Year 5 Convert Metric Measures

Capacity

I can convert metric measures.

Complete this table.

<table>
<thead>
<tr>
<th>Millilitres (ml)</th>
<th>Centilitres (cl)</th>
<th>Litres (l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td>300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>84</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td></td>
<td>0.25</td>
</tr>
<tr>
<td></td>
<td>175</td>
<td>0.5</td>
</tr>
<tr>
<td>2300</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

Match these capacities:

60ml  60cl
0.6l  6000cl
0.6cl 6cl
60l  6ml
6l  600cl

Order these bottles from smallest capacity to largest capacity.

150ml  13cl  0.14l  16cl
Distance and Length

I can convert metric measures.

Complete this table.

<table>
<thead>
<tr>
<th>Millimetres (mm)</th>
<th>Centimetres (cm)</th>
<th>Metres (m)</th>
<th>Kilometres (km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>600</td>
<td></td>
<td>0.04</td>
<td></td>
</tr>
<tr>
<td></td>
<td>340</td>
<td></td>
<td>0.23</td>
</tr>
<tr>
<td>90</td>
<td></td>
<td>4500</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>8.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1700</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>5600</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Match these measurements:

- 7m = 7000m
- 0.7mm = 700cm
- 7km = 70000mm
- 7cm = 0.7km
- 700m = 0.7km

Order these rulers from shortest to longest:

- 30cm
- 500mm
- 150mm
- 1m
Weight and Mass

I can convert metric measures.

Complete this table.

<table>
<thead>
<tr>
<th>kilograms (kg)</th>
<th>grams (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>30</td>
</tr>
<tr>
<td>0.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3700</td>
</tr>
<tr>
<td>50</td>
<td>10</td>
</tr>
<tr>
<td>900</td>
<td></td>
</tr>
<tr>
<td>0.29</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7000</td>
</tr>
</tbody>
</table>

Match these measurements:

- 30g
- 3000g
- 3kg
- 0.003kg
- 300g
- 0.03kg
- 3g
- 30000g
- 30kg
- 0.3kg

Order these weights:

- 0.2kg
- 250g
- 0.3kg
- 150g
Maths Assessment Year 5: Measurement

1. Convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre].

2. Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.

3. Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.

4. Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes.

5. Estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water].

6. Solve problems involving converting between units of time.

7. Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.
**Maths Assessment Year 5: Measurement**

1. Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre).

   Choose the correct number to complete each statement:

   a) 12  120  1200

   There are __________ metres in 1.2 kilometres.

   There are 12 000 millimetres in __________ metres.

   There are __________ millimetres in 12 centimetres.

   b) 15  150  1500

   There are __________ grams in 0.15 kilograms

   There are 15 000 grams in __________ kilograms

   There are __________ grams in 1 ½ kilograms

2. Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.

   Circle the best answer for the equivalence of the following:

   1 inch = 12.5cm or 2.5cm.

   1 mile = 1.6km or 11.6km

   1 pound = 453.59g or 45.35g

   1 pint = 0.57l or 5.7l
3. Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.

a) Work out the perimeter of this shape:

```
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>20m</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>8m</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>6m</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>12m</td>
</tr>
</tbody>
</table>
```

Answer: ___ m

b) Calculate the perimeter of this shape (not drawn to scale).

```
| 4cm             |
| 12cm            |
| 4cm             |
| 5cm             |
| 5cm             |
| 3cm             |
```

Answer: ___ cm

4. Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes.

Calculate and write the area of the following shapes:

a) 

```
| 4.5m             |
| 9m              |
```

Area = ___
5. Estimate volume [for example, using 1 cm$^3$ blocks to build cuboids (including cubes)] and capacity [for example, using water].

If each cube measures 1 cm$^3$ what is the volume of these shapes:

a)

Volume = 

b)

Volume = 
c) The bucket holds 10 litres. The fish tank has been filled with 1 bucketful of water. Estimate how many litres you think it will take to fill the tank.

6. Solve problems involving converting between units of time.

a) Lara went to visit her cousin. She left home at 10.30 am. It took her 20 minutes to walk to her cousin's house. She stopped there for 2 and ½ hours. Her uncle drove her home and the journey took 10 minutes. What time did she get home? Show your working out.

Here is the bus timetable for the Number 18 bus from Jarton Town Centre to Wheelby Bus Station:

<table>
<thead>
<tr>
<th>Location</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jarton Town Centre</td>
<td>10:08</td>
</tr>
<tr>
<td>Jarton Country Park</td>
<td>10:11</td>
</tr>
<tr>
<td>Zeefly</td>
<td>10:28</td>
</tr>
<tr>
<td>Canley</td>
<td>10:39</td>
</tr>
<tr>
<td>Wheelby Train Station</td>
<td>10:55</td>
</tr>
<tr>
<td>Wheelby Bus Station</td>
<td>11:02</td>
</tr>
</tbody>
</table>

b) How long does it take for the journey from Jarton town centre to Wheelby Bus Station?
c) How long does it take from Jarton Country Park to Wheelby Train Station?

d) Jagdeep arrives at the bus stop at Canley at 10:27. How long does he have to wait until the bus arrives?

e) Today is March 24th, how many days have passed since December 31st? This year is not a leap year.

f) Today is 2nd April, Mark’s birthday is on June 5th. How many days is it until his birthday?

7. Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.

Here are the results for the Women’s long jump in the Commonwealth Games:

<table>
<thead>
<tr>
<th></th>
<th>Athlete</th>
<th>Country</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ese Brume</td>
<td>Nigeria</td>
<td>6.56m</td>
</tr>
<tr>
<td>2</td>
<td>Jazmin Sawyers</td>
<td>England</td>
<td>6.54m</td>
</tr>
<tr>
<td>3</td>
<td>Christabel Netty</td>
<td>Canada</td>
<td>6.49m</td>
</tr>
<tr>
<td>4</td>
<td>Chantel Malone</td>
<td>British Virgin Isles</td>
<td>6.41m</td>
</tr>
<tr>
<td>5</td>
<td>Lorraine Ugen</td>
<td>England</td>
<td>6.39m</td>
</tr>
</tbody>
</table>

a) How much further did the winning athlete jump than the 5th place athlete?

b) How much further would the winner need to jump to equal the World Record of 7.52m?
DVDs cost £10.99 each.

c) How much change would you have from £30 if you bought 2 DVDs? Show your working out.

d) How many DVDs could you buy with £60?
1. Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre).

2. Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.

3. Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.

4. Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm$^2$) and square metres (m$^2$) and estimate the area of irregular shapes.

5. Estimate volume (for example, using 1 cm$^3$ blocks to build cuboids (including cubes)) and capacity (for example, using water).

6. Solve problems involving converting between units of time.

7. Use all four operations to solve problems involving measure (for example, length, mass, volume, money) using decimal notation, including scaling.
1. Convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre]. Write the correct number to complete each statement:

45mm = cm
3400m = km
5.75kg = g
7350ml = l
450cm = m
256mm = m

2. Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.

a) If I am 6 foot and 2 inches tall, what is my height in metres?

(12 inches = 1 foot = 30cm)

b) A recipe asks for \(2 \frac{1}{2}\) pounds of apples. How many kilograms of apples do I need?

(1 pound = 0.454 kg)
3. Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.

a) The perimeter of this shape is 68 cm. Write possible measurements for each side of the shape.

![Diagram of a composite shape with unspecified measurements for sides a, b, c, d, and e.]

4. Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes.

a) Order these rectangles by area from smallest to largest.

![Diagram of rectangles with dimensions 4 cm x 6 cm, 5 cm x 5 cm, and 2 cm x 11 cm.]

Smallest

Largest
b) This grid is made of 1 cm squares. Calculate the area of the shaded shape:

Area = 

5. Estimate volume (for example, using 1 cm³ blocks to build cuboids (including cubes)) and capacity (for example, using water).

a) If each cube measures 1 cm³, what is the volume of this cuboid:

Volume = 

b) Circle the most appropriate estimate for the volume of this shape:

1500 cm³ 1000 cm³ 500 cm³

b) This glass is filled from this 1 litre bottle, which shows what is left after filling the glass. Estimate how much the glass holds:

c) This glass is filled from this 1 litre bottle, which shows what is left after filling the glass. Estimate how much the glass holds:
6. Solve problems involving converting between units of time.

   a) Hamza goes to the cinema to see a film which is 115 minutes long. The adverts before the film last 20 minutes and start at 1.45pm. What time will the film finish? Show your working out.

   b) Here is the tram timetable for the Purple Route from Meadowhall to Sheffield:

<table>
<thead>
<tr>
<th>Stop</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meadowhall</td>
<td>09:15</td>
</tr>
<tr>
<td>Arena</td>
<td>09:21</td>
</tr>
<tr>
<td>Woodburn Road</td>
<td>09:24</td>
</tr>
<tr>
<td>Nunnery Square</td>
<td>09:26</td>
</tr>
<tr>
<td>Cricket Inn Road</td>
<td>09:27</td>
</tr>
<tr>
<td>Castle Square</td>
<td>09:32</td>
</tr>
<tr>
<td>Cathedral</td>
<td>09:34</td>
</tr>
</tbody>
</table>

   How long does it take for the journey from Meadowhall to Castle Square take?

   c) Trams run every half hour and take the same time. Complete the next tram's times in the above table.

   d) It's the 17th of July, the last day of the summer term, and the new term begins on 3rd September. How many days holiday are there?

   e) Hasan says he has four weeks holiday. How many days will he be away?
7. Use all four operations to solve problems involving measure (for example, length, mass, volume, money) using decimal notation, including scaling.

Here are the results for the Men's Javelin in the Commonwealth Games:

<table>
<thead>
<tr>
<th></th>
<th>Athlete</th>
<th>Country</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Julius Kiplangat Yego</td>
<td>Kenya</td>
<td>83.87m</td>
</tr>
<tr>
<td>2</td>
<td>Keshorn Walcott</td>
<td>Trinidad</td>
<td>82.67m</td>
</tr>
<tr>
<td>3</td>
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</tr>
<tr>
<td>4</td>
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<td>5</td>
<td>Stuart Farquhar</td>
<td>New Zealand</td>
<td>78.14m</td>
</tr>
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</table>

a) How much further would the fifth place athlete need to throw to win?

b) Jacob says that the difference between the distance the gold medal winner threw and the distance the silver medal winner threw is more than the distance between the silver and bronze medal winners. Explain why he is correct.

c) Here is a recipe which makes 4 strawberry lollies:

- 250g strawberries
- 100ml natural yoghurt
- 5ml spoon of honey

The Ahmed family pick 1.5kg of strawberries. How many lollies can they make?

d) How much honey will they need?

e) If yoghurt comes in 500ml pots, how many pots of yoghurt will be needed?
1. Convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre].

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6. Solve problems involving converting between units of time.

7. Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.
Maths Assessment Year 5 Term 2: Measurement

1. Convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre].

   Write the correct number to complete each statement:

   45mm = __________ cm
   3400m = __________ km
   5.75kg = __________ g
   7350ml = __________ l
   450cm = __________ m
   256mm = __________ m

2. Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.

   a) If I am 6 foot and 2 inches tall, what is my height in metres?

      (12 inches = 1 foot = 30cm)

      __________

   b) A recipe asks for 2 \( \frac{1}{2} \) pounds of apples. How many kilograms of apples do I need?

      (1 pound = 0.454 kg)

      __________
3. Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.

a) The perimeter of this shape is 68 cm. Write possible measurements for each side of the shape.

![Diagram](image)

4. Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes.

a) Order these rectangles by area from smallest to largest.

- a: 4 cm × 6 cm = 24 cm²
- b: 5 cm × 5 cm = 25 cm²
- c: 2 cm × 11 cm = 22 cm²

Smallest: a
Largest: c
b) This grid is made of 1 cm squares. Calculate the area of the shaded shape:

\[ \text{Area} = \underline{} \]

---

5. Estimate volume (for example, using 1 cm³ blocks to build cuboids (including cubes)) and capacity (for example, using water).

a) If each cube measures 1 cm³ what is the volume of this cuboid:

\[ \text{Volume} = \underline{} \]

b) Circle the most appropriate estimate for the volume of this shape:

\[ 1500 \text{cm}^3 \quad 1000 \text{cm}^3 \quad 500 \text{cm}^3 \]

c) This glass is filled from this 1 litre bottle, which shows what is left after filling the glass. Estimate how much the glass holds:

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d) How much honey will they need?

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Year 5
Mathematics
Arithmetic: Test 2

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
</tr>
</tbody>
</table>

+  
-  
×  
÷  

©twinkl.co.uk. You may photocopy this page.
1. $173 - 100 = $ \\

2. $409 + 300 = $ \\

3. $23 \times 8 = $
<table>
<thead>
<tr>
<th></th>
<th>[\frac{3}{10} + \frac{1}{10} = ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>[\frac{7}{12} - \frac{5}{12} = ]</td>
</tr>
<tr>
<td>6</td>
<td>[4274 + 5029 = ]</td>
</tr>
</tbody>
</table>
7.  7216 - 707 =  

8.  4 x 12 =  

9.  48 x 1 =
10  \[825 \times 5 = \]

11  \[5.72 - 0.06 = \]

12  \[79 \div 100 = \]
13 \[\frac{3}{4}\text{ of } 36 = \]

14 \[2816 - 9215 = \]

15 \[30000 + 900 = \]
16. $262\ 886 + 45\ 392 = $

17. $3^3$

18. $4 \times 500 =$
19\[1320 \div 12 = \]

20\[456 \div 100 = \]

21\[\frac{1}{3} + \frac{5}{6} = \]
22 \[ \frac{1}{2} - \frac{1}{8} = \]

23 \[ \frac{2}{3} \times 4 = \]

24 \[ 8.1 - 3.63 = \]
25. \(376 \times 16 = \)

26. \(6413 \times 37 = \)
<table>
<thead>
<tr>
<th>27</th>
<th>785 ÷ 5 =</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>5296 ÷ 8 =</td>
</tr>
<tr>
<td>----</td>
<td>---------</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>