20. A hot-air balloon is ascending at the rate of 18.0 m/s and is 90 m above the ground when a package is dropped over the side. (a) How long does the package take to reach the ground? (b) With what speed does it hit the ground?

33. A pilot flies horizontally at 1100 km/h, at height $h = 35$ m above initially level ground. However, at time $t = 0$, the pilot begins to fly over ground sloping upward at angle $\theta = 4.3°$ (Fig. 2-23). If the pilot does not change the airplane's heading, at what time t does the plane strike the ground?

Figure 2-23 Problem 33.

66. A key falls from a bridge that is 40 m above the water. It falls directly into a model boat, moving with constant velocity, that is 14 m from the point of impact when the key is released. What is the speed of the boat?