NAME

Module 18Solving Radical EquationsLesson 3Solving Problems Using Radical
Equations

Lesson Objective

• Solve application problems in which a radical equation must be solved.

In the length of a skid mark formula, $s = 5.5\sqrt{0.75m}$, *s* represents **speed in mph** and *m* represents **length of the skid mark in feet**



Find the length of a skid mark when a car goes into a skid at 60 mph. **approximately 159 feet**

In the distance to the horizon formula, $d = 1.17\sqrt{h}$, d represents distance to the horizon in miles height from which the horizon is being veiwed in feet

A mountain climber sitting on a mountain's summit estimates that the distance to the horizon is 45 miles. How high is the mountain's summit? approximately 1,479 feet

In the speed of sound near Earth's surface formula, $v = 20\sqrt{t + 273}$,

v represents the speed of sound in m/s _____, and *t* represents temperature in °C

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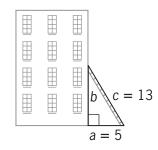
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(3) What is the temperature if sound travels at 400 meters per second? <u>127</u>°C



(4) A 13-foot ladder leans against a building so that the bottom of the ladder rests on the ground five feet from the building. How high up the side of the building does the ladder reach?

12 feet



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Guided Notes