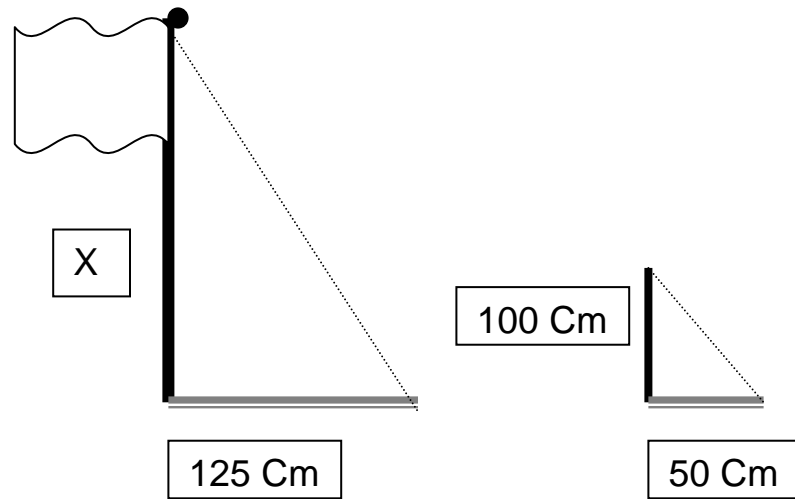


Flag Pole Problem Transparency



$$\frac{\text{Height of stick}}{\text{Height of flag pole}} = \frac{\text{Meter stick's shadow}}{\text{Flagpole's shadow}}$$

$$\frac{100\text{ Cm}}{X} = \frac{50\text{ Cm}}{125\text{ Cm}}$$

Solve for X

$$100 \cdot 125 = 50x$$

$$12500 = 50x$$

$$12,500/50 = 50x/50$$

$$250\text{ Cm} = x$$

The flagpole is 250 centimeters tall or 2.5 meters tall.

## Flag Pole Problem

Name \_\_\_\_\_

1. Record your measurements in the chart below.

Height of Stick	Cm
Length of stick's shadow	Cm
Length of flagpole's shadow	Cm

2. Draw a sketch that shows that the two similar triangles. Label your sketch with your measurements

3. Use shadow reckoning to find the height of the flagpole. Set up your proportion in the space provided, then solve.

4. The height of the flagpole is approximately \_\_\_\_\_ Cm

5. The height of the flagpole is approximately \_\_\_\_\_ M

6. The Eiffel tower casts a shadow that is 1.5 m. At a certain time of day, a stick that is 3 m casts a shadow that is .015 m. How tall is the Eiffel tower?

7. The Sears building is among the tallest buildings in the world. At a certain time of day, a 90 meter pole cast a shadow that measures 180 meters. The Sears building's shadow is 886 meters. How tall is the Sears building?

8. The Statue of Liberty is 92 meters tall. At a certain time of day, a stick that is 90 centimeters tall casts a shadow that is 2200 centimeters long. How many meters long will the Statue's shadow be?

9. The largest known pyramid is Khufu's pyramid. At a certain time of day, a stick that is 3 meters casts a shadow 1.5 m long, and the pyramid casts a shadow 68.5 m long. How tall is the Khufu's pyramid?
10. The Khafre pyramid is 143.5 meters. At a certain time of day, a meter stick casts a shadow that is 6 meters long. How long is the shadow of the pyramid?
11. In the space provided, create a bar graph of the heights of the flagpole, Sears building, Eiffel Tower, Statue of Liberty, Khufu pyramid, and Khafre pyramid. Be sure to include:
- Title
  - Label axis
  - Appropriate scale

