

Max's Measurement Challenge

Learning objective: To solve problems involving the conversion of metric units, including length, mass, and capacity, and to calculate the perimeter and area of composite shapes.

Max the monkey has been busy organising his supplies for an adventure. Help him solve these measurement puzzles by showing your working clearly and ensuring you use the correct units.

Word bank: millimetres · centimetres · metres · kilometres · grams · kilograms · millilitres · litres · perimeter · area · conversion

1. Max has a piece of rope that is 4.5 metres long. He needs to cut it into 15 equal sections for his climbing frame. How many centimetres long will each section be? (2 marks)

2. Bea the honeybee collected 2,450 grams of nectar on Monday and 3.2 kilograms of nectar on Tuesday. How many kilograms of nectar did she collect in total? (2 marks)

3. A rectangular garden bed measures 4 metres by 3 metres. A path is built around the outside, increasing the dimensions to 6 metres by 5 metres. What is the area of the path only? (3 marks)

4. Kit the fox is filling water bottles for a hiking trip. If he has a 5-litre jug of water and wants to fill 8 bottles that each hold 450 millilitres, how much water will be left in the jug? Give your answer in millilitres. (3 marks)

5. Zara the zebra is designing a square art frame with a perimeter of 120 centimetres. What is the length of one side of the frame in millimetres? (2 marks)

Draw: Draw a composite shape made of two rectangles, one 5cm by 2cm and the other 3cm by 3cm joined together. Label all the side lengths and calculate the total perimeter.



Extension challenge: Max wants to buy some fruit for the team. Bananas cost £1.20 per kilogram. If he buys 750 grams of bananas, how much will he spend? Show your calculation in pounds and pence.