

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

## HS.P.D.21, HS.P.D.22, HS.P.D.23, HS.P.D.24 Assessment

**SITUATION:** Your best friend Harry, has a cousin Larry and in 5 days from now he's going to get married. Before the wedding Harry and Larry go sky diving (they are going to jump out of a plane)! Harry as you know, has fallen out of his helicopter 3 times! Today, after jumping Harry realized he has forgotten his parachute! (Lucky for Larry he has his!) When Harry jumps the plane was traveling at a horizontal velocity of 60 m/s and was 125m above the ground.

1) In your own words, describe Harry's motion as he falls [HINT: include direction(s) and velocity(s)].

2) Fill out the horizontal and vertical motion charts for the **position, velocity, and acceleration** of Harry as he falls.

**Show all work and calculation on the next page.**

### Horizontal Motion (x direction)

time (sec)	x position (meters)	x velocity (m/s)	x acceleration ( $m/s^2$ )
0			
1			
2			
3			
4			
5			

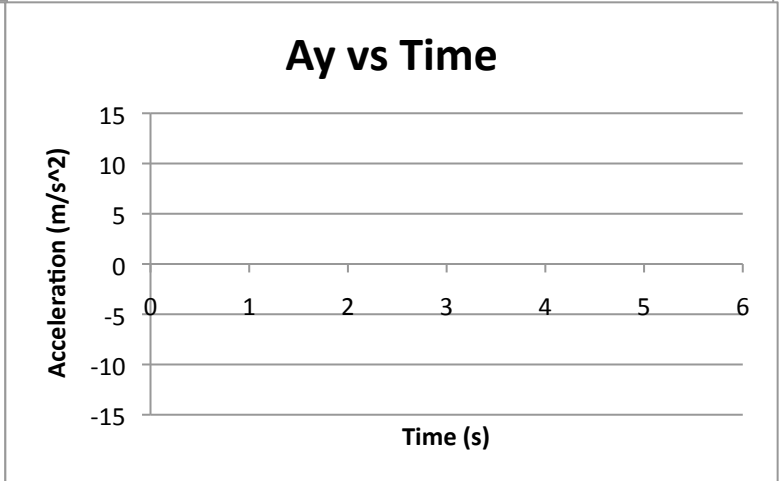
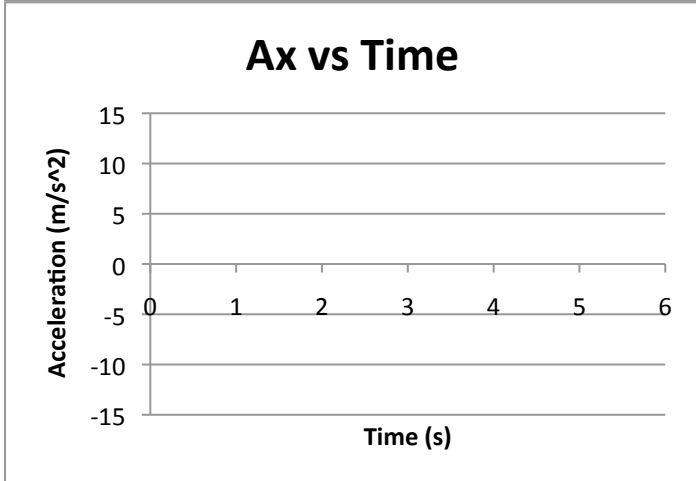
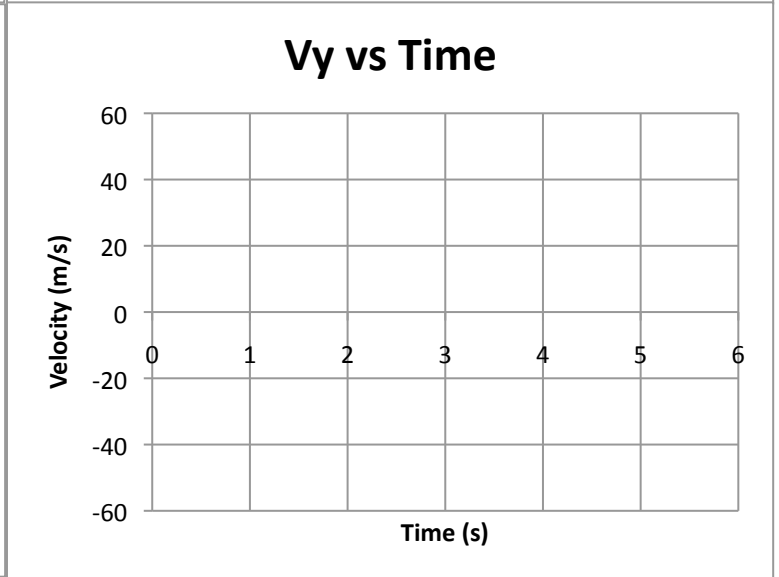
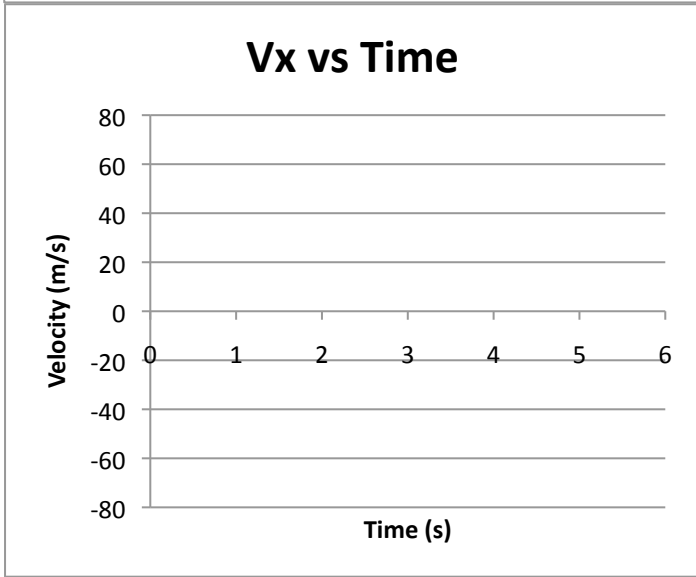
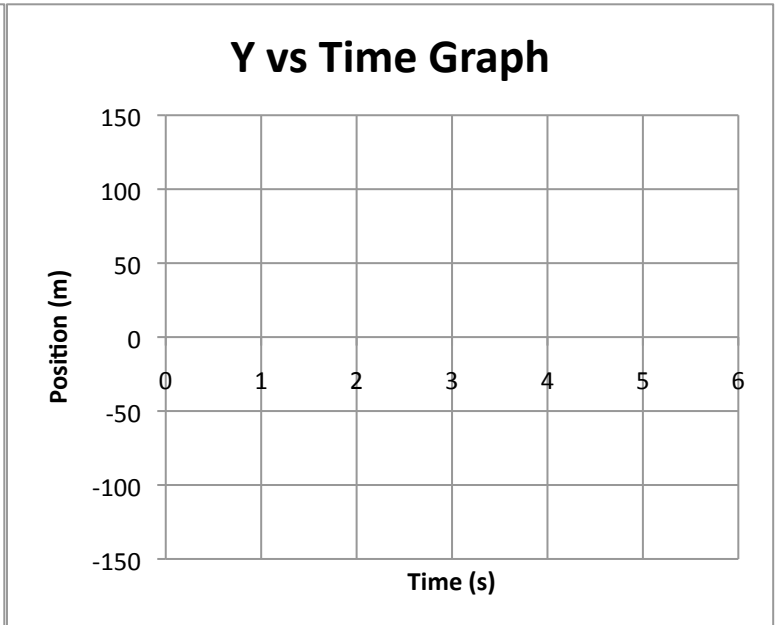
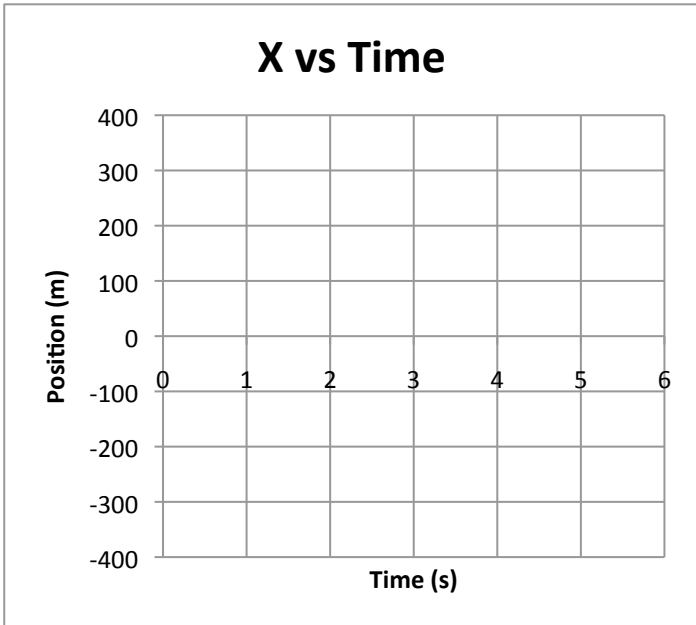
### Vertical Motion (y direction)

time (sec)	y position (meters)	y velocity (m/s)	y acceleration ( $m/s^2$ )
0			
1			
2			
3			
4			
5			

Use the following space to complete one calculation for the horizontal and vertical **positions** and **velocities** on the pervious page (HS.P.D.21)

Horizontal Motion (x direction)	Vertical Motion (y direction)
$X_1 =$	$Y_1 =$
$X_2 =$	$Y_2 =$
$V_{1x} =$	$V_{1y} =$
$V_{2x} =$	$V_{2y} =$
$a_x =$	$a_y =$
$t =$	$t =$

3) Use the graphs below to plot the positions, velocities and acceleration from the tables in #2



Extra space and Honor Code.