



Units of Mass

I can understand, use and convert between common metric and imperial units of mass.



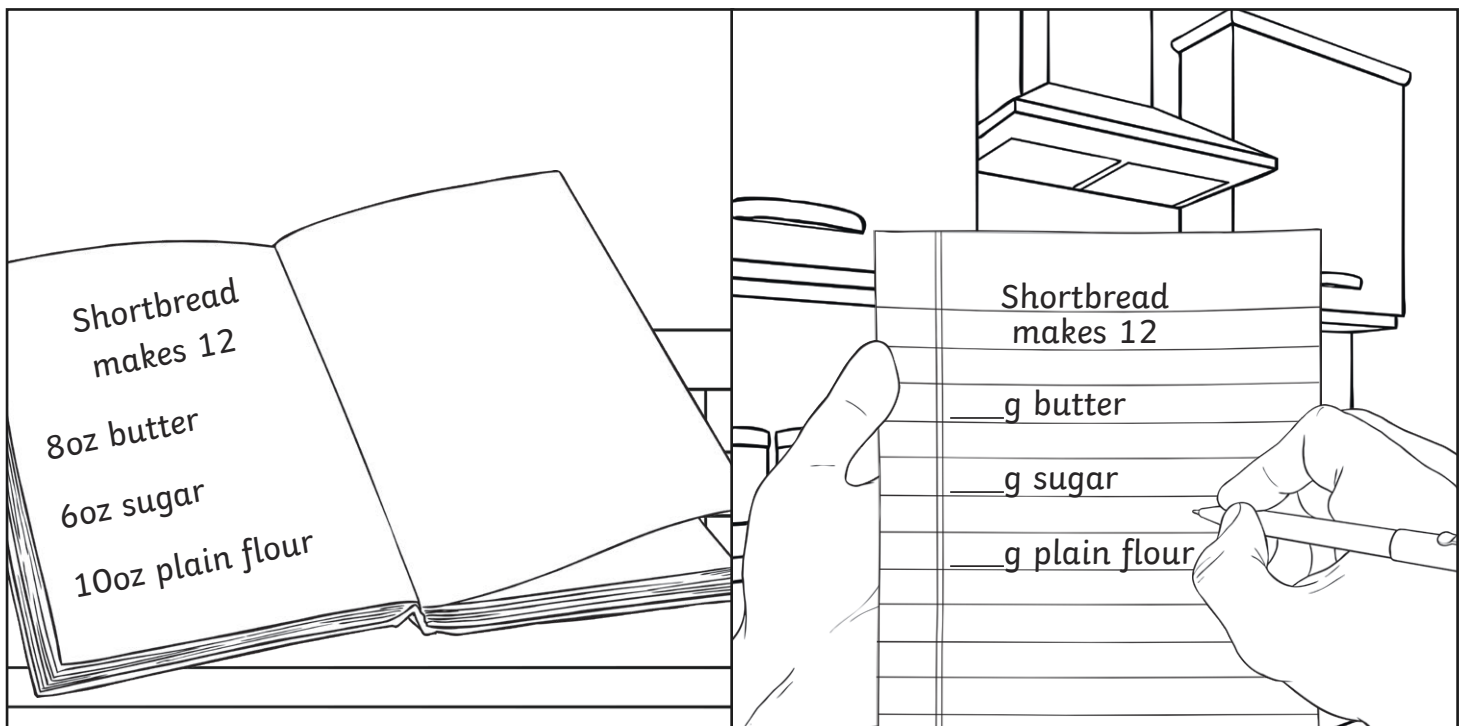
One ounce is approximately the same as 28 grams. However, many people use the approximate conversion of $1\text{oz} \approx 30\text{g}$, which is quicker and simpler to calculate with.

$1\text{oz} \approx 30\text{g}$

$1\text{lb} \approx 450\text{g}$

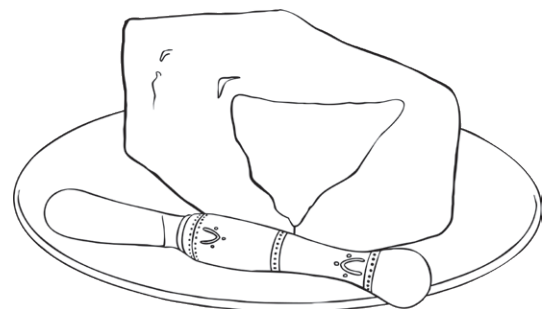
$1\text{kg} \approx 2.2\text{lb}$

1) Here is a recipe for biscuits. Convert the imperial measurements into metric units.



2) Fill in this chart to convert from pounds to grams.

1lb	2lb	5lb	10lb
450g			

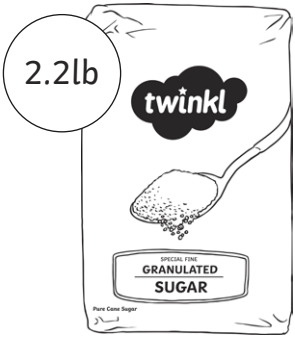
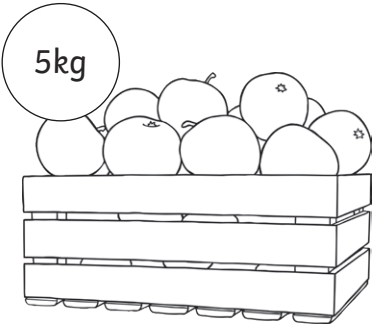


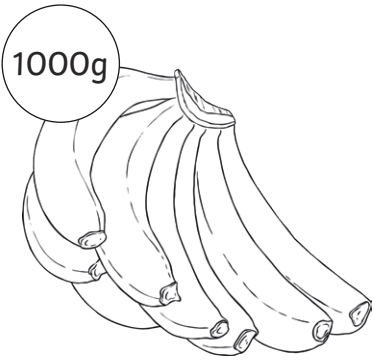



$1\text{oz} \approx 30\text{g}$

$1\text{lb} \approx 450\text{g}$

$1\text{kg} \approx 2.2\text{lb}$

- 3) The masses of these items of food have been recorded in either metric or imperial units of measurement. Convert each measurement into the given unit.

 <p>2.2lb</p> <p>_____ g</p>	 <p>5kg</p> <p>_____ lb</p>	 <p>4.4lb</p> <p>_____ kg</p>
 <p>3000g</p> <p>_____ lb</p>	 <p>1000g</p> <p>_____ lb</p>	 <p>1.1lb</p> <p>_____ g</p>

- 4) Sara adopted two kittens called Kiki and Ken. Kiki has a mass of 10oz; Ken's mass is 250g. Which kitten is heavier? Show your working out.





Units of Mass Answers

Question	Answer								
1.	Convert the imperial measurements into metric units.								
	240g butter 180g sugar 300g plain flour								
2.	Fill in this chart to convert from pounds to grams.								
	<table border="1"><thead><tr><th>1lb</th><th>2lb</th><th>5lb</th><th>10lb</th></tr></thead><tbody><tr><td>450g</td><td>900g</td><td>2250g</td><td>4500g</td></tr></tbody></table>	1lb	2lb	5lb	10lb	450g	900g	2250g	4500g
1lb	2lb	5lb	10lb						
450g	900g	2250g	4500g						
3.	The masses of these items of food have been recorded in either metric or imperial units of measurement. Convert each measurement into the given unit.								
	<table border="1"><tbody><tr><td>1000g</td><td>11lb</td><td>2kg</td></tr><tr><td>6.6lb</td><td>2.2lb</td><td>500g</td></tr></tbody></table>	1000g	11lb	2kg	6.6lb	2.2lb	500g		
1000g	11lb	2kg							
6.6lb	2.2lb	500g							
4.	Sara adopted two kittens called Kiki and Ken. Kiki has a mass of 10oz; Ken's mass is 250g. Which kitten is heavier?								
	Kiki: 10oz $\approx 10 \times 30g \approx 300g$ Ken: 250g 250g is less than 300g so Kiki is heavier.								



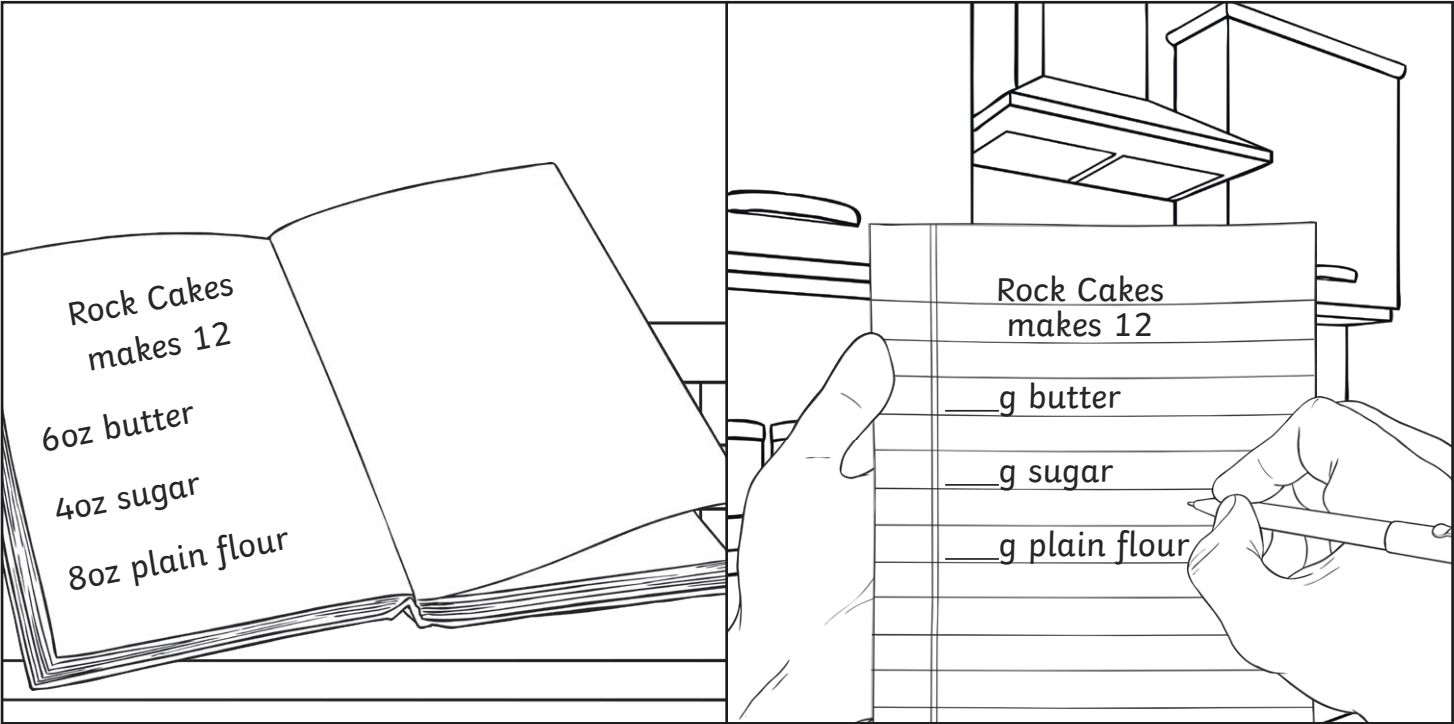
Units of Mass

I can understand, use and convert between common metric and imperial units of mass.



1oz ≈ 28g	1lb ≈ 450g	1kg ≈ 2.2lb
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- 1) Here is a recipe for making rock cakes.
Convert the imperial measurements into metric units.



- 2) Order these measurements from lightest to heaviest.

80g	5oz	50g	2oz
Lightest	←————→		Heaviest

- 3) Fill in this chart to convert from pounds to grams.

$\frac{1}{2}$ lb	1lb	2lb	5lb	10lb	20lb
	450g				

$1\text{oz} \approx 28\text{g}$

$1\text{lb} \approx 450\text{g}$

$1\text{kg} \approx 2.2\text{lb}$

4) Jude bought 1kg of toffee at the sweet shop! Marius decided to buy $1\frac{1}{2}$ lb.

a) Who bought the most toffee?

b) How much more toffee did they buy than the other person?

Give your answer in grams and show your working out.

5) Tom was in the airport. His bag contained his laptop with a mass of 4kg; his books with a mass of 3lb; and his laptop charger with a mass of 2000g.

The airport staff said that he would have to pay more to take his bag into the cabin with him as it had a total mass of more than 15lb. Were they correct? Show your working out.



Units of Mass Answers

Question	Answer												
1.	Convert the imperial measurements into metric units.												
	168g butter 112g sugar 224g plain flour												
2.	Order these measurements from lightest to heaviest.												
	Lightest \longleftrightarrow Heaviest <table border="1" style="width: 100%; text-align: center;"> <tr> <td>50g</td> <td>2oz</td> <td>80g</td> <td>5oz</td> </tr> </table>	50g	2oz	80g	5oz								
50g	2oz	80g	5oz										
3.	Fill in this chart to convert from pounds to grams.												
	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>$\frac{1}{2}$lb</td> <td>1lb</td> <td>2lb</td> <td>5lb</td> <td>10lb</td> <td>20lb</td> </tr> <tr> <td>225g</td> <td>450g</td> <td>900g</td> <td>2250g</td> <td>4500g</td> <td>9000g</td> </tr> </table>	$\frac{1}{2}$ lb	1lb	2lb	5lb	10lb	20lb	225g	450g	900g	2250g	4500g	9000g
$\frac{1}{2}$ lb	1lb	2lb	5lb	10lb	20lb								
225g	450g	900g	2250g	4500g	9000g								
4.	Jude bought 1kg of toffee at the sweet shop! Marius decided to buy $1\frac{1}{2}$ lb.												
a.	<i>Jude bought more toffee.</i>												
b.	<i>Marius bought $1\frac{1}{2}$lb toffee $\approx 1.5 \times 450g = 675g$.</i> <i>$1kg - 675g = 325g$</i> <i>Jude buys 325g more of toffee.</i>												
5.	The airport staff said that he would have to pay more to take his bag into the cabin with him as it had a total mass of more than 15lb. Were they correct?												
	$4kg \approx 4 \times 2.2lb = 8.8lb$ $2000g = 2kg \approx 2 \times 2.2lb = 4.4lb$ $8.8lb + 4.4lb + 3lb = 16.2lb$ <i>The total mass was more than 15lb so the airport staff were correct.</i>												



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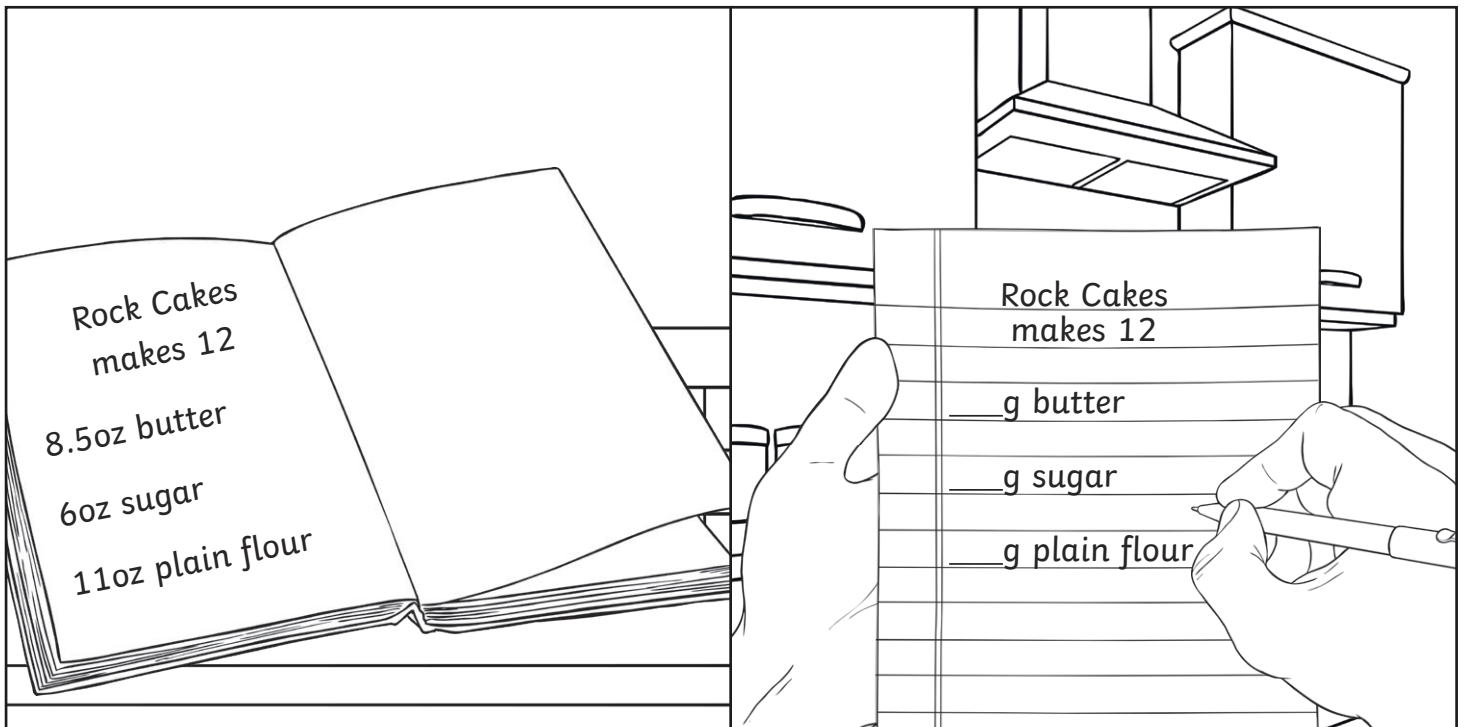


$1\text{oz} \approx 28\text{g}$

$1\text{lb} \approx 450\text{g}$

$1\text{kg} \approx 2.2\text{lb}$

- 1) Here is a recipe for making rock cakes.
Convert the imperial measurements into metric units.



- 2) Order these measurements from lightest to heaviest.

50g

3oz

580g

0.2kg

20oz

Lightest	←————→				Heaviest

- 3) Fill in this chart to convert from pounds to grams.

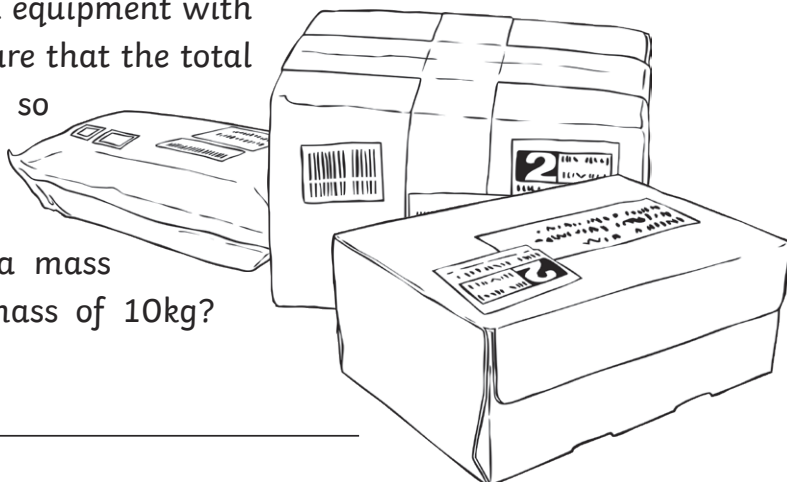
$\frac{1}{2}\text{lb}$	1lb	2lb	4lb	5lb	10lb	15lb
	450g					

$1\text{oz} \approx 28\text{g}$

$1\text{lb} \approx 450\text{g}$

$1\text{kg} \approx 2.2\text{lb}$

- 4) Jaya is sending a parcel to her brother for his birthday. She has bought him a large book with a mass of 4lb and some camera equipment with a mass of 4kg. She wants to make sure that the total mass of the parcel is under 10kg so that she doesn't have to pay for the higher rate of postage.



Can Jaya add another item with a mass of 5kg without exceeding a total mass of 10kg?
Show your working out.

- 5) A bunch of 5 bananas has a total mass of 3kg. Yasmin takes 2 bananas with a mass of 3lb from the bunch. What is the average mass of each of the remaining bananas?
Show your working out and give your answer in pounds.



Units of Mass Answers

Question	Answer														
1.	Convert the imperial measurements into metric units.														
	238g butter 168g sugar 308g plain flour														
2.	Order these measurements from lightest to heaviest.														
	Lightest ←→ Heaviest														
	<table border="1" style="margin: auto;"><tr><td style="padding: 5px;">50g</td><td style="padding: 5px;">30z</td><td style="padding: 5px;">0.2kg</td><td style="padding: 5px;">200z</td><td style="padding: 5px;">580g</td></tr></table>	50g	30z	0.2kg	200z	580g									
50g	30z	0.2kg	200z	580g											
3.	Fill in this chart to convert from pounds to grams.														
	<table border="1" style="margin: auto;"><tr><td style="padding: 5px;">$\frac{1}{2}$lb</td><td style="padding: 5px;">1lb</td><td style="padding: 5px;">2lb</td><td style="padding: 5px;">4lb</td><td style="padding: 5px;">5lb</td><td style="padding: 5px;">10lb</td><td style="padding: 5px;">15lb</td></tr><tr><td style="padding: 5px;">225g</td><td style="padding: 5px;">450g</td><td style="padding: 5px;">900g</td><td style="padding: 5px;">1800g</td><td style="padding: 5px;">2250g</td><td style="padding: 5px;">4500g</td><td style="padding: 5px;">6750g</td></tr></table>	$\frac{1}{2}$ lb	1lb	2lb	4lb	5lb	10lb	15lb	225g	450g	900g	1800g	2250g	4500g	6750g
$\frac{1}{2}$ lb	1lb	2lb	4lb	5lb	10lb	15lb									
225g	450g	900g	1800g	2250g	4500g	6750g									
4.	Can Jaya add another item with a mass of 5kg without exceeding a total mass of 15kg?														
	$4lb \approx 4 \times 450g = 1.8kg$ $1.8kg + 4kg + 5kg = 10.8kg$ <i>No, Jaya would not be able to add a 5kg item without exceeding a total mass of 10kg.</i>														
5.	What is the average mass of each of the remaining bananas? Show your working out and give your answer in pounds.														
	$3kg \approx 3 \times 2.2lb = 6.6lb$ $6.6lb - 3lb = 3.6lb$ $3.6lb \div 3 = 1.2lb$ <i>The average mass of each of the remaining bananas is 1.2lb.</i>														