Mass

Find three small boxes. Label them A, B and C. Fill each box with sand.

1 a Feel the weight of each box.

   b Write the boxes in order from lightest to heaviest.

   lightest _____ _____ _____ heaviest

2 Use balance scales to order the boxes.

   lightest _____ _____ _____ heaviest

3 a Empty the boxes and fill them with something different, eg marbles or blocks.

   b Order the boxes from lightest to heaviest.

   lightest _____ _____ _____ heaviest

4 Is the order the same each time? _____

5 How could you weigh this book using sand or marbles?

_____

6 Do you know a better method to weigh this book?

_____

ACMMG061 Using units of measurement • Measure, order and compare objects using familiar metric units of length, mass and capacity.

Introducing the kilogram

1 Hold a one kilogram weight. Feel how heavy it is.

Estimate whether these items are heavier or lighter than 1 kg. Use balance scales to check.
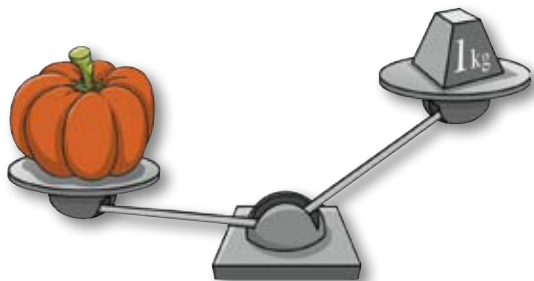
> **Objects are weighed in kilograms.**
> **kg is the short way to write kilograms.**

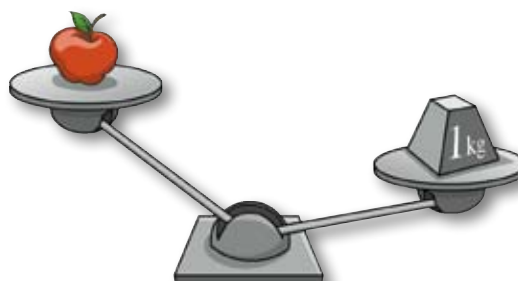| Item	Estimate	Balance scales
a 2 maths books		
b a pencil case		
c a book box		
d a full lunch box		
e 1 brick		
f a bottle of water		
g a football		
h a backpack		
i a whiteboard marker		
j 20 pencils		

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a

The pumpkin weighs _____ than 1 kg.
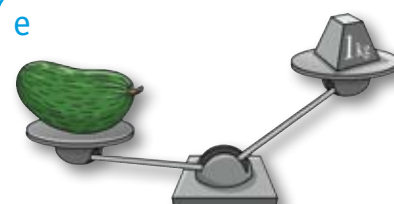
b

The apple weighs _____ than 1 kg.

c

The sugar _____
_____

d

_____
_____

e

_____
_____

3 Write five items that are weighed in kilograms, eg sugar.

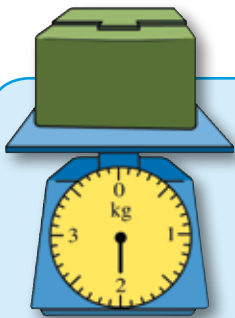_____ _____ _____ _____ _____
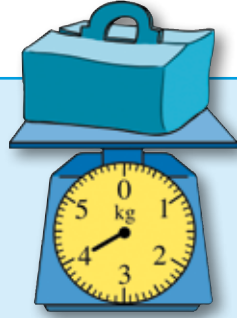
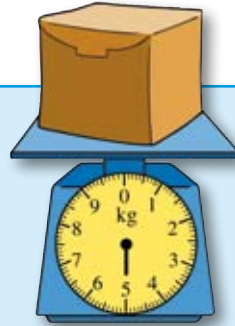**4** How many kilograms do you weigh? _____

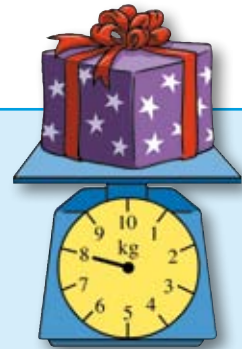# Weighing in kilograms

1 What is the mass for each box?
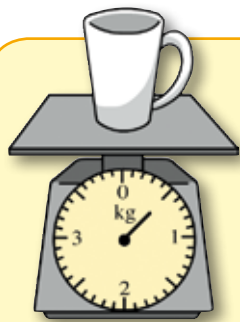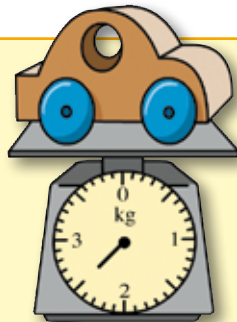
a _____ kg　　b _____ kg　　c _____ kg　　d _____ kg
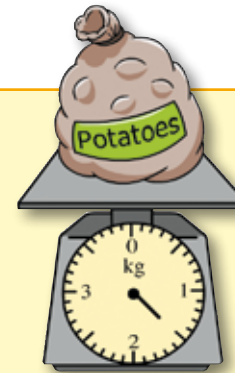
e What is the total mass of the four boxes? _____

2 What is the mass for each object?

a _____ kg　　b _____ kg　　c _____ kg　　d _____ kg

e Order the objects from lightest to heaviest.

_____ _____ _____ _____

3 Use balance scales to find:

a two things that weigh about 1 kg. _____ _____

b two things that weigh about 2 kg. _____ _____

c two things that weigh about $\frac{1}{2}$ kg. _____ _____

d two things that are exactly the same weight. _____ _____

How heavy are they? _____

Challenge! Find something that has the same mass as you.

Problem solving

Heavy duty

1 You can carry 7 kg and your little sister can carry 5 kg.

How many ways can you carry all these bags between you?

2 kg   3 kg   4 kg

1 kg   2 kg

Solutions: _____

_____

_____

_____

2 How can you find the heaviest of three similar objects with only a balance scale and no weights?

Solution: _____

_____

_____

_____

3 How can you weigh your dog when he won't stand still on the scales?

Hint: Use these.

_____

_____

_____

_____

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