

Answer on Question #68365, Physics / Electromagnetism

At a point that is 3 meters away from a 3 -coloumb point charge, the electric field intensity in N/coloumb, that the charge produces is equal to?

Find: $E = ?$

Given:

$$a = 3 \text{ m}$$

$$q = 3 \text{ C}$$

$$\epsilon_0 = 8.85 \times 10^{-12} \text{ F/m}$$

$$\epsilon = 1$$

Solution:

The electric field intensity of point charge:

$$E = \frac{1}{4\pi\epsilon_0} \frac{|q|}{\epsilon a^2} \quad (1)$$

$$\text{Of (1)} \Rightarrow E = 3 \times 10^9 \text{ N/C}$$

Answer:

$$3 \times 10^9 \text{ N/C}$$

Answer provided by <https://www.AssignmentExpert.com>