Exercise 24.9

A capacitor is made from two hollow, coaxial, iron cylinders, one inside the other. The inner cylinder is negatively charged and the outer is positively charged; the magnitude of the charge on each is 12.0 pC . The inner cylinder has a radius of 0.550 mm , the outer one has a radius of 4.40 mm , and the length of each cylinder is 21.0 cm .

Part A

What is the capacitance?

Use 8.854×10^{-12} $\mathrm{F/m}$ for the permittivity of free sp

C = 5.62×10^{-12} F

Submit My Answers Give Up

Correct

Significant Figures Feedback: Your answer $5.61{\cdot}1$ figures than required for this part.

Part B

What applied potential difference is necessary to produ

V = 2.14 V

Submit My Answers Give Up

Correct

Significant Figures Feedback: Your answer 2.137 required for this part.