

## Chapter 9 Lab

- 1) A security camera in a neighborhood bank is mounted on a wall 9 feet above the floor. What angle of depression should be used if the camera is to be directed to a spot 6 feet above the floor and 12 feet from the wall?
- 2) A Surveyor is measuring the distance across a small lake. He has set up his transit on one side of the lake 130 feet from a piling that is directly across from a pier on the other side of the lake. From his transit, the angle between the piling and the pier is  $50^\circ$ . What is the distance between the piling and the pier to the nearest foot?

For problems #3 & #4.

Two sides and an angle are given. Determine whether the given information results in one triangle, two triangles, or no triangle at all. Then solve for the other angles and sides.

- 3)  $b = 3$ ,  $c = 7$ ,  $B = 70$
- 4)  $B = 41^\circ$ ,  $a = 4$ ,  $b = 3$

- 5) An airplane is sighted at the same time by two ground observers who are 2 miles apart and directly west of the airplane. They report the angles of elevation as  $15^\circ$  and  $24^\circ$ . How high is the airplane from the ground?

Find the Area and the Angles for the given triangle.

- 6)  $a = 8$ ,  $b = 6$ ,  $c = 5$