

Name: _____ I worked with: _____

Radioactive Detection with Distance Lab

Purpose: Determine the relationship between distance from a radioactive source and the number of decays detected.

Sketch a diagram of the set up and label all the components.



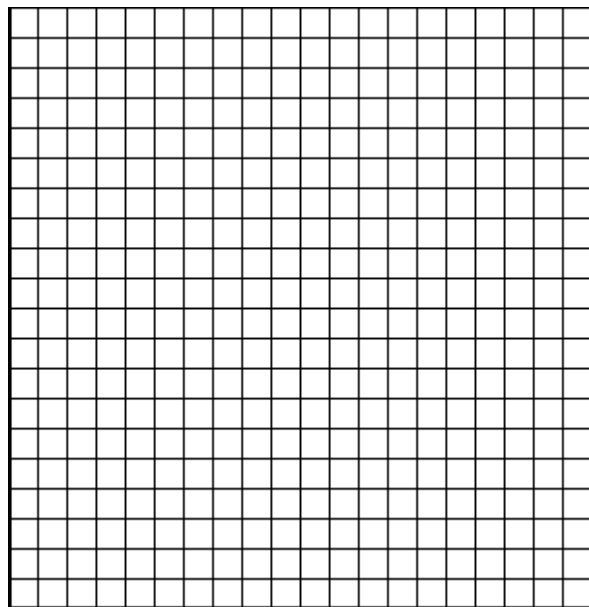
Open up the program. <http://www.thephysicsaviary.com/Physics/Programs/Labs/RadiationDetectionLab/>

Set the radioactive source to Radium 226.

Count the number of decays that you can detect at 10 different distances over a 30 second interval. Make sure you reset your counter after each shift in distance. Graph decays/s to distance in meters.

Distance to decays – Ra-226

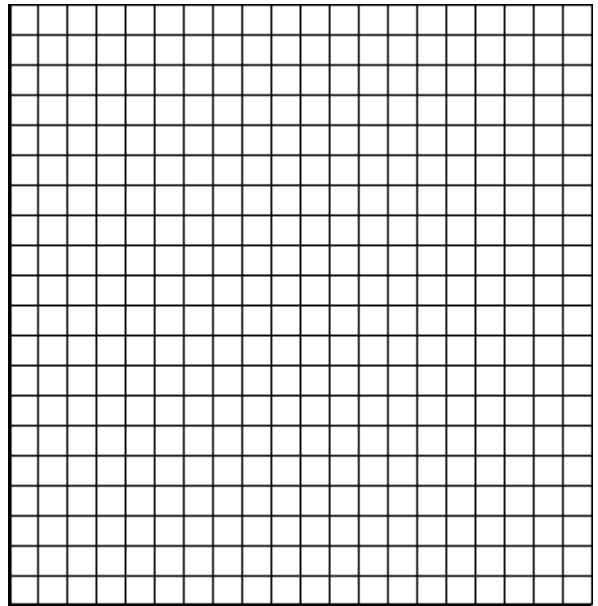
distance	decays in 30s	decays/s



Write an equation for the graph:

Distance to decays – Po-210

distance	decays in 30s	decays/s



Write an equation for the graph:

Write a CER about distance to decay count:

Write a CER about the 2 different isotopes in terms of radioactive activity. Include which substance would be more dangerous to humans.