1) John throws a ball up with an initial velocity of 15 m/s at an angle of 32° above the horizontal.
   a. Calculate the maximum height of the ball.
   b. Calculate the time the ball is in the air.
   c. Calculate the total horizontal distance the ball travels before it hits the ground.

2) Billy punts a soccer ball off the top of his 25 m tall apartment building. The initial velocity of the ball is 18 m/s at an angle of 45° above the horizontal.
   a. Find the initial speed in the horizontal direction.
   b. Find the initial speed in the vertical direction.
   c. Find the maximum height of the ball.
   d. Find the total time the ball is in the air.
   e. Find the total horizontal distance the ball will travel before it hits the ground.
   f. Find the final velocity of the ball.

ANSWERS:  1a) 3.2 m  1b) 1.6 s  1c) 2.0 x 10^1 m
          2a) 13 m/s  2b) 13 m/s  2c) 34 m  2d) 4.0 s  2e) 52 m  2f) 28 m/s at 117°