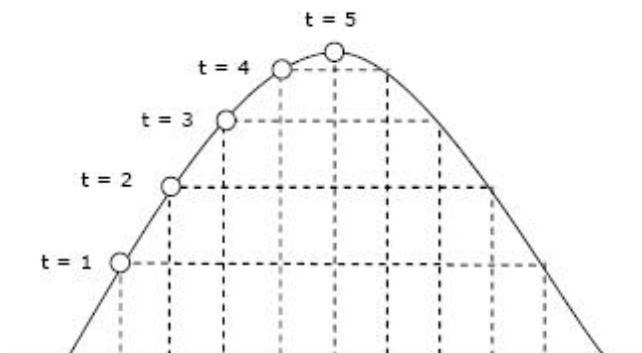


Name \_\_\_\_\_ # \_\_\_\_\_

Section \_\_\_\_\_

Projectile Motion Worksheet



**$V_{iy} = +50 \text{ m/s}$        $V_{ix} = 16 \text{ m/s}$**

1. Show the position of the ball on the drawing above at times 6, 7, 8, 9 and 10 seconds.

2. Use the picture above to fill out the chart below.

<b>t (sec)</b>	<b><math>V_x</math> (m/s)</b>	<b><math>V_y</math> (m/s)</b>
0	16	50
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

3. A person kicks a soccer ball at an angle and sends it in the air.

a) What angle of projection between 0 and 90 degrees produces the greatest initial vertical component? \_\_\_\_\_

greatest initial horizontal component? \_\_\_\_\_

b) A soccer ball is kicked at a speed of 8 m/s. Circle the angle below that will give the ball the largest (dy)?

Which angle will make the ball go the farthest (dx)?

13 degrees      7 degrees      40 degrees      85 degrees      2 degrees.?

4. What angle can you kick a football that will make the initial vertical component of the velocity equal to the initial horizontal

component of the velocity? \_\_\_\_\_

5. Name an angle that you could kick a football that would give it a very large initial vertical component but a small nonzero initial

horizontal component. \_\_\_\_\_

6. How would the vertical component of a velocity change if the angle of projection was changed from 80 degrees to 60

degrees? \_\_\_\_\_

7. A soccer ball was kicked on a horizontal field. The initial vertical component of the soccer ball was +15 m/s and the initial horizontal component was + 8 m/s.

a) What was the vertical component of the balls velocity just before it hit the ground? \_\_\_\_\_

b) What was the horizontal component of the balls velocity just before it hit the ground? \_\_\_\_\_