Monday Reading Assessment: Unit 1, Two-dimensional kinematics

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1 Memory Bank

- $y(t) = -\frac{1}{2}gt^2 + v_{i,y}t + y_i$

- $x(t) = v_{i,x}t$

2 Chapter 3 - Two-Dimensional Kinematics

1. Suppose a basketball player is on top of a 60 meter building. There is a basketball net located 10 meters horizontally from the edge of the building, and the net is 3 meters tall. The person shoots the basketball from a height of 1.5 meters above their feet, and they shoot horizontally. With what horizontal velocity should they shoot in order to make the shot?

   - *Hint: draw a diagram.*
   - *Hint: think of motions in x and y separately.*