

Before you is a plastic surface representing the electric potential between two charged plates. A 1 *cm* height difference corresponds to an electric potential difference of 1 *V*.

Interpret the Surface

Rank the three points by the value of the electric potential from greatest to least.

Mark three points on the surface that are separated by equal (non-zero!) changes in potential.

Identify (and mark) all the points with the same value of potential as your three points. What patterns do you notice?

Connect Representations

Align your surface with your contour map. How are you making this alignment? Where is the surface a good approximation of the potential? Where is the approximation less good?

Generate a Graph

Sketch a graph of the potential (*V*) vs. distance from the negative plate (*x*).

- Describe the relationship between potential and distance from the negative plate.
- Propose an equation to describe the electric potential as a function of the distance, *x*, from the negative plate. Where did you choose for the location of $V = 0$?