**Example 1:** A world record motorcycle jump occurred on August 31, 1986 when Chris Bromhan took off on his Yamaha and jumped a horizontal distance of 74.0 m across a row of cars. Assuming that he started and landed at the same level and was airborne for 1.3 s, what height from his starting point did this daredevil achieve?

**Example 2:** Billy-Joe stands on the Talahatchee Bridge kicking stones into the water below. **a)** If Billy-Joe kicks a stone with a horizontal velocity of 3.50 m/s, and it lands in the water a horizontal distance of 5.40 m from where Billy-Joe is standing, what is the height of the bridge? **b)** If the stone had been kicked harder, how would this affect the time it would take to fall?

**Example 3:** The movie “The Gods Must Be Crazy” begins with a pilot dropping a bottle out of a airplane. It is recovered by a surprised native below, who thinks it is a message from the gods. If the plane from which the bottle was dropped was flying at an altitude of 500 m, and the bottle lads 400 m horizontally from the initial dropping point, how fast was the plane flying when the bottle was released?

**Example 4:** Tad drops a cherry pit out of a car window 1.0 m above the ground while traveling down the road at 18 m/s. **a)** How far, horizontally, from the initial dropping point with the pit hit the ground? **b)** Draw a picture of the situation. **c)** If the car continues to travel at the same speed, where will the car be in relation to the pit when it lands?

**Example 5:** Ferdinand the frog s hopping from lily pad to lily pad in search of a good fly for lunch. If the lily pads are spaced 2.4 m apart, and Ferdinand jumps with a speed  of 5.0 m/s, taking 0.60 s to go from lily pad to lily pad, at what angle must Ferdinand make each of his jumps?

**Example 6:** At her wedding, Beyoncé lies up all the single ladies in a straight line away from her in preparation for the tossing of the bridal bouquet, She stands Kelly at 1.0 m, Kendra at 1.5 m, Maru at 2.0m, Kristen at 2.5 m, and Lauren at 3.0 m. Beyoncé turns around and tosses the bouquet behind her at a speed of 3.9 m/s at an angle of 50.0° to the horizontal, and it is caught at the same height 0.60 s later. **a)** Who catches the bouquet? **b)** who might have caught it if she had thrown it more slowly?

**Example 7:** At a meeting of physics teachers in Montana, the teachers were asked to calculate where a flour sack would land if dropped from a moving airplane. The plane would be moving horizontally at a constant speed of 60.0 m/s at an altitude of 300 m. **a)** If one of the physics teachers neglected air resistance while making his calculations, how far horizontally from the dropping point would he predict the landing? **b)** Draw a sketch that shows the path the flour sack would take as it falls to the ground (from the perspective of an observer on the ground and off to the sides)

**Example 8:** Jack be nimble, Jack be quick, Jack jumped over the candlestick with a velocity of 5.0 m/s at an angle of 30.0° to the horizontal. Did jack burn his feet on the 0.25-m-high candle?