

Massive masses



Convert between kilograms and tonnes using decimals to 3 places

Challenge 1

1 Write these masses in tonnes.

a 6000 kg

b 9000 kg

c 3000 kg

d 12 000 kg

e 5700 kg

f 6800 kg

g 13 600 kg

h 21 700 kg

i 19 900 kg

Example

$$2000 \text{ kg} = 2 \text{ t}$$

$$2700 \text{ kg} = 2.7 \text{ t}$$

2 Write these masses in kilograms.

a 1.4 t

b 3.8 t

c 7.9 t

d 15.5 t

e 18.7 t

f 24.6 t

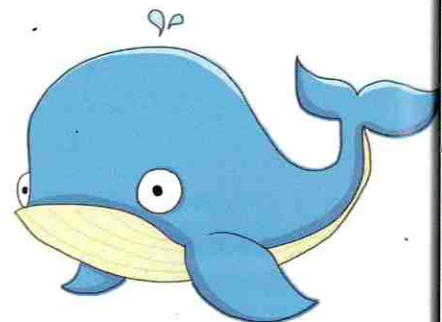
Example

$$5.3 \text{ t} = 5300 \text{ kg}$$

Challenge 2

1 Copy and complete the table, which shows the average mass of adult whales.

Whale	Tonnes (t)	Kilograms (kg)
blue	150	150 000
bowhead	100	
sei		20 000
humpback	30	
grey	28.5	
minke		7500
bottlenose	6.5	
killer		3988
pilot		2200
narwhal		1250



2 How many times heavier is the blue whale than:

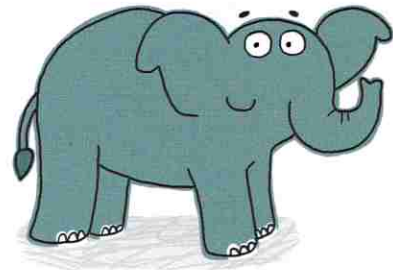
- a the humpback whale? b the minke whale?

3 How many times heavier is the bowhead whale than the sei whale?

4 What is the approximate total mass in tonnes of a pod of:

- a 8 narwhals? b 5 pilot whales? c 10 killer whales?

5 The average mass of an adult African elephant is 4800 kg. How many elephants will have a total mass to the nearest tonne as that of 1 grey whale to the nearest tonne?



1 Calculate in kilograms:

- a the mass of krill that a blue whale eats in one day.
b the difference between the average and the heaviest recorded mass of the blue whale.

2 What is the approximate mass of a baby blue whale:

- a at 10 days old?
b at 10 weeks old?

3 The mass of a slice of pizza is 0.2 kg. How many times larger would the pizza slice have to be to match the daily appetite of an average blue whale?

Facts about blue whales

- They are the largest living creatures on Earth.
- They have an average mass of 150 tonnes.
- The heaviest ever caught had a mass of about 190 tonnes.
- Their daily consumption of krill, small sea creatures similar to shrimp, is about 4 tonnes.
- At birth the mass of a baby blue whale is about 3000 kg.
- A baby blue whale will gain about 100 kg in mass each day.

