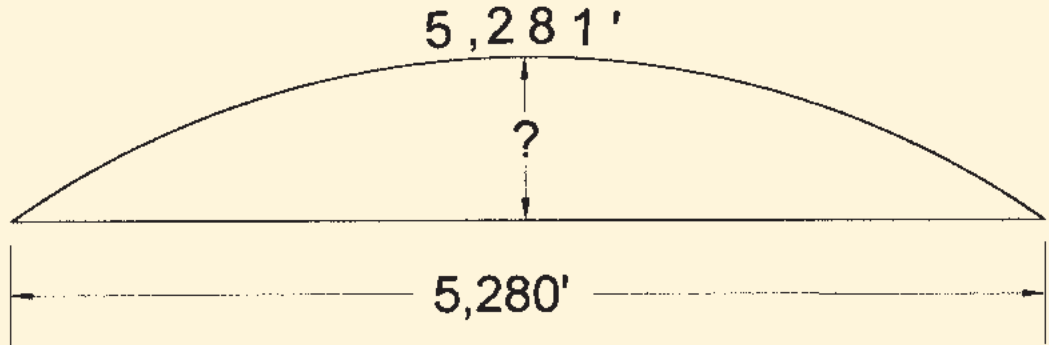




PROBLEM CORNER

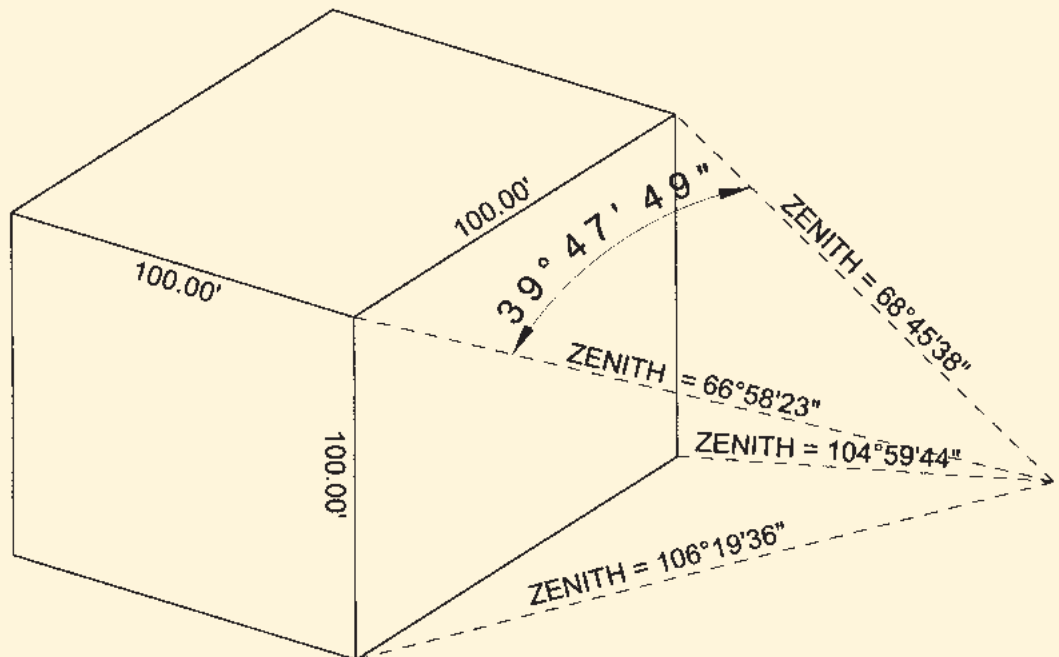
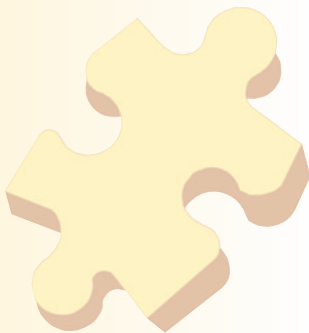
Problem 71

One very hot day a one-mile long length of railroad track on a level surface expanded exactly one foot. If it rose vertically only and in a circular arc and the two ends stayed in their original positions, how high would the middle be?



Problem 72

Your instrument is set up on the roof of a 3-story building across the street from a building that is a cube 100.00 feet on a side. Your zenith angle to the upper left corner is $66^{\circ}58'23''$ and to the lower left corner is $106^{\circ}19'36''$. Your zenith angle to the upper right corner is $68^{\circ}45'38''$ and to the lower right corner is $104^{\circ}59'44''$. Your horizontal angle from the upper left to the upper right is $39^{\circ}47'49''$. What is the shortest distance from your instrument to the building? How far from the prolongation of the left edge is your instrument?



The problems for this column are contributed by retired California surveyor Dave Lindell, LS.

Solutions can be found on our website at www.profsurv.com