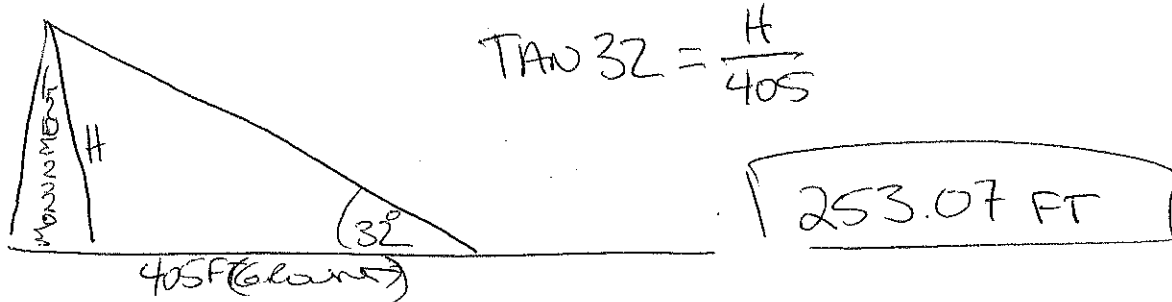


Worksheet 8.4 Trig Word Problems  
 Geometry Regular

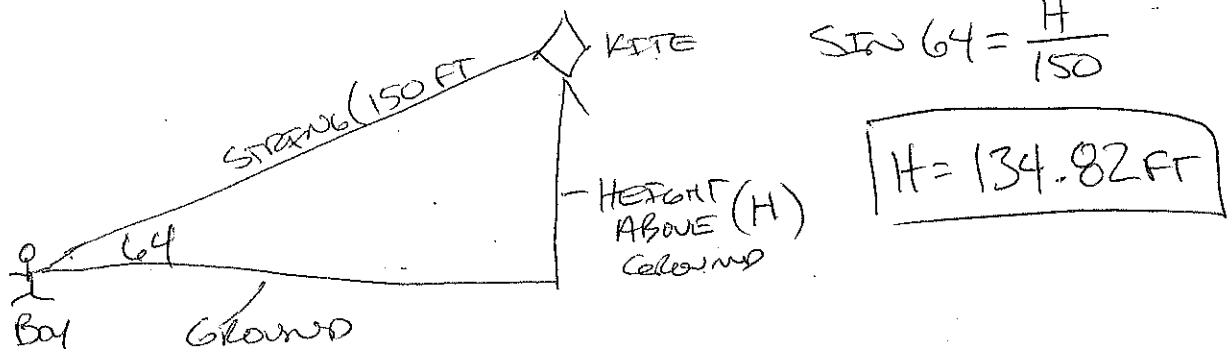
Name \_\_\_\_\_  
 Date \_\_\_\_\_ Mods \_\_\_\_\_

Draw diagrams for each word problem and show the trig function used to solve the problem.

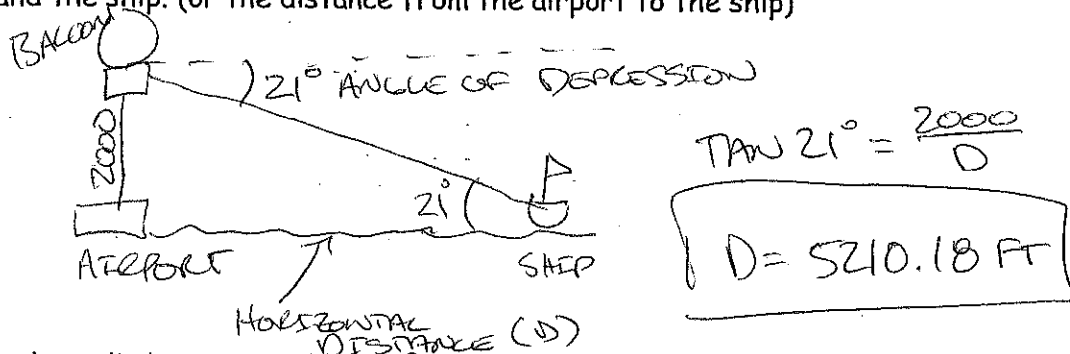
1. A monument stands on level ground. The angle of elevation to the top of the monument taken at a point 405 feet away is  $32^\circ$ . Find the height of the monument.



2. A boy flying a kite lets out 150 feet of string that makes an angle of  $64^\circ$  with the ground. If the string forms a straight line, how high is the kite above the ground?

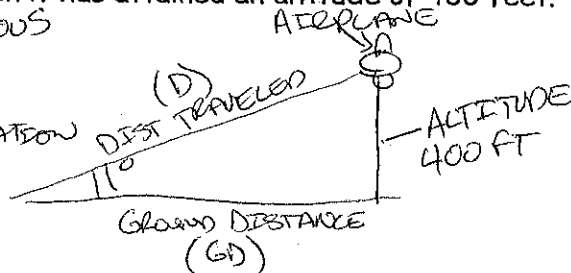


3. A person in a balloon which is 2,000 feet above the airport finds that the angle of depression to a ship out at sea is  $21^\circ$ . Find the horizontal distance between the balloon and the ship. (or the distance from the airport to the ship)



4. An airplane climbs at an angle of  $11^\circ$  with the ground. Find the distance it has traveled when it has attained an altitude of 400 feet.

\* AMBIGUOUS CASE  
 - SUBJECT TO INTERPRETATION



$\tan 11 = \frac{400}{G}$       2057.82  
 or  
 $\sin 11 = \frac{400}{D}$       2096.34 FT