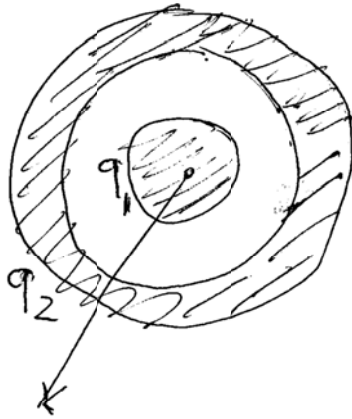


A solid insulating sphere of radius 5.0 cm carries a charge $+3.0 \mu\text{C}$. Concentric with this sphere is a conducting spherical shell of inner radius 20 cm and outer radius 25 cm. The electric field at a distance of 50 cm from the center of the sphere is $3.6 \times 10^4 \text{ N/C}$ and points radially outward. What is the net charge on the spherical shell?



$$E = \frac{kq}{r^2}$$

$$q = \frac{Er^2}{k} = \frac{3.6 \times 10^4 \times 0.50^2}{9 \times 10^9} = 1.0 \mu\text{C}$$

$$q = q_1 + q_2$$

$$q_2 = q - q_1 = 1.0 \times 10^{-6} - 3.0 \times 10^{-6} = -2.0 \mu\text{C}$$

04 Sep	11 Sep	18 Sep	25 Sep	2 Oct	9 Oct	23 Oct	30 Oct	6 Nov	13 Nov	20 Nov	27 Nov	4 Dec	11 Dec	18 Dec
Solutions of the quizzes can be found on the webpage: http://faculty.kfupm.edu.sa/phys/aljalal/phys102.htm														
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