

<p><b>2(9) Geometry and measurement.</b> The student applies mathematical process standards to select and use units to describe length, area, and time.</p>	<p><b>2(9)(A)</b> The student is expected to find the length of objects using concrete models for standard units of length.</p>
<p><b>Materials</b></p> <ul style="list-style-type: none"> <li>• Two strips of paper: one strip 6 inches in length and one strip 20 centimeters in length</li> <li>• Concrete models such as one-inch tiles and centimeter cubes</li> </ul>	
<p><b>Procedure:</b> Provide the student with the strips paper and corresponding measurement tools.</p> <p><b>If one square tile is one inch, how many inches is this strip of paper?</b></p> <p><b>If one cube is one centimeter, how many centimeters is this strip of paper?</b></p> <p><i>Repeat using various lengths.</i></p>	
<p><b>Check Student’s Responses:</b></p>	<p><b>Check Student’s Strategies:</b></p>
<p>1. Inches</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Correctly measures</li> <li><input type="checkbox"/> Incorrectly measures</li> </ul> <p>2. Centimeters</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Correctly measures</li> <li><input type="checkbox"/> Incorrectly measures</li> </ul>	<p>The student:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Places the tool end on end (iterates)</li> <li><input type="checkbox"/> Leaves spaces when iterating</li> <li><input type="checkbox"/> Other:</li> </ul>
<p><b>Notes:</b></p>	

**2(9)(A)** The student is expected to find the length of objects using concrete models for standard units of length.

**Possible interpretations, issues to follow up on, and implications for teaching**

**What did you observe?**

- The student **correctly measured the strips of paper**. The student may be ready to make connections between the inch tiles and an inch ruler and the centimeter cubes and a centimeter rule.

*A teaching strategy might include placing the appropriate ruler on a strip of paper and asking the student to place the inch tiles or centimeters cubes above the ruler. Ask questions such as, “You measured the paper to be 6 inch tiles in length, how many inches is this strip of paper in length?”*

- The student **incorrectly measured the strips of paper**. The student may not understand that the measuring tools need to be laid end to end without any gaps or overlaps. The student may need more experience measuring with concrete objects before moving to using a ruler. This will help the student build the understanding that just as the concrete objects are iterated: the intervals (inches or centimeters) on rulers are iterated.