**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** **Period \_\_\_\_**

Find the height of each item use Trigonometric functions. Stand at the given location and use a clinometer to find the angle of elevation for each item. When finding height of an object, add 5 feet (average eye height) to your final answer.

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| How tall is the flagpole in front of the school?  – measured from the staked tree next to the parking lot (north of the flag pole)  Angle of Elevation http://2.bp.blogspot.com/-YScodKxEk-Q/UaDA0EoSC_I/AAAAAAAABGQ/5LmpsS5TyJ0/s200/400px-greek_lc_theta-svg.png : \_\_\_\_\_\_\_\_\_ degrees  **Slant height (diagonal)** distancefrom the staked tree to the top of the flagpole: 51 feet    The flag pole is about \_\_\_\_\_\_\_\_ feet tall. \*\*\*don’t forget to add 5 feet to “x” |
| What is the height of the front of the Forum (brick wall that sticks out)?  -measured from the class theme plaques on the block wall in the center of the quad (corner near Forum).  Angle of Elevation http://2.bp.blogspot.com/-YScodKxEk-Q/UaDA0EoSC_I/AAAAAAAABGQ/5LmpsS5TyJ0/s200/400px-greek_lc_theta-svg.png: \_\_\_\_\_\_\_\_\_\_\_ degrees    ***Horizontal*** distance to the base of the Forum from the class theme plaques: 72 feet    The Forum is about \_\_\_\_\_\_\_\_ feet tall. \*\*\*don’t forget to add 5 feet to “x” |
| How tall is the tree behind the flagpole?  -measured from in front of the rocks in the middle of the main quad.  Angle of Elevation: \_\_\_\_\_\_\_\_ degrees  ***Slant height (diagonal)*** distance from the rocks to top of the tree (north side of tree): 186 feet  The tree behind the flagpole is about \_\_\_\_\_\_\_\_ feet tall. |
| Which is taller? The thin tree behind the apartments (north of the JV softball field- closest to the wall of Room 901) or the light tower at Handel Stadium which can be seen over the roof of Rooms 902 and 903?    - measured from the rock outside of Room 901.  Angle of Elevation (thin tree north of fields): \_\_\_\_\_\_\_ degrees  Angle of Elevation (light tower over Rooms 902 and 903): \_\_\_\_\_\_\_ degrees  ***Slant height*** from the rock outside Room 901 to the thin tree: 933 feet  ***Slant height*** from the rock outside Room 901 to the light tower over Rooms 902 and 903: 708 feet  The tree’s height is \_\_\_\_\_\_\_\_ feet and the light tower is \_\_\_\_\_\_\_\_ feet tall. Therefore the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is taller than the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |

\*Discuss what information you would need and how this math could be used to find the height of the Supreme Scream ride at Knott’s Berry Farm.