

# Right Triangle Word Problems



## Overview of problems



### Example Set: A



*You want to test your new trigonometry skills so you decide to figure out the height of a tree. Gathering some information, you determine that from 100 feet away from the tree, the angle from the ground to the top of the tree is 40 degrees.*

*How tall is the tree?*



## Example Set: B



*Air traffic control instructs the pilot of an airplane to start a landing descent to an airport 20 miles away.*

*Assuming the aircraft is flying level at 30,000 feet what angle does the pilot need to descend for the landing approach?*

*(assume 5280 ft/mile)*



## Example Set: C



*A rocket is launched at an angle of elevation of 75 degrees. It travels in a direct path for 30 seconds at 1200 miles/hour. How high above the ground is the rocket 30 seconds into the flight?*

# Right Triangle Word Problems



## Overview of problems- KEY



*Example Set: A*



*You want to test your new trigonometry skills so you decide to figure out the height of a tree. Gathering some information, you determine that from 100 feet away from the tree, the angle from the ground to the top of the tree is 40 degrees.*

*How tall is the tree?*

**83.9 ft.**



## Example Set: B



*Air traffic control instructs the pilot of an airplane to start a landing descent to an airport 20 miles away.*

*Assuming the aircraft is flying level at 30,000 feet what angle does the pilot need to descend for the landing approach?*

*(assume 5280 ft/mile)*

**15.85°**



## Example Set: C



*A rocket is launched at an angle of elevation of 75 degrees. It travels in a direct path for 30 seconds at 1200 miles/hour. How high above the ground is the rocket 30 seconds into the flight?*

*9.62 miles*