**Math 10**

**Trig assignment: Finding heights**

1. Using a protractor, string. washers and a straw, make a sextant like the one below.



1. Use your sextant to find the height of three (3) objects around the school. For each object you must have
	1. A labeled diagram like the one below including the angle of inclination (found using your sextant), horizontal distance to the object (measured using measuring tape) and the eye height (measured using measuring tape).



* 1. Calculations showing how you found the height of the object. Make sure you box your final height and that your work is neat.

You will be put into groups, but you must hand in your own work.

**Math 10**

**Trig assignment: Finding heights**

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

 Group members:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Teacher led example:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Diagram:

Horizontal distance to object:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Eye Height:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Angle measured with sextant:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Angle of inclination:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Calculations

Height of object:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Object 1:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Diagram:

Horizontal distance to object:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Eye Height:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Angle measured with sextant:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Angle of inclination:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Calculations

Height of object:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Object 2:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Diagram:

Horizontal distance to object:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Eye Height:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Angle measured with sextant:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Angle of inclination:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Calculations

Height of object:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Object 3:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Diagram:

Horizontal distance to object:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Eye Height:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Angle measured with sextant:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Angle of inclination:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Calculations

Height of object:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_