To solve multi-step problems involving converting between units of measure and calculating with money.

Read the story below carefully. Use Max the monkey's mathematical methods to solve the problems, showing your working out clearly. Remember to convert your units before you add or subtract.

Max the monkey is organising a feast for the BookFlik forest gathering. He has a budget of £50.00 to buy fruit and nectar. He needs to buy 2.5 kilograms of bananas at £1.20 per kilogram and 4500 millilitres of forest nectar, which costs £0.80 per litre. Max also needs to measure the perimeter of the banquet table, which is 320 centimetres long and 150 centimetres wide. He must ensure he has enough ribbon to decorate the edges.

Word bank: millilitres · centimetres · kilograms · conversion · budget · decimal · perimeter

1. Calculate the total cost of the bananas and the nectar. How much money will Max have remaining from his £50.00 budget? (3 marks)

2. The banquet table is 320 cm long and 150 cm wide. Calculate the total perimeter of the table in metres. Show your conversion steps. (3 marks)

3. Explain why it is important to convert all measurements to the same unit before performing calculations. Provide an example from the text to support your reasoning. (2 marks)

4. If Max decides to buy an extra 1.5 kilograms of mangoes at £2.40 per kilogram, will he still be within his £50.00 budget? Justify your answer with a calculation. (3 marks)

5. Compare and contrast the units used for volume (millilitres) and mass (kilograms). Why do we use different scales for these measurements? (2 marks)

Draw: Draw a diagram of the banquet table, labelling the length and width in metres, and sketch the items Max is buying, including their prices.



Extension challenge: What might happen if Max miscalculated the conversion of millilitres to litres? Write a short paragraph explaining the potential impact on his budget and his shopping list.