

Name _____

Date _____ Pd _____

UNIT IV: Projectile Motion Anticipation Guide

Part I

Read each statement below, then indicate whether you agree or disagree with the statement.

Agree	Disagree	Statement
<input type="checkbox"/>	<input type="checkbox"/>	For a projectile, Newton's 1 st Law describes motion in the horizontal direction, since no forces are acting on the object in this direction.
<input type="checkbox"/>	<input type="checkbox"/>	Newton's 3 rd Law describes motion in the vertical direction, since there is a net force, gravity.
<input type="checkbox"/>	<input type="checkbox"/>	The vertical motion of a projectile affects its horizontal motion.
<input type="checkbox"/>	<input type="checkbox"/>	Doubling the horizontal velocity of a projectile will double how far it will go.
<input type="checkbox"/>	<input type="checkbox"/>	Doubling the height a projectile is fired from will double how far it will go.
<input type="checkbox"/>	<input type="checkbox"/>	Increasing the mass of a projectile will decrease how far it will go.
<input type="checkbox"/>	<input type="checkbox"/>	An object fired straight upward has a greater velocity than the instant it hits the ground.
<input type="checkbox"/>	<input type="checkbox"/>	A projectile at the top of its parabolic path will have no velocity and no acceleration.
<input type="checkbox"/>	<input type="checkbox"/>	A projectile fired horizontally will land after an object dropped vertically from the same height.

Part II

At the end of the unit, review each statement above and explain why this statement is correct or incorrect. Be sure to use equations to guide your thinking!

Statement Number	True or False?	Explanation
1	<input type="checkbox"/>	
2	<input type="checkbox"/>	
3	<input type="checkbox"/>	
4	<input type="checkbox"/>	
5	<input type="checkbox"/>	
6	<input type="checkbox"/>	
7	<input type="checkbox"/>	
8	<input type="checkbox"/>	
9	<input type="checkbox"/>	



1. Draw a dot on the center of the snowboarder at each stage of his jump.
2. Draw a line straight down from the center of the dot to the x-axis.
3. In general, are your lines equally spaced? Why or why not?
4. Draw a line from the center of the dot to the left along the y-axis.
5. In general, are your lines equally spaced? Why or why not?
6. What does this tell you about projectile motion?

Draw a force diagram and ΣF equation for the snowboarder here.