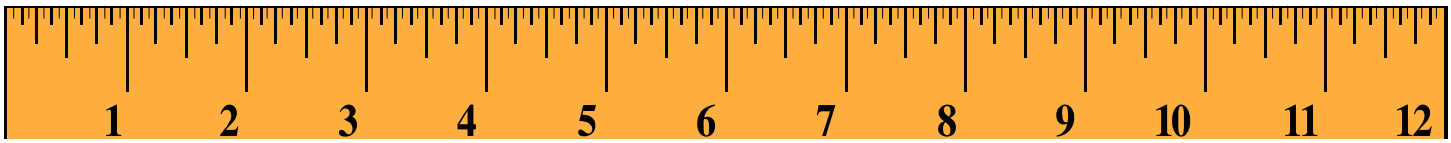
Name _____
Date _____

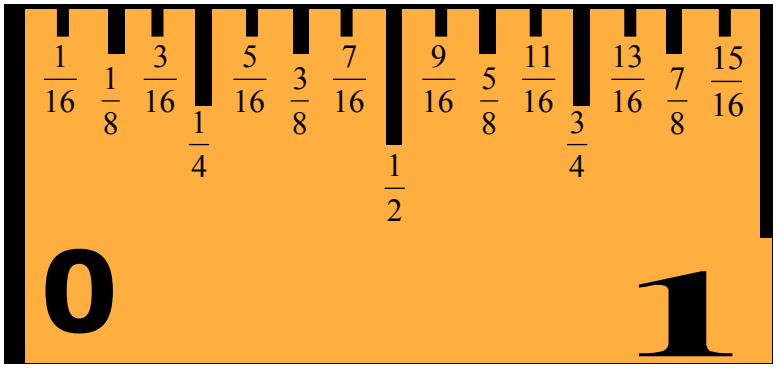
***Module #1:***
**Worksheet 2c*:*** ***Ruler Measurement***

**View Tutorial 2c**

**Objective:** *Accurately measure each segment and simplify each fraction.*

**Use a ruler to measure the following line segments to the nearest $^1/_{16}$ of an inch:**

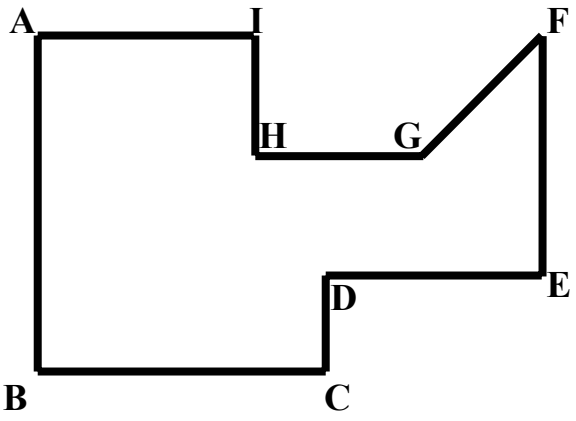



***A closer look at an inch.***

**Measure the lengths of the line segments that make up the sides of the figure below. Measure the sides to the nearest $^1/_{16}$ of an inch.**

**1.** AB =_____
**2.** BC =_____
**3.** CD =_____
**4.** DE =_____
**5.** EF =_____
**6.** FG =_____
**7.** GH =_____
**6.** HI =_____



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**Worksheet 2c*:*** ***Ruler Measurement***

The concept of ***scale*** allows objects to be drawn smaller or larger than in real life. When designing a home or building, it is necessary to make smaller ***scale drawings*** of each section with new dimensions for the planning of the design layout, property layout, cost and other factors. The key to understanding scale is the size relationship between an actual object and the scale drawing of the object. This relationship is called the ***scale ratio***.

**Symbols: ‘ = foot “ = inch**

**Example:**
**A bedroom is to be drawn at a scale ratio of 1/8” = 1’. What is the length of each side of a rectangular floor plan if the room is to be *18’ by 24’?***


**Solution:**

Since every foot is represented by an eighth inch, multiply each side length by 1/8 to get the new scale dimension.

**Step 1)** Multiply then reduce the fraction.

**Step 2)** Write the improper fraction as a mixed number.

**1)** $18 \times \frac{1}{8} = \frac{18}{8} = \frac{9}{4}$ **2)** $\frac{9}{4} = 2\frac{1}{4}$

**1)** $24 \times \frac{1}{8} = \frac{24}{8} = \frac{3}{1}$ **2)** $\frac{3}{1} = 3$

**Scale dimension:** $2\frac{1}{4}$” *by* 3”.

**7. In the space provided below, accurately measure and draw to scale a floor plan for a rectangular living room. The room should be 14’ by 20’. Use the scale ratio 1/4 = 1’. Make sure the rectangle has 90° angles by using a protractor. Label each side with the original length and the scale length.**