Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Right Triangle Trigonometry Application Notes

 A kite string is 60 feet long and makes an angle of 42° with the ground. How high above the ground is the kite?

Your kite is stuck in a tree. You are holding the kite string and standing 50 meters from the base of the tree. You look up at an angle of 33°. Determine the length of the kite string.

A building 14.5 meters tall casts a shadow of 11.4 meters along the ground. At what angle does the shadow meet the ground?

A firefighter is rescuing a cat in a tree. If the branch that the cat is on is 15 feet above the ground and the ladder is a 10 ft. ladder. What angle does the ladder make with the ground?

A surveyor needs to find out how far away she is from a 3,000 ft. cliff. Looking up at the cliff, the angle of elevation is 22°. How far is she from the cliff?

When the plane had flown 6,451 feet from the airport where it had taken off, it had covered a horizontal distance of 4,765 feet. What is the angle at which the plane rose from the ground to the nearest degree?

Exit Ticket:

* Explain how you know whether to use sin, cos, or tan.
* Explain how you know whether to use the inverse functions or the regular trig functions.