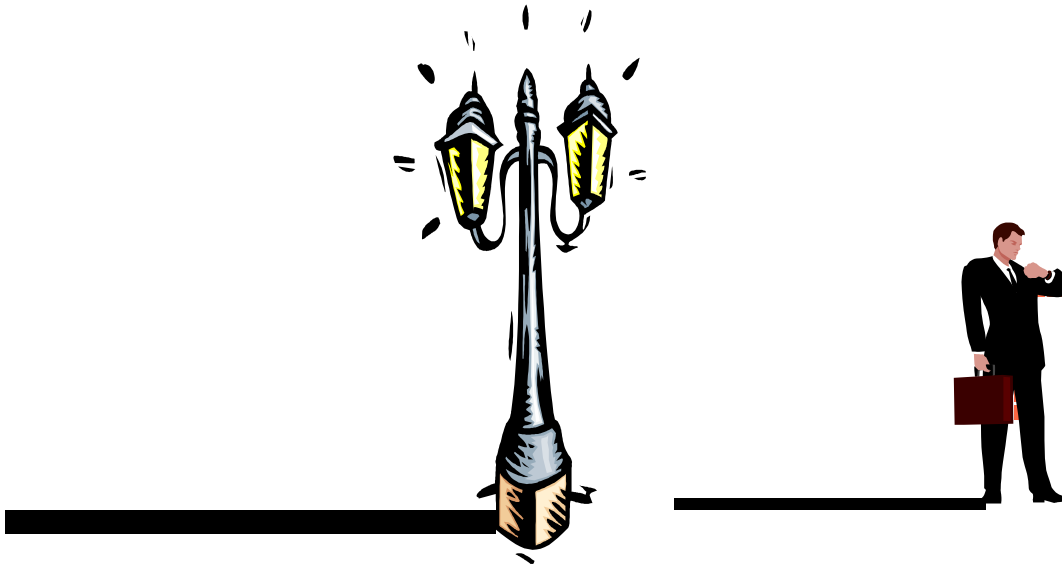
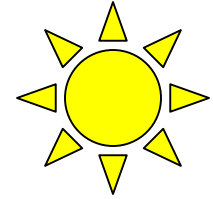


**7.45**

**INDIRECT MEASUREMENT WITH  
SIMILAR TRIANGLES**

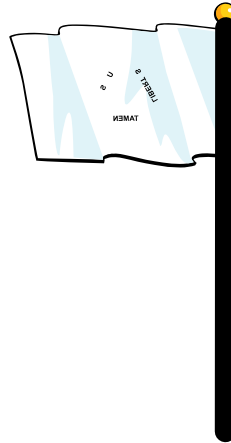
# Example 1

If a 5 foot person casts a 6-foot shadow at the same time that a lamppost casts an 18 foot shadow, what is the height of the lamppost?



## Example 2

Helga is looking at a mirror on the ground that is reflecting the top of a flagpole. Her eye level is 168 centimeters above the ground and she is 114 centimeters from the mirror lying on the ground. The mirror is 570 centimeters from the flagpole. How tall is the flagpole?



## Example 3

Driving through the mountains, Dale has to go up and over a high mountain pass. The road has a constant incline for  $7\frac{3}{4}$  miles to the top of the pass. Dale notices from a road sign that in the first mile he climbs 840 feet. What is the height of the mountain pass?

(5280 ft = 1 mi)