

Group Names: \_\_\_\_\_

Period: \_\_\_\_\_

Honors Algebra II

1. India Gate in New Delhi is 42 meters tall. Mrs. Singer stood with a clinometer and found the angle from her eyes (1.6 meters off the ground) to the top of India Gate to be 50 degrees. How far away from the base of India Gate was she standing to the nearest tenth of a meter?



2. The Taj Mahal is 73 meters tall. Mrs. Singer is standing with an angle of elevation of  $58.9$  degrees from her eyes to the top. Ms. Andrews is standing with an angle of elevation of  $60.7$  degrees from her eyes to the top. How far apart are Mrs. Singer and Ms. Andrews to the nearest tenth of a meter? Assume the height of their eyes is 1.6 meters above the ground.



3. While visiting Panna Meena Ka Kund in Jaipur, Mrs. Singer and Ms. Andrews took some measures of the stepwell. We were standing 8.5 meters above the water to our eye height. Our tour guide asked us to use the clinometer and he found the angle of depression to be 80 degrees to the top of the water. Find the distance from his eye to the water's edge on the other side (the white line). Round your answer to the nearest tenth of a meter. Does his measurement make sense? Why or why not?



4. Your teacher will randomly assign an object/point/location for you to find the height of. Use the tape measure, clinometer and right triangle trigonometry to find that height.

What is being measured: \_\_\_\_\_

**Draw a picture** below and show all calculations. Round your answer to the **nearest tenth** of an inch.