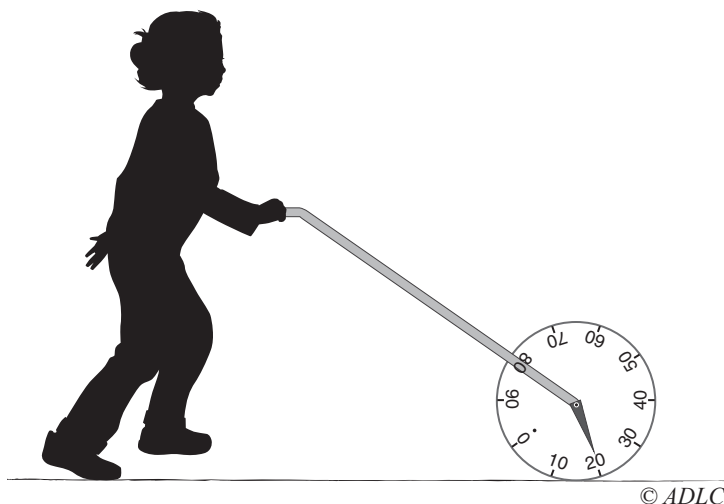## Lesson 1.2: Measuring Instruments

Practice – II

1. A vernier calliper is much more precise than a ruler. That is, it is capable of taking much finer measurements. Describe a reason someone may choose to use a ruler instead of a vernier calliper if both tools are available.

    Reading a vernier calliper involves taking a measurement from the fixed scale as well as from the vernier scale, whereas reading a ruler only requires taking a measurement from the fixed scale. This means reading is generally quicker. Often, the precision offered by a ruler is sufficient for what is being measured.

2. This diagram shows a child walking with a measuring instrument called a trundle wheel.

© ADLC

a. Predict how the trundle wheel measures a distance.

    As the person pushes the trundle wheel, the wheel turns. The number of turns corresponds to the distance traveled. Many trundle wheels include a mechanism that clicks once per revolution. This means you can count the number of clicks to measure the distance.

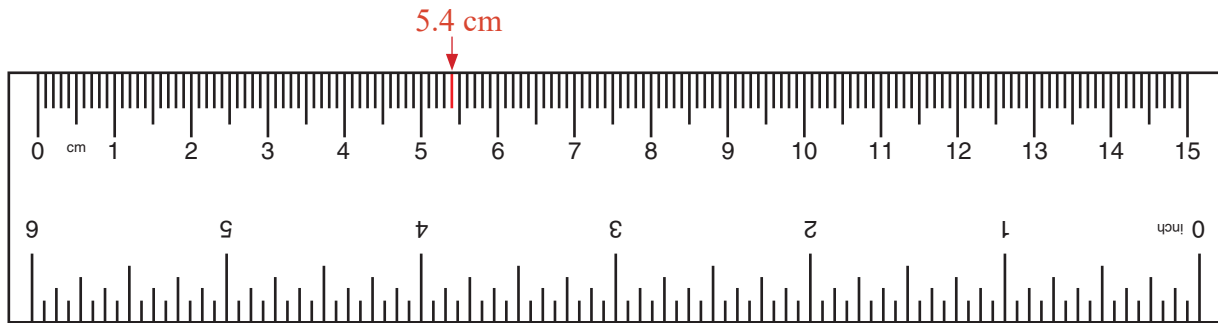b. There are numbers written on the trundle wheel. What unit do you expect these values represent?

    Based on the size of the child, centimetres are the most likely unit. This also means the wheel will turn 1 metre with each revolution.

    c. Describe a situation where a trundle wheel would make a good measuring instrument.
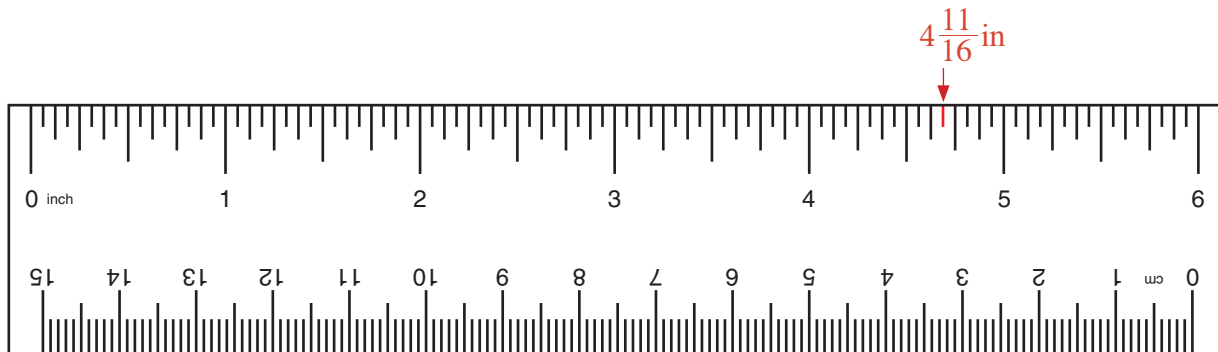
       Trundle wheels are useful for measuring moderately long distances such as the width of a property or the length of a football field.

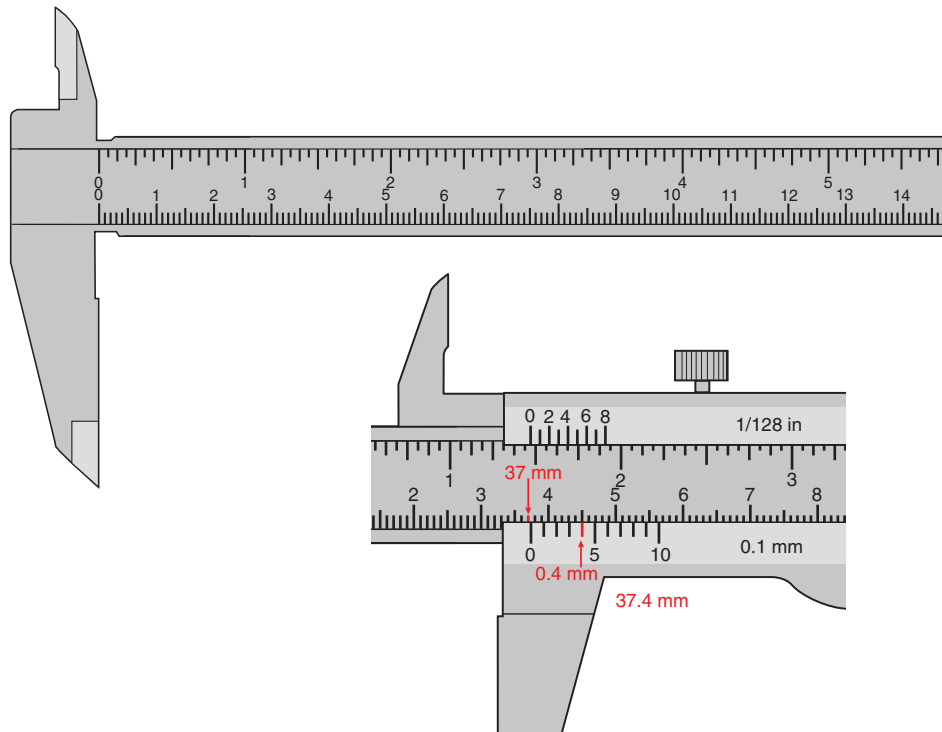3.   Indicate each of the following measurements on the diagram provided.
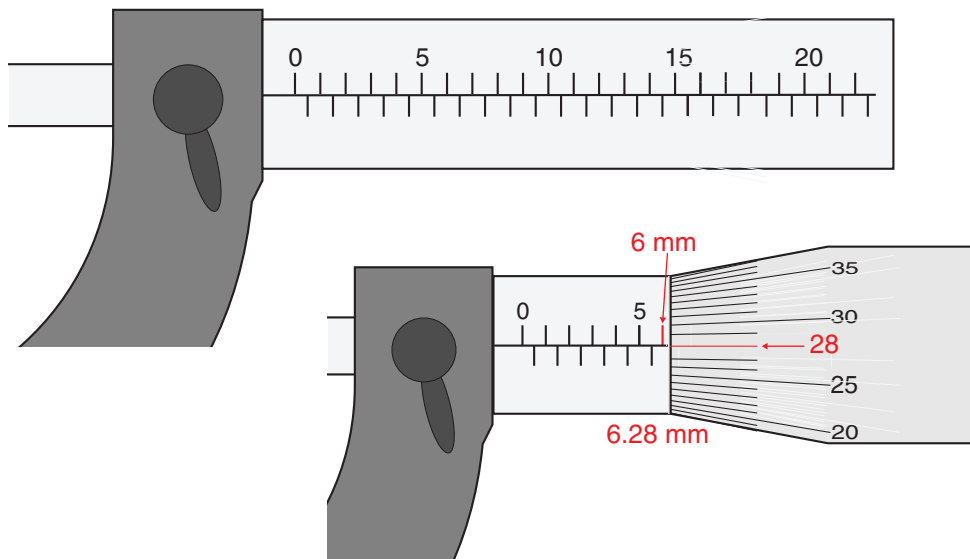
    a. a metric ruler showing 5.4 cm

    b. an imperial ruler showing $4\frac{11}{16}$ in

c. a vernier calliper showing 37.4 mm (Your sketch only needs to show where important lines will be.)

d. a micrometer showing 6.28 mm (Your sketch only needs to show where important lines will be.)

Please complete *Lesson 1.2 Explore Your Understanding Assignment* located in *Workbook 1.2* before proceeding to *Lesson 1.3*.