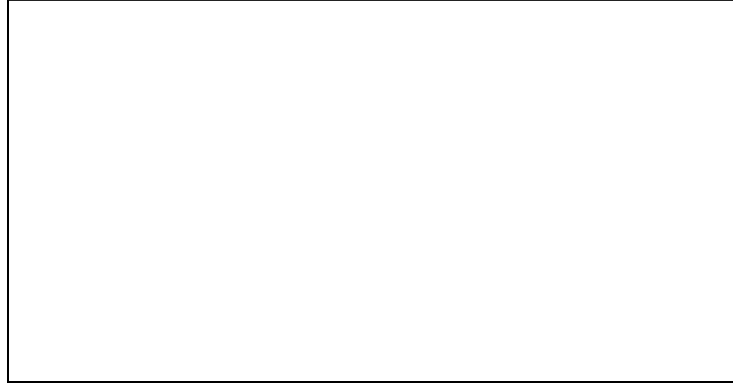


### Inclined Planes – Guided Notes

When on an inclined plane, objects roll/slide down the slope because of the force of \_\_\_\_\_ .

To solve such problems we can rotate the axis. The final diagram will look like this:

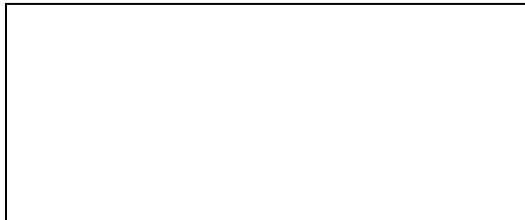


We can break the force of gravity into a component down the slope, and a component into the slope, which gives the following equations:

$$F_x = \boxed{\phantom{000}}$$

$$F_y = \boxed{\phantom{000}}$$

Final Free Body Force Diagram:



Balanced Forces Equations:

X-Direction Equation



Y-Direction Equation



X-Direction Acceleration Equation (for situations where the object on the plane is accelerating):

