

PhyzJob: Electric Potential Graphing

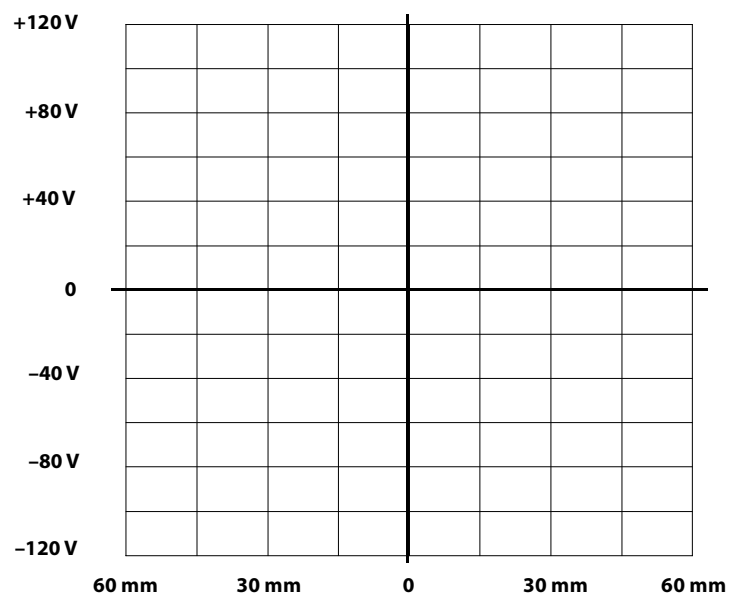


Make a data table, then plot the electric potential vs. the distance from the spherical charges shown below. *Hint: the potential is symmetrical around the charge, and the sphere itself is a conductor.*

| d (mm) | V (V) |
|----------|---------|
| 15 | |
| 30 | |
| 60 | |

Equation you used to find V :

$Q = +200 \text{ pC}$
 $R = 15 \text{ mm}$



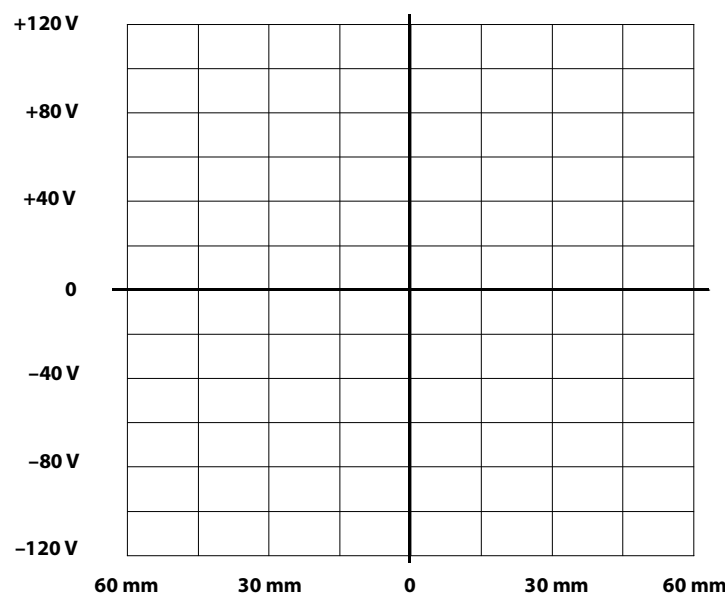
Suppose the graph represented a small track on which a marble could roll. If a marble were placed on the graph 30 mm away from the center of the charge and released, which way would it roll?

How does this compare to the motion of a free proton placed 30 mm from the center of the spherical charge?

What would an electron placed 30 mm from the spherical charge do if released?

| d (mm) | V (V) |
|----------|---------|
| 15 | |
| 30 | |
| 60 | |

$Q = -200 \text{ pC}$
 $R = 15 \text{ mm}$



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