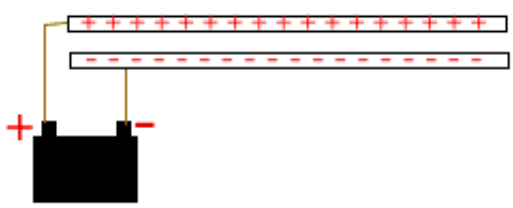
Chapter 17
Practice Problems

New Problems

New Problems reloads the page with new variable values in all questions. You must do this after grading the test to rework it another time.
Make sure to enter your answers in the specified units.

1

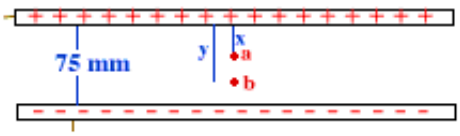


If the battery voltage in the figure is 11.96 volts and the plate separation is 0.47 cm, what is the electric field to the nearest N/C?

2

If a charge of 6.9 μC moves from the upper plate to the lower one in Problem 1, what is its change in electrical potential energy to the nearest hundredth of a μJ?

3



If the voltage across the plates in the figure is 12.0 volts, x = 22 mm and y =41 mm, what is $\Delta V = V_B - V_A$ to the nearest hundredth of a volt?

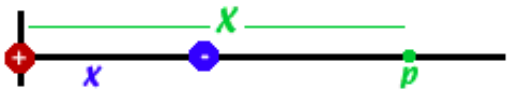
4

In the previous problem what is the electric field at b to the nearest N/C?

5

In Problem 3 if a particle with charge 3.75 μC and mass 3.03 μkg is released from rest at the upper plate, what will be its velocity when it reaches the lower plate to the nearest tenth of a m/s?

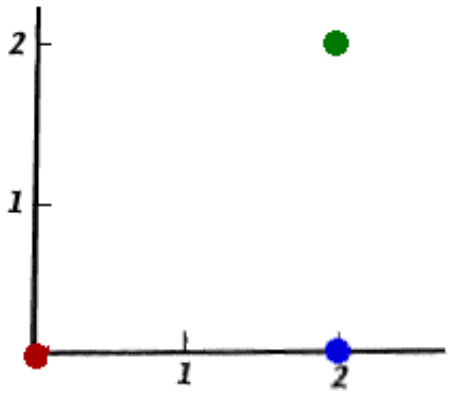
6



The blue and red charge in the figure have equal and opposite charges of 5 μC, if x = 0.22 meters. What is the potential at X = 1.06 meters to the nearest volt?

7

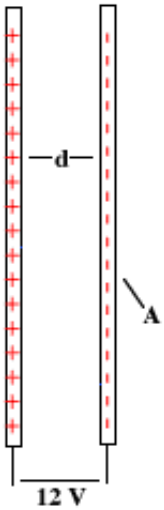
The green charge has a charge of -4 μC, the red charge is 1 μC and the blue is -3 μC. What is the potential energy of the configuration to the nearest tenth of a millijoule?



8

In Problem 7 what is the potential at the point $x = 1$ and $y = 1$ to the nearest volt?

9



The capacitor in the figure has a plate area, A, of 0.05 m^2 and a plate separation, d, of 0.31 mm. What is its capacitance to the nearest hundredth of a nF?

10

In Problem 9 what is the energy stored in the capacitor to the nearest nJ?

submit for grade

Once you have submitted your answers for grading by clicking the grade button, you **cannot resubmit answers** for the same Problem Set–you must use the 'New Problems' button first.

Need help? Try these test-taking tools:

Constants Conversions Calculator