

35. We use Eq. 23-13.

(a) To the left of the plates:

$$\vec{E} = (\sigma / 2\epsilon_0)(-\hat{i}) \text{ (from the right plate)} + (\sigma / 2\epsilon_0)\hat{i} \text{ (from the left one)} = 0.$$

(b) To the right of the plates:

$$\vec{E} = (\sigma / 2\epsilon_0)\hat{i} \text{ (from the right plate)} + (\sigma / 2\epsilon_0)(-\hat{i}) \text{ (from the left one)} = 0.$$

(c) Between the plates:

$$\vec{E} = \left(\frac{\sigma}{2\epsilon_0}\right)(-\hat{i}) + \left(\frac{\sigma}{2\epsilon_0}\right)(-\hat{i}) = \left(\frac{\sigma}{\epsilon_0}\right)(-\hat{i}) = -\left(\frac{7.00 \times 10^{-22} \text{ C/m}^2}{8.85 \times 10^{-12} \frac{\text{N} \cdot \text{m}^2}{\text{C}^2}}\right)\hat{i} = (-7.91 \times 10^{-11} \text{ N/C})\hat{i}.$$