Backpack masses

Convert between grams and kilograms to solve problems

Oscar:
5·248 kg

Mina:
5·813 kg

Terry:
6·478 kg

Julie:
4·685 kg

Steve:
8·157 kg

Abby:
7·589 kg

Challenge 1

1   Write the mass of each backpack in grams.

2   Write the number of grams represented by the number 8 in the mass of each child's backpack.

3   Find the difference in kilograms between the backpacks of Oscar and Steve.

Challenge 2

1   Round the mass of each backpack to the nearest tenth of one kilogram and then to the nearest kilogram. Record your results in a table.

Backpack	Rounded to nearest $\frac{1}{10}$ kg (kg)	Rounded to nearest kg (kg)
Oscar	5·2	5
Mina		
Terry		
Julie		
Steve		
Abby		

2 All 6 backpacks were loaded into the back of the minivan. Use the answers in your table for Question 1 to calculate the total mass of the 6 backpacks to the nearest kilogram.

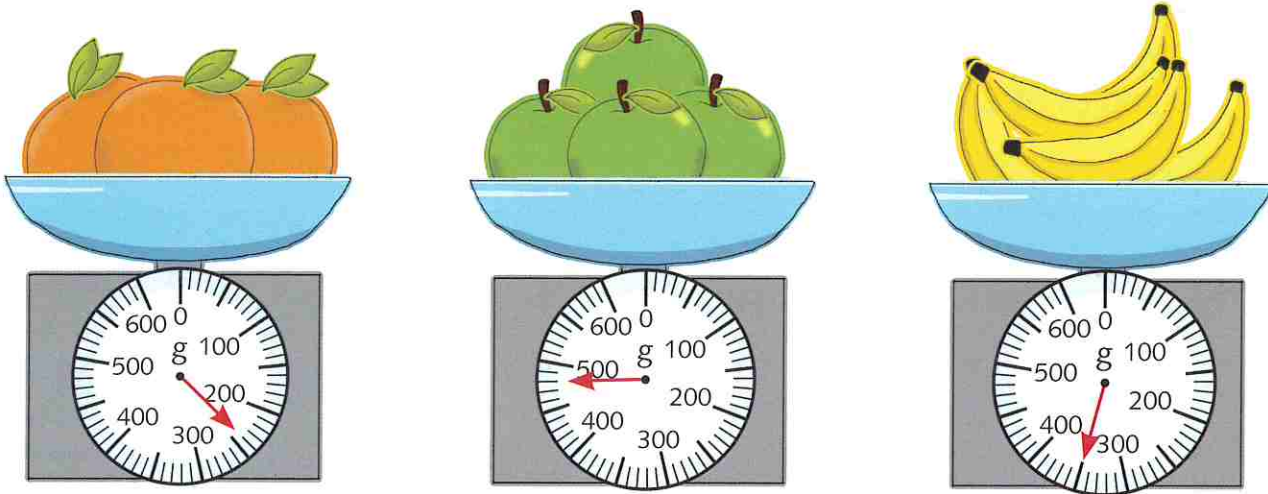**3** Find the difference in grams between the backpacks of these children.

    a Oscar and Terry   **b** Mina and Steve   **c** Julie and Abby

4 Which three backpacks have the same combined mass as the combined mass of Steve's and Abby's backpacks?

5 Use the pictures below to answer the questions.

a For each of the fruits, find the approximate mass of:

    i 1 fruit in grams   **ii** 10 fruits in kilograms   **iii** 100 fruits in kilograms

b Mina put 2 apples and 1 banana into her lunch box. What was the total mass of her fruit in kilograms?

Three spaniel puppies have a combined mass of 11·9 kg.

- Harry is 0·4 kg heavier than Holly.

- Holly is 200 g heavier than Heather.

What is the mass of each puppy in kilograms?