13. Using your ruler, draw a second line so that the pair of lines are the given distance apart.

<table>
<thead>
<tr>
<th>Distance apart</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>in cm</td>
<td>in mm</td>
<td></td>
</tr>
<tr>
<td>a)</td>
<td>4</td>
<td>40</td>
</tr>
<tr>
<td>b)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>c)</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>d)</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

14. In the space provided, draw a line that is between 5 and 6 cm.

How long is your line in mm? ________

15. Write a measurement in mm that is between ...

a) 7 and 8 cm: _____ mm  
b) 12 and 13 cm: ________  
c) 27 and 28 cm: ________

16. Write a measurement in a whole number of cm that is between ...

a) 67 mm and 75 mm: ___ cm  
b) 27 mm and 39 mm: _______  
c) 52 mm and 7 cm: _______

17. Draw a line that is a whole number of centimetres long and is between ...

a) 35 and 45 mm  
b) 55 and 65 mm  
c) 27 and 33 mm

18. Rebecca says 7 mm is longer than 3 cm because 7 is greater than 3. Is she right?

19. Carl has a set of sticks: some are 7 cm long and some are 4 cm long.

Example: This picture (not drawn to scale) shows how he could line up the sticks to measure 19 cm: 7 cm 4 cm 4 cm 4 cm

Draw a sketch to show how Carl could measure each length by lining the sticks up end to end.

a) 8 cm  
b) 11 cm  
c) 22 cm  
d) 26 cm  
e) 25 cm

20. Show how Carl could make these measurements using his sticks.  
HINT: you may need to subtract.

a) 3 cm  
b) 1 cm  
c) 20 mm  
d) 50 mm  
e) 17 cm

BONUS:  
f) Can you find two different solutions for each measurement?
ME6-2: Decimetres

A decimetre is a unit of length equal to 10 cm.

1. Place a checkmark in the correct column.
   HINT: You can use the picture at the top of the page to help you estimate.
<table>
<thead>
<tr>
<th>My leg</th>
<th>Less than 1 dm</th>
<th>More than 1 dm</th>
</tr>
</thead>
<tbody>
<tr>
<td>The length of an eraser</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My pencil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The height of the classroom door</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. 1 decimetre = ____________ centimetres.

3. What fraction of a decimetre (dm) is a centimetre? ________________

4. To change a measurement from dm to cm, what should you multiply by? ________________

5. To change a measurement from cm to dm what should you divide by? ________________

6. Find the numbers missing from the following charts.

<table>
<thead>
<tr>
<th>cm</th>
<th>dm</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
<td>12</td>
</tr>
<tr>
<td>31</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>cm</th>
<th>dm</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>620</td>
</tr>
<tr>
<td>300</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>cm</th>
<th>dm</th>
</tr>
</thead>
<tbody>
<tr>
<td>530</td>
<td>1</td>
</tr>
<tr>
<td>950</td>
<td></td>
</tr>
</tbody>
</table>

7. In the space provided, draw a line that is between 1 and 2 decimetres long.

   a) How long is your line in cm? _________
   b) How long is your line in mm? _________

8. Write a measurement in cm that is between ...
   a) 3 and 4 dm _________
   b) 6 and 7 dm _________
   c) 9 and 10 dm _________

9. Write a measurement in dm that is between ...
   a) 62 and 72 cm _________
   b) 37 and 45 cm _________
   c) 48 and 73 cm _________

10. How many dm are in 100 cm? ________________

11. There are 10 mm in 1 cm. There are 10 cm in 1 dm. How many mm are in 1 dm? ________________

JUMP at Home Grade 6  No Unauthorized Copying
ME6-3: Metres and Kilometres

A metre is a unit of measurement for length (or height or thickness) equal to 100 cm.

A metre stick is 100 cm long. 

A kilometre is a unit of measurement for length equal to 1000 metres.

Here are some measurements you can use for estimating in metres.

- **about 2 metres:** the height of a (tall) adult
- **about 10 metres:** the length of a school bus
- **about 100 metres:** the length of a football field

1. Find (or think of) an object in your classroom or outside that is approximately …
   a) 2 metres long ____________________________  
   b) 3 metres long ____________________________

2. Fourteen basketball players can lie head to foot along a basketball court.
   What is the court’s length in metres? ____________________________

3. a) How many adults do you think could lie head to foot across your classroom? ____________________________
   b) Approximately how wide is your classroom (in metres)? ____________________________

4. a) About how many school buses high is your school? ____________________________
   b) About how high is your school (in metres)? ____________________________

5. A small city block is about 100 m long.
   Name a place you can walk to from your school: ____________________________
   Approximately how many metres away from the school is the place you named? ____________________________

6. The number line represents 1 km. Mark the following distances on the line:
   - A 200 m
   - B 50 m
   - C 550 m
   - D 825 m
   - E 110 m

   ![Number line with distances marked]

   7. About how many football fields long is a kilometre?

   8. You can travel 1 km if you walk for 15 minutes at a regular speed.
   Name a place that is about 1 km from your school.
1. Finish the table by following the pattern.

<table>
<thead>
<tr>
<th>m</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>dm</td>
<td>10</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cm</td>
<td>100</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mm</td>
<td>1000</td>
<td>2000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. To convert a measurement from metres to centimetres, you multiply by ________________.

3. To convert a measurement from metres to millimetres, you multiply by ________________.

4. Convert the following measurements.

<table>
<thead>
<tr>
<th>m</th>
<th>cm</th>
<th>m</th>
<th>mm</th>
<th>cm</th>
<th>mm</th>
<th>dm</th>
<th>cm</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>5</td>
<td>70</td>
<td>17</td>
<td>4</td>
<td>121</td>
<td>32</td>
<td>5</td>
</tr>
</tbody>
</table>

5. Convert the measurement given in cm to a measurement using multiple units.
   a) 423 cm = ___ m ___ cm
   b) 514 cm = ___ m ___ cm
   c) 627 cm = ___ m ___ cm
   d) 673 cm = ___ m ___ cm
   e) 381 cm = ___ m ___ cm
   f) 203 cm = ___ m ___ cm

6. Convert the following multiple units of measurements to a single unit.
   a) 2 m 83 cm = ______ cm
   b) 3 m 65 cm = ______ cm
   c) 4 m 85 cm = ______ cm
   d) 9 m 47 cm = ______ cm
   e) 7 m 4 cm = ______ cm
   f) 6 m 40 cm = ______ cm

7. Change the following measurements to multiple units then to decimal notation.
   a) 546 cm = ___ m ___ cm = ______ m
   b) 217 cm = ___ m ___ cm = ______ m
   c) 783 cm = ___ m ___ cm = ______ m
   d) 608 cm = ___ m ___ cm = ______ m
   e) 72 cm = ___ m ___ cm = ______ m
   f) 7 cm = ___ m ___ cm = ______ m

8. Why do we use the same decimal notation for dollars and cents and for metres and centimetres?

9. Michelle says that to change 6 m 80 cm to centimetres, you multiply the 6 by 100 and then add 80. Is Michelle correct? Why does Michelle multiply by 100?