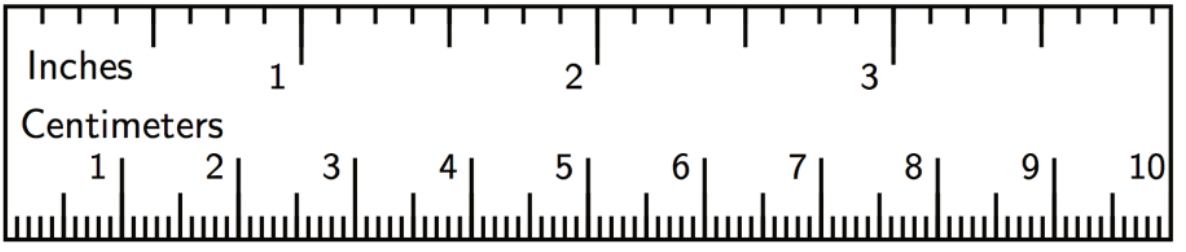
Unit 1 Lesson 10: Changing Scales in Scale Drawings

1 Appropriate Measurements (Warm up)

Student Task Statement

1. If a student uses a ruler like this to measure the length of their foot, which choices would be appropriate measurements? Select **all** that apply. Be prepared to explain your reasoning.



   a. $9\frac{1}{4}$ inches

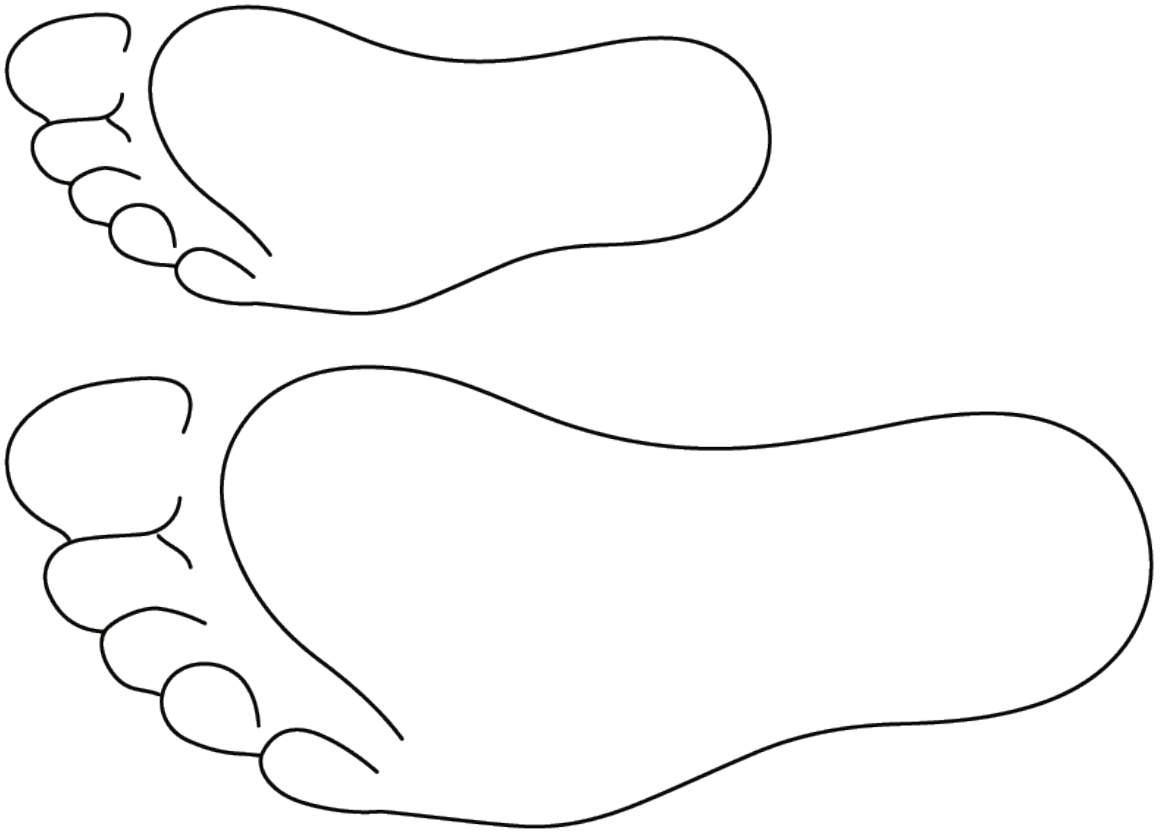
   b. $9\frac{5}{64}$ inches

   c. 23.47659 centimeters

   d. 23.5 centimeters

   e. 23.48 centimeters

2. Here is a scale drawing of an average seventh-grade student's foot next to a scale drawing of a foot belonging to the person with the largest feet in the world. Estimate the length of the larger foot.



2 Same Plot, Different Drawings

Images for Launch

Student Task Statement

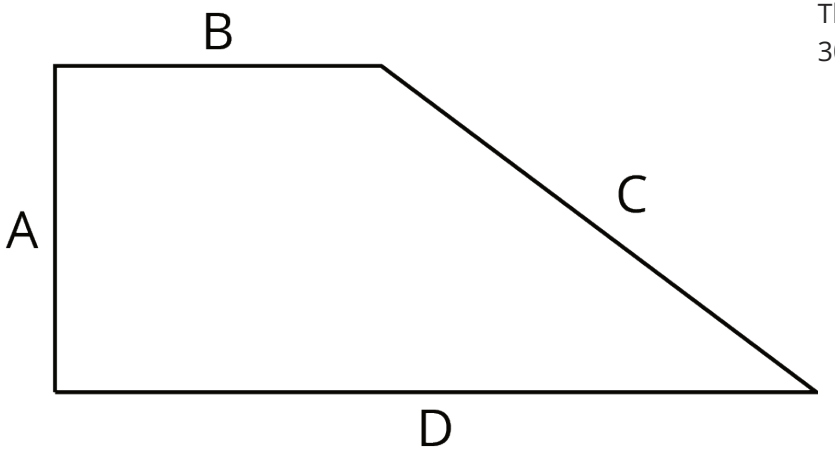
Here is a map showing a plot of land in the shape of a right triangle.

1. Your teacher will assign you a scale to use. On centimeter graph paper, make a scale drawing of the plot of land. Make sure to write your scale on your drawing.
2. What is the area of the triangle you drew? Explain or show your reasoning.
3. How many square meters are represented by 1 square centimeter in your drawing?
4. After everyone in your group is finished, order the scale drawings from largest to smallest. What do you notice about the scales when your drawings are placed in this order?

3 A New Drawing of the Playground

Student Task Statement

Here is a scale drawing of a playground.



The scale is 1 centimeter to 30 meters.

1. Make another scale drawing of the same playground at a scale of 1 centimeter to 20 meters.
2. How do the two scale drawings compare?