

4. The electric field is determined by dividing the electric force by the magnitude of the test charge employed. In this case we are using the positive charge of magnitude  $3.0 \times 10^{-8}\text{C}$  as the test charge.

$$E = F / q$$

$$E = (-2.5 \times 10^{-4} \text{ N}) / (3.0 \times 10^{-8} \text{ C})$$

$$E = -8333 \text{ N/C}$$