## Problem Solving with Trig

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## Trig Problem

Example: Sarah is flying a kite on a 100 meter string. If the angle that the string makes with the ground is $70^{\circ}$, how high in the air is the kite? (Assume Sarah is holding the string 1.6 meters from the ground.)

Draw a picture:

click to reveal

17 A skateboard ramp is 5 feet long and 18 inches high at the higher end. What is the angle of elevation of the ramp?


18 The American Ladder Institute recommends that in order to prevent slipping, a ladder should be set up as close to a $75^{\circ}$ angle with the ground as possible. How far should the base of a 14 foot ladder be from the wall?

