

ΕΝΔΕΙΚΤΙΚΕΣ ΑΠΑΝΤΗΣΕΙΣ

Θέμα 4^ο

4.1

$$\varepsilon = \varepsilon_0 * \varepsilon_r = \frac{1}{4\pi * 10^9} * 1 = \frac{1}{4\pi * 10^9} \frac{C^2}{N * m^2}$$

4.2

$$E = \frac{Q}{4\pi * \varepsilon * r^2} = \frac{4 * 10^{-8}}{4\pi * \frac{1}{4\pi * 10^9} * 2^2} = \frac{4 * 10^{-8}}{\frac{4}{10^9}} = \frac{4 * 10^9 * 10^{-8}}{4} = 10 \frac{N}{C}$$

4.3

$$F = E * q = 10 * 2 * 10^{-9} = 20 * 10^{-9} N = 2 * 10^{-8} N$$