11 COORDINATE GEOMETRY IN SURVEYING CALCULATIONS

Asterisks $^{(*)}$ indicate problems that have partial answers given in Appendix G.

11.1 The *X* and *Y* coordinates (in meters) of station Shore are 379.241 and 819.457, respectively, and those for station Rock are 437.854 and 973.482, respectively. What are the azimuth, bearing, and length of the line connecting station Shore to station Rock?

Az = 20°50'02"; Brg = N 20°50'02" E; Distance = 164.800 m

11.2 Same as Problem 11.1, except that the *X* and *Y* coordinates (in feet) of Shore are 2058.97 and 6980.06, respectively, and those for Rock are 1408.03 and 6980.06, respectively.

Az = 343°08'40"; Brg = N 16°51'20" W; Distance = 2244.92 ft