

Angled Launch - Range vs Angle

Go to the PhET Projectile Motion simulation linked at mrmont.com.

Leave the launch velocity where it is.

Pull the cannon down to a height of zero.

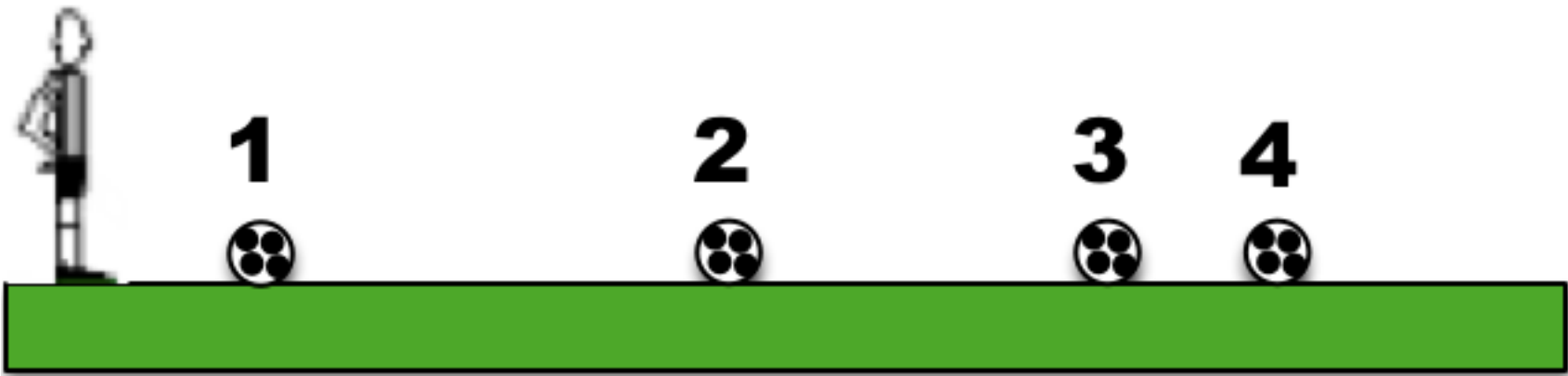
Set the angles below and launch. Pull out the measuring tool to find the range and time and copy it down.

angle	85°	75°	65°	55°	45°	35°	25°
range							
time							

What is the relationship between angle and time?

Do you detect a pattern with the angles and range? What is it? Use the pattern to predict:

angle	15°	5°
range		



The soccer player kicked each ball with the same speed, but at different angles. Assuming that each ball stopped when it landed...

Can you match up the ball to the angle?

_____ a) 45°

_____ b) 80°

_____ c) 40°

_____ d) 30°