

Name: _____
Period: _____

Acceleration Lab

Newton's Second Law of Motion:

Acceleration depends on _____ and _____.

If the mass of an object increases, it's acceleration _____.

If the mass of an object decreases, it's acceleration _____.

BUT WAIT!

If the force applied to an object increases, it's acceleration _____.
If the force applied decreases, it's acceleration _____.

Purpose: How do different factors effect acceleration?

Force (F) = Mass (m) * Acceleration (a)

So: $F = m * a$

During this lab, we are looking to see how different forces and masses effect acceleration. If we are looking for acceleration, we should rearrange the equation.

So: $a = F/m$

Part I

Force	Mass	Acceleration
1 marble		
1 marble		
1 marble		

Part II

Force	Mass	Acceleration
	1 cup	
	1 cup	
	1 cup	

Questions:

1. How does force effect acceleration?
2. How does mass effect acceleration?