

<b>MA 8D</b>	<b>Mathematics Embedded Credit</b>
<b>Cape Career &amp; Technology Center</b>	<b>Last Update: January 2005</b>
<b>Topic: Units of Measure</b>	<b>Focus: Measurement</b>

Show-Me Standards: MA1, MA2, G3-4	MO Grade Level Expectations: M1A7, M1C7	NCTM Standards: 12A, 13A, 13D, 18A, 22A
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**OBJECTIVE:** Students will apply what they know from lessons on “Reading Tools of Measurement” to solve problems related to dimension.

**Introduction:**

An understanding of measurement begins with the primary purpose for measuring. Measurement ensures that decisions are made accurately. Career-minded individuals must know how to read the tools of his/her trade. Before taking a job it is very important to know what tools are used in the trade and how they are used to determine measurement.

A measurement will often contain both a whole number and a fraction. The fractional part of the measurement should always be reduced to lowest terms. A fractional measurement is divided into parts, which are divisions of a whole. Typically the denominator of the fraction is the number of parts the whole was divided into. To determine the value of the divisions when the spaces are not marked, simply count up the total number of divisions and place this in the denominator of the fraction.

For purposes of the Embedded Credit Math exam the focus of this lesson will be accurately measuring lines with a ruler. This lesson contains 15 lines that you are required to accurately measure as indicated. Read the directions and then use a ruler to determine the answer.

**MEASUREMENT PROBLEMS:**

1. Find the length of this line segment to the nearest inch.

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2. Find the length of this line segment to the nearest millimeter.

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3. Find the length of this line segment to the nearest fraction of an inch.

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4. Find the length of this line segment to the nearest fraction of a centimeter.

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5. Find the length of this line segment to the nearest marking on the metric side of the ruler.

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6. Find the length of this line segment to the nearest marking on the U.S. Conventional side of the ruler.

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7. Find the length of this line segment to the nearest  $\frac{1}{4}$ ".

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8. Find the length of this line segment to the nearest  $\frac{1}{2}$ ".

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9. Find the length of this line segment to the nearest mm.

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10. Find the length of this line segment to the nearest cm.

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11. Find the length of this line segment to the nearest  $\frac{1}{8}$ ".

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12. Find the length of this line segment to the nearest  $\frac{1}{16}$ ".

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