**Falling For Physics**

1. You throw a ball downwards off the edge of a cliff with a speed of 6 m/s. The ball strikes the ground 10 s later. How high is the cliff? How fast is the ball traveling just before it strikes the ground? *[305 m, 104.1 m/s]*
2. You are standing on a balcony where you toss a ball up in the air and ball falls to the floor below.
   1. Draw a dot diagram representing the motion of the ball from the time the ball is released until it hits the floor below.
   2. Draw a d(t) and a v(t) graph representing the motion of the ball from the time the ball is released until the ball hits the floor.
3. You and your friends found the keys to get on the roof at FHS. You all brough up water balloons to drop onto unsuspecting teachers. If the sidewalk is 12 m below the roof, how long after you drop a balloon do the teachers have to get out of the way before they get wet? (How long does the balloon take to fall?) *[1.56 s]*