

NAME _____ SECTION _____ Score _____

CEEN 113 Engineering Measurements Lab Final
30 minute time limit

Instrument Position (circle the one you set up on) 1 2 3 4 5

Set up and level your total station on the carpet over your given position. Assume that all elevations at prisms correspond to the center of the prism so that subsequent elevations can be computed using the instrument height (HI) and the vertical distance. You can measure the height of your instrument from the rod labeled Actual Height.

Problem I Measure the horizontal angle AB.

Enter any notes/computations (neatly) here

Horizontal Angle AB = _____° _____' _____”

Problem II Measure the zenith angle and slope distance to B from the point you are set up on and assuming the elevation of the floor where your instrument is set is 4510.28 feet, calculate the elevation of the center of B.

Enter any notes/computations (neatly) here

Zenith Angle to B = _____° _____' _____”

Slope Distance _____

Elevation of B _____

Problem III Using the level provided and the proper leveling techniques, determine the elevation at the bottom of Rod #2 knowing that the bottom of Rod #1 is sitting on a Bench Mark whose elevation is 4221.32 ft.

Elevation Rod #1 4221.32

Back Sight Reading _____

Fore Sight Reading _____

Elevation Rod #2 _____