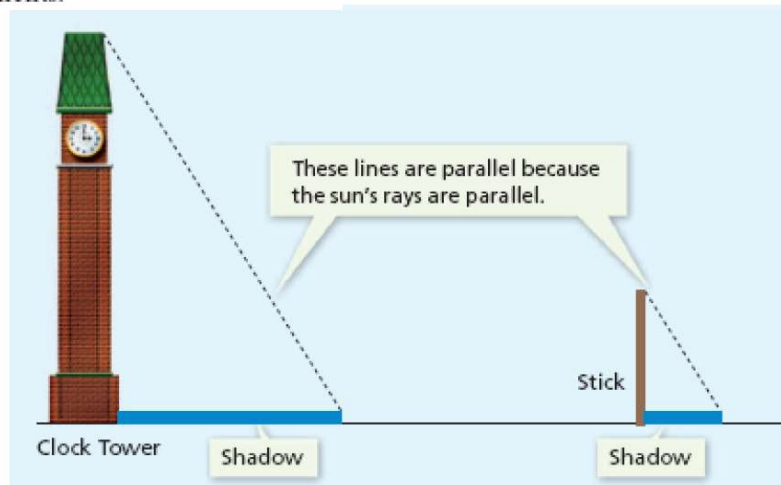


Applications of Similar Triangles

Using Shadows to Find Heights

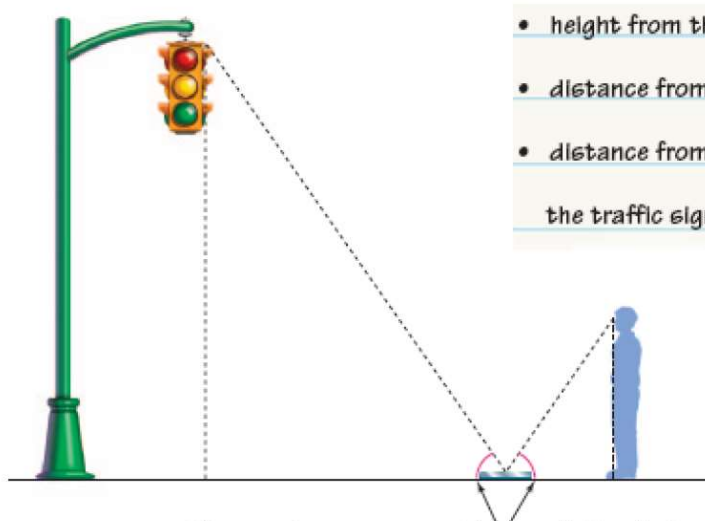
Suppose you want to use the shadow method to estimate the height of a building. You make the following measurements:

- length of the stick: 3 m
- length of the stick's shadow: 1.5 m
- length of the building's shadow: 8 m



Using Mirrors to Find Heights

Jim wants to find the height of the traffic light.



- height from the ground to Jim's eyes: 150 cm
- distance from the middle of the mirror to Jim's feet: 100 cm
- distance from the middle of the mirror to a point directly under the traffic signal: 450 cm

These angles are congruent because light reflects off a mirror at the same angle it arrives.