1. Streams of water in a fountain shoot from one level to the next. A particle of water in a stream takes 0.50 s to travel between the first and second level. The receptacle on the second level is a horizontal distance of 1.5 m away from the spout on the first level. If the water is projected at an angle of 33°, what is the initial speed of the particle?

2. A football is kicked at an angle of 37.0° with a velocity of 20.0 m/s. Calculate (a) the maximum height, (b) the time of travel before the football hits the ground, (c) how far away it hits the ground.

3. An athlete executing a long jump leaves the ground at a 30° angle with a velocity of 9.4 m/s. What was the horizontal distance of the jump?

4. A football is kicked at ground level with a speed of 27.0 m/s at an angle of 30.0° to the horizontal. How much later does it hit the ground?