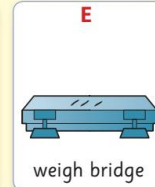
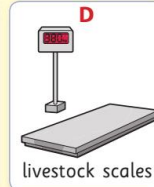
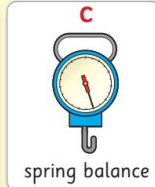
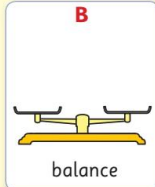
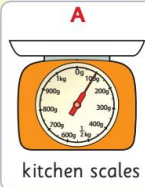


Chapter 31. Weight – Using the correct measure

Here are some of the most common weighing instruments we use.



1. Which of the above scales would you use to weigh each of these items?

- | | | |
|---------------------------------|----------------------------|-----------------------------|
| (a) a family suitcase _____ | (b) a turkey _____ | (c) a car transporter _____ |
| (d) a small truck of logs _____ | (e) a box of crayons _____ | (f) a horse _____ |
| (g) a bowl of rice _____ | (h) a kitten _____ | (i) a pineapple _____ |

2. Write two other items you would measure with each of the above weighing instruments.

Each of these items weighs about 1 gramme.

- | | | |
|---------------------|--|--|
| (a) paperclip | | |
| (b) a pinch of salt | | |
| (c) a €5 note | | |

Each of these items weighs about 1kg.

- | | |
|------------------------|--|
| (a) a litre of water | |
| (b) 6 apples | |
| (c) 1½ loaves of bread | |

Remember:

$1g = \frac{1}{1000}kg = 0.001kg$

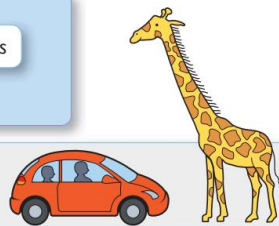
$1kg = \frac{1}{1000}tonnes = 0.001tonnes$

$1,000kg = 1tonne (1t)$

$1,600kg = 1.6tonnes (1.6t)$

A small family car weighs approximately 1.3 tonnes.

An adult giraffe weighs about 1.2 tonnes.



3. Give your best estimate in **grammes (g)**, **kilogrammes (kg)**, or **tonnes (t)** for each of these.

- | | |
|-----------------------------------|---------------------------------|
| (a) Average newborn baby _____ | (b) An adult whale _____ |
| (c) Standard concrete block _____ | (d) An average adult _____ |
| (e) An African elephant _____ | (f) Regular jar of coffee _____ |

Maths Fact 825 tonnes of coal were used to fire the ship's engines every day the Titanic sailed.



Challenge The Titanic sank four days into its voyage. How many tonnes of coal would have been used, if it had completed the usual eight-day crossing?

Weight - Rename measures in weight

Paula is baking and wishes to convert 1,430g to kg.

$$1,430\text{g} = 1.430\text{kg}$$

$$1,000\text{g} = 1\text{kg}$$

$$1\text{kg} = 1,000\text{g}$$

$$1,400\text{g} = \frac{1400}{1000}\text{kg} = 1.4\text{kg}$$

$$1,430\text{g} = \frac{1430}{1000}\text{kg} = 1.43\text{kg}$$

Write these **gramme** weights as **kilogrammes (kg)** using the decimal point.

1. (a) $1,650\text{g} = \underline{\hspace{1cm}}$ (b) $1,800\text{g} = \underline{\hspace{1cm}}$ (c) $2,370\text{g} = \underline{\hspace{1cm}}$ (d) $5,075\text{g} = \underline{\hspace{1cm}}$ (e) $3,005\text{g} = \underline{\hspace{1cm}}$

2. (a) $4,450\text{g} = \underline{\hspace{1cm}}$ (b) $445\text{g} = \underline{\hspace{1cm}}$ (c) $45\text{g} = \underline{\hspace{1cm}}$ (d) $5\text{g} = \underline{\hspace{1cm}}$ (e) $700\text{g} = \underline{\hspace{1cm}}$

Write these **kilogramme** weights as **grammes**.

3. (a) $3\text{kg } 625\text{g} = \underline{\hspace{1cm}}$ (b) $5\text{kg } 700\text{g} = \underline{\hspace{1cm}}$ (c) $1\text{kg } 85\text{g} = \underline{\hspace{1cm}}$ (d) $2\text{kg } 60\text{g} = \underline{\hspace{1cm}}$

4. (a) $3\frac{1}{4}\text{kg} = \underline{\hspace{1cm}}$ (b) $6\frac{7}{10}\text{kg} = \underline{\hspace{1cm}}$ (c) $2\frac{3}{100}\text{kg} = \underline{\hspace{1cm}}$ (d) $3\frac{375}{1000}\text{kg} = \underline{\hspace{1cm}}$



Christy took a delivery of 2,375kg of concrete for a building job. How much is this in tonnes?

$$1,000\text{kg} = 1\text{tonne}$$

$$1\text{tonne} = 1,000\text{kg}$$

$$2,300\text{kg} = \frac{2300}{1000}\text{t} = 2.3\text{t}$$

$$2,375\text{kg} = \frac{2375}{1000}\text{t} = 2.375\text{t}$$

Convert these weights to **tonnes** using the decimal point.

5. (a) $1,470\text{kg} = \underline{\hspace{1cm}}\text{t}$ (b) $2,260\text{kg} = \underline{\hspace{1cm}}\text{t}$ (c) $1,700\text{kg} = \underline{\hspace{1cm}}\text{t}$ (d) $3,025\text{kg} = \underline{\hspace{1cm}}\text{t}$

6. (a) $770\text{kg} = \underline{\hspace{1cm}}\text{t}$ (b) $95\text{kg} = \underline{\hspace{1cm}}\text{t}$ (c) $8\text{kg} = \underline{\hspace{1cm}}\text{t}$ (d) $300\text{kg} = \underline{\hspace{1cm}}\text{t}$

7. (a) $1\text{t } 840\text{kg} = \underline{\hspace{1cm}}\text{t}$ (b) $5\text{t } 300\text{kg} = \underline{\hspace{1cm}}\text{t}$ (c) $6\text{t } 90\text{kg} = \underline{\hspace{1cm}}\text{t}$ (d) $3\text{t } 8\text{kg} = \underline{\hspace{1cm}}\text{t}$

8. (a) $5\frac{9}{10}\text{t} = \underline{\hspace{1cm}}\text{t}$ (b) $3\frac{3}{4}\text{t} = \underline{\hspace{1cm}}\text{t}$ (c) $6\frac{3}{5}\text{t} = \underline{\hspace{1cm}}\text{t}$ (d) $4\frac{57}{100}\text{t} = \underline{\hspace{1cm}}\text{t}$

Frances knows that 125g can also be written as a fraction of a kg. Help her write it in its lowest terms.

$$125\text{g} = \frac{125}{1000}\text{kg}$$

$$\frac{125}{1000} \rightarrow \frac{25}{200} \rightarrow \frac{5}{40} = \frac{1}{8}$$

Convert these weights to **fractions of kilogrammes** or **tonnes** in their lowest terms.

9. (a) $750\text{g} = \underline{\hspace{1cm}}\text{kg}$ (b) $600\text{g} = \underline{\hspace{1cm}}\text{kg}$ (c) $375\text{g} = \underline{\hspace{1cm}}\text{kg}$ (d) $900\text{g} = \underline{\hspace{1cm}}\text{kg}$

10. (a) $700\text{kg} = \underline{\hspace{1cm}}\text{t}$ (b) $0.4\text{t} = \underline{\hspace{1cm}}\text{t}$ (c) $650\text{kg} = \underline{\hspace{1cm}}\text{t}$ (d) $0.36\text{t} = \underline{\hspace{1cm}}\text{t}$

11. (a) $6\text{kg} = \underline{\hspace{1cm}}\text{t}$ (b) $50\text{kg} = \underline{\hspace{1cm}}\text{t}$ (c) $0.65\text{t} = \underline{\hspace{1cm}}\text{t}$ (d) $0.15\text{t} = \underline{\hspace{1cm}}\text{t}$

12. (a) $510\text{kg} = \underline{\hspace{1cm}}\text{t}$ (b) $875\text{kg} = \underline{\hspace{1cm}}\text{t}$ (c) $175\text{kg} = \underline{\hspace{1cm}}\text{t}$ (d) $75\text{kg} = \underline{\hspace{1cm}}\text{t}$

Maths Fact



A blue whale's diet consists of a daily intake of about 3,600kg of krill.

Challenge

Convert the Maths Fact figure of 3,600kg to tonnes using (a) the decimal point and (b) as tonnes and a fraction of a tonne in its lowest terms.

Busy at Maths 6 - Sixth Class

Pg 164

Weight - Addition, subtraction, multiplication and division

1. (a)
$$\begin{array}{r} 4.937\text{kg} \\ \times 8 \\ \hline \end{array}$$
 (b)
$$\begin{array}{r} 7.256\text{kg} \\ \times 17 \\ \hline \end{array}$$
 (c)
$$\begin{array}{r} 9.036\text{kg} \\ \times 35 \\ \hline \end{array}$$
 (d)
$$\begin{array}{r} 9.608\text{kg} \\ \times 7.3 \\ \hline \end{array}$$
 (e)
$$\begin{array}{r} 45.2\text{kg} \\ \times 6.8 \\ \hline \end{array}$$

2. (a)
$$7 \overline{) 3.696\text{t}}$$
 (b)
$$8 \overline{) 3.08\text{t}}$$
 (c)
$$16 \overline{) 4.416\text{t}}$$
 (d)
$$39 \overline{) 6.357\text{t}}$$
 (e)
$$27 \overline{) 77.49\text{t}}$$

Do the following. Remember to complete the part **inside the brackets** first.

3. (a) $(5279\text{g} + 3.714\text{kg}) \times 6 =$ _____ (b) $(7126\text{g} - 2.338\text{kg}) \times 7 =$ _____
 (c) $(6\frac{256}{1000}\text{kg} \times 9\frac{1}{4}\text{kg}) \times 8 =$ _____ (d) $(9.03\text{kg} - 933\text{g}) \div 3 =$ _____
 (e) $(83.228\text{kg} - 6\frac{988}{1000}\text{kg}) \div 16 =$ _____ (f) $(6\frac{1}{4}\text{t} + 3.098\text{t}) \div 38 =$ _____

4. (i) Write each of these groups of weights in order, starting with the **smallest**.

(ii) Subtract the **smallest** from the **largest** number in each case.

(a) $5,500\text{kg}$, $5\frac{2}{5}\text{kg}$, 5.273kg

(b) $1,186\text{g}$, 1.45kg , $1\text{kg } 279\text{g}$

(c) $6,003\text{g}$, 6.03kg , 603g

(d) $7\frac{72}{100}\text{kg}$, $7,127\text{g}$, $7\frac{3}{8}\text{kg}$

(e) 876g , $\frac{3}{4}\text{kg}$, 0.867kg

(f) $4\frac{5}{8}\text{kg}$, $4,650\text{g}$, $4\frac{3}{5}\text{kg}$

5. Rachel and Jamie are both using this recipe to make their Christmas puddings.

- (a) Rachel follows the recipe. What will be the total weight of the ingredients she uses?
- (b) Jamie leaves out the cherries but doubles the amount of cinnamon. What total weight of ingredients will he use?
- (c) Rachel makes another pudding with 30g less flour but decides to add another egg. What is the total weight of her ingredients for this pudding?
- (d) Jamie sticks to the recipe and makes 27 puddings for a cake sale. What is the total weight of the ingredients?
- (e) If Jamie made another pudding using $\frac{1}{5}$ less flour but twice as much cherries and eggs, what would be the total weight of his pudding?
- (f) Rachel and Jamie both used the quick Christmas pudding recipe and donated a dozen puddings **each** to charity. What was the total weight of the ingredients that they used?

QUICK CHRISTMAS PUDDING

80g of self-raising flour
 13.5g of brown sugar
 $\frac{1}{8}\text{kg}$ of margarine
 0.005kg of cinnamon
 $\frac{1}{10}\text{kg}$ of cherries
 0.175kg of breadcrumbs
 2 eggs (75g each)



Maths Fact A newborn giant panda weighs about 85 grammes. This is about 0.2% of its mother's weight.

Challenge Convert the newborn panda's weight to kg. What should be the weight of 24 newborn pandas? _____ kg

