Week 6, Day 3
Imperial measures (1)

Each day covers one maths topic. It should take you about 1 hour or just a little more.

1. Start by reading through the Learning Reminders. They come from our PowerPoint slides.

2. Tackle the questions on the Practice Sheet. There might be a choice of either Mild (easier) or Hot (harder)! Check the answers.

3. Finding it tricky? That’s OK… have a go with a grown-up at A Bit Stuck?

4. Have I mastered the topic? A few questions to Check your understanding. Fold the page to hide the answers!

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Learning Reminders

Know regularly-used imperial units and approximate metric equivalents.

**Imperial units**
- pints
- pounds
- stones
- ounces
- feet
- inches
- yards

**Ask your grandparents / parents / carers what imperial measures they use.**

**When are these used?**

Some bags of crisps weigh 28 grams, a very strange number but this is because there were originally ‘1-ounce’ packets. 28g is approximately 1 ounce.

A new-born baby might weigh 7 pounds and 8 ounces.
There are 16 ounces in a pound.
So how many ounces did the baby weigh?
How many bags of crisps is that?!

Many adults will know their weight in stones and pounds rather than kilograms.
There are 14 pounds in a stone. 10 kilograms is about the same as 1½ stones which is 1 stone and 7 pounds.

If a child weighs 20 kg, what is that in stones?
And if a child weighs 30 kg?

The baby weighed 7 x 16 = 116 ounces.

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**Learning Reminders**

Know regularly-used imperial units and approximate metric equivalents.

1 cm = 0.39 inches

A 15 cm ruler is **6 inches** long.

This length originates from when rulers used to be a ‘foot’ long, 12 inches, about 30cm. How long in inches is a **15cm ruler**? An inch is about an adult thumb width.

1 pint = 568ml

Milk used to come in pint bottles and pubs still serve drinks in pint and half-pint glasses.
Converting between centimetres and inches

30 cm is approximately 12 inches. There are 12 inches in one foot. 1 inch is approximately 2 \( \frac{1}{2} \) cm

1. How many inches in:
   a) 3 feet
   b) 10 feet
   c) 4 \( \frac{1}{2} \) feet
   d) 7 \( \frac{1}{2} \) feet

2. How many feet in:
   a) 120 inches
   b) 66 inches
   c) 96 inches
   d) 42 inches

3. How many cm in:
   a) 4 inches
   b) 10 inches
   c) 24 inches
   d) 7 inches
Practice Sheet Hot
Converting between centimetres and inches

30 cm is approximately 12 inches. There are 12 inches in one foot. 1 inch is approximately 2 \( \frac{1}{2} \) cm

1. How many inches in:
   a) 3 feet
   b) 10 feet
   c) 4 \( \frac{1}{2} \) feet
   d) 7 \( \frac{1}{2} \) feet

2. How many feet in:
   a) 120 inches
   b) 66 inches
   c) 96 inches
   d) 42 inches

3. How many cm in:
   a) 4 inches
   b) 10 inches
   c) 24 inches
   d) 7 inches

Challenge

Use the information to order these children by height, from shortest to tallest.

Table of heights

<table>
<thead>
<tr>
<th>Name</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ben</td>
<td>6 feet and 3 inches</td>
</tr>
<tr>
<td>Mia</td>
<td>125 cm</td>
</tr>
<tr>
<td>Miriam</td>
<td>60 inches</td>
</tr>
<tr>
<td>Lucas</td>
<td>1.5 m</td>
</tr>
<tr>
<td>Chan</td>
<td>5 feet 6 inches</td>
</tr>
<tr>
<td>Sarah</td>
<td>1 m 70 cm</td>
</tr>
</tbody>
</table>

Ask someone to measure your height in feet and inches. Convert this to metres and centimetres.
Practice Sheets Answers

Converting between centimetres and inches (mild)

1. a) 36 inches  
   b) 120 inches  
   c) 54 inches  
   d) 90 inches  

2. a) 10 feet  
   b) 5\(\frac{1}{2}\) feet  
   c) 8 feet  
   d) 3\(\frac{1}{2}\) feet  

3. a) 10 cm  
   b) 25 cm  
   c) 60 cm  
   d) 17.5 cm  

Converting between centimetres and inches (hot)

1. a) 36 inches  
   b) 120 inches  
   c) 54 inches  
   d) 90 inches  

2. a) 10 feet  
   b) 5\(\frac{1}{2}\) feet  
   c) 8 feet  
   d) 3\(\frac{1}{2}\) feet  

3. a) 10 cm  
   b) 25 cm  
   c) 60 cm  
   d) 17.5 cm  

Challenge

<table>
<thead>
<tr>
<th>Name</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ben</td>
<td>6 feet and 3 inches = 187.5 cm</td>
</tr>
<tr>
<td>Mia</td>
<td>125 cm</td>
</tr>
<tr>
<td>Miriam</td>
<td>60 inches = 150 cm</td>
</tr>
<tr>
<td>Lucas</td>
<td>1.5 m = 150 cm</td>
</tr>
<tr>
<td>Chan</td>
<td>5 feet 6 inches = 165 cm</td>
</tr>
<tr>
<td>Sarah</td>
<td>1 m 70 cm = 170 cm</td>
</tr>
</tbody>
</table>

Shortest to tallest: Mia  
Miriam = Lucas  
Chan  
Sarah  
Ben
A Bit Stuck?
Tape measure maths

Approximate metric and imperial equivalents:
30 cm = 1 foot = 12 inches;
1 inch = 2\(\frac{1}{2}\) cm

Use this information to generate other facts:
6 inches = [ ] centimetres
5 centimetres = [ ] inches
60 centimetres = [ ] feet = [ ] inches
3 feet = [ ] centimetres

Check your answers on a tape measure.

Remember that these are approximate, so the answer will be a little different, but they are still useful approximations.

How tall are you?
Find your height in feet and inches.
Convert the feet to centimetres, and then the remaining inches to centimetres.
What is your height in metres and centimetres?
Check your understanding

Questions

Write a familiar object that weighs about...

(a) 5 Kg
(b) 1 pound
(c) 100g

Write a familiar container that holds about ...

(a) 1 pint
(b) 5 ml
(c) 2 gallons

True or false?

• Half a pint is about $\frac{1}{4}$ of a litre True – it is around 280ml.
• You can weigh people in stones True, Stones are an ‘Imperial’ measure of weight.

Fold here to hide answers

Check your understanding

Answers

Write a familiar object that weighs about...

(a) 5 Kg e.g. cat or small dog.
(b) 1 pound e.g. small bag of sugar, 1 very large potato
(c) 100g e.g. bar of soap, small book, apple.

Write a familiar container that holds about...

(a) 1 pint e.g. jug, carton of milk, beer glass.
(b) 5 ml e.g. a teaspoon.
(c) 2 gallons e.g. a large bucket.

True or false?

• Half a pint is about $\frac{1}{4}$ of a litre True – it is around 280ml.
• You can weigh people in stones True, Stones are an ‘Imperial’ measure of weight.