Height of Table Top ­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Height of launch above table top: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ total height \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Distance from launch to landing (horizontal): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Sketch of launch geometry: include x-y axis, table and launcher, horizontal distance and vertical distance. Include an initial velocity vector and an acceleration vector. Remember – label with variables, not numbers.

Known and Unknown variables:

x = y = ttotal =

v0x = v0y = v0 =

ax = ay = θ =

Kinematic equations that are useful here:

Solution. Show all steps. Circle your solution for the initial velocity of the projectile as it is launched.

Now, we’re going to work in the opposite direction. Using the launch speed of \_\_\_\_\_\_\_\_\_\_\_\_\_, we will launch another projectile!

Let’s set the projectile launcher at an angle of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ degrees.

Does height change?

Sketch of launch geometry: include x-y axis, table and launcher, horizontal distance and vertical distance. Include an initial velocity vector and an acceleration vector

Known and Unknown variables:

x = y = ttotal =

v0x = v0y = v0 =

ax = ay = θ =

Kinematic equations that are useful here:

Solution. Show all steps. Circle your prediction.

How does your prediction compare to the real horizontal distance?