

## Linear Measurement (Section 11.1)

### Introduction to Measurement

A measurable attribute is a characteristic of an object that can be quantified.

Examples:

### The English System:

1 foot = \_\_\_\_\_ inches

1 yard = \_\_\_\_\_ feet

1 mile = \_\_\_\_\_ feet

**Examples:** Convert each of the following.

a. 70 mph = \_\_\_\_\_ ft/sec

b. 0.3 miles = \_\_\_\_\_ feet

c. 8432 yards = \_\_\_\_\_ miles

**The Metric System:**

The metric system is a decimal system based on the meter.

| <b>Prefix</b> | <b>Conversion</b> |
|---------------|-------------------|
| Kilo          | meters            |
| Hecto         | meters            |
| Deka          | meters            |
| Base (Meter)  | meters            |
| Deci          | meters            |
| Centi         | meters            |
| Milli         | meters            |

Mnemonic:

**Examples:** Convert each of the following.

a. 3 meters = \_\_\_\_\_ centimeters

b. 5 kilometers = \_\_\_\_\_ hectometers

c. 500 centimeters = \_\_\_\_\_ dekameters

**Examples:** Convert each of the following using the information that

$$1 \text{ inch} = 2.54 \text{ centimeters} .$$

a. 10 inches = \_\_\_\_\_ meters

b. 6 feet = \_\_\_\_\_ meters

c. 10 kilometers = \_\_\_\_\_ miles

**Using the metric system.**

What everyday objects have the following measure?

\_\_\_\_\_ 1 centimeter?

\_\_\_\_\_ 1 decimeter?

1 meter?

Which metric unit of measure would be best for each of the following measurements?

- a. length of the room
- b. length of a pencil
- c. height of chair back
- d. length of the USC horseshoe
- e. distance from the window to the floor
- f. length of foot
- g. distance from USC to the airport

Homework: