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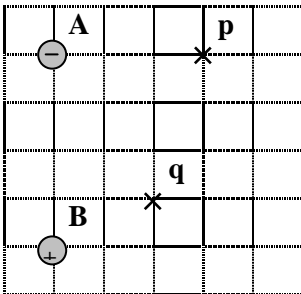
**Show your work, and circle your answers and use sig figs to receive full credit.**

When you have finished this, go to the website and check your answers. If you got a problem wrong, cross it off on the front, and do it correctly on the back.

1. If it takes +34.0 J of work to move a  $-250. \mu\text{C}$  charge from plate A to plate B, what is the potential difference, and which plate is more positive, A or B?

2. What is the velocity of a proton accelerated through 3.70 Volts from rest?

3. Find the electric potential **at point p and point q**. Charge A is  $-3.10 \mu\text{C}$ , B is  $+2.60 \mu\text{C}$ , and each grid line is a meter.



4. What work would it take to move a  $+370. \mu\text{C}$  charge from point q to point p?

5. A 5.20 kg piece of rock is in an elliptical orbit around a  $4.80 \times 10^{24}$  kg planet. At one point in time, its velocity is 6790 m/s when it is at a distance of  $8.40 \times 10^6$  m from the planet's center. What is its distance from the planet's center when it is going 5860 m/s?