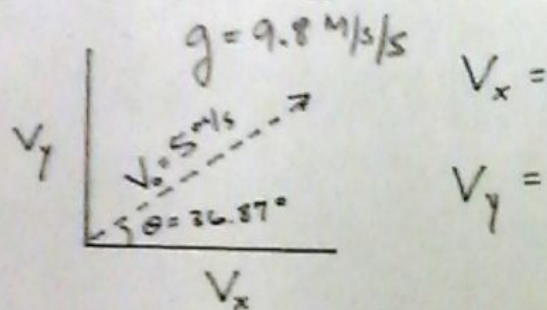


NAME: _____

Michael Jordan and Kobe Bryant are playing a 1 on 1 game of basket ball. Michael Jordan elevates for a jump shot over Kobe and releases the ball at a height of 10 feet (or 3.048 meters). The basketball hoop is also 10 feet (or 3.048 meters) in height. When the ball leaves Michael's hand it has an initial velocity of 5 m/s and an angle of 36.87° . Find V_x and V_y .



1.) How much time does the ball spend in the air? Use $g = 9.8 \text{ m/s}^2$.
 (* From the time it is released until it goes through the hoop. *)

2.) If the shot is successful, how far horizontally (Δx) did the ball travel? Use $g = 9.8 \text{ m/s}^2$

3.) Kobe is standing half the distance between MJ and the hoop.

Kobe jumps to a height of 4 meters as the ball passes over head. Would Kobe block Jordan's shot? Why or why not?

4.) What is the ball's velocity at its peak height?