

Answer on Question #71805 – Physics – Electromagnetism

How far apart must the point charges of 75nC be to have force of 1.00 N between them

Solution:

$$F = \frac{1}{4\pi\epsilon_0} \frac{q_1q_2}{r^2} \rightarrow r = \frac{q}{\sqrt{4\pi\epsilon_0 F}} = \frac{75 \times 10^{-9}}{\sqrt{4\pi \cdot 8.85 \times 10^{-12} \cdot 1.00}} = 7.11 \times 10^{-3}m$$

Answer: $7.11 \times 10^{-3}m$.

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