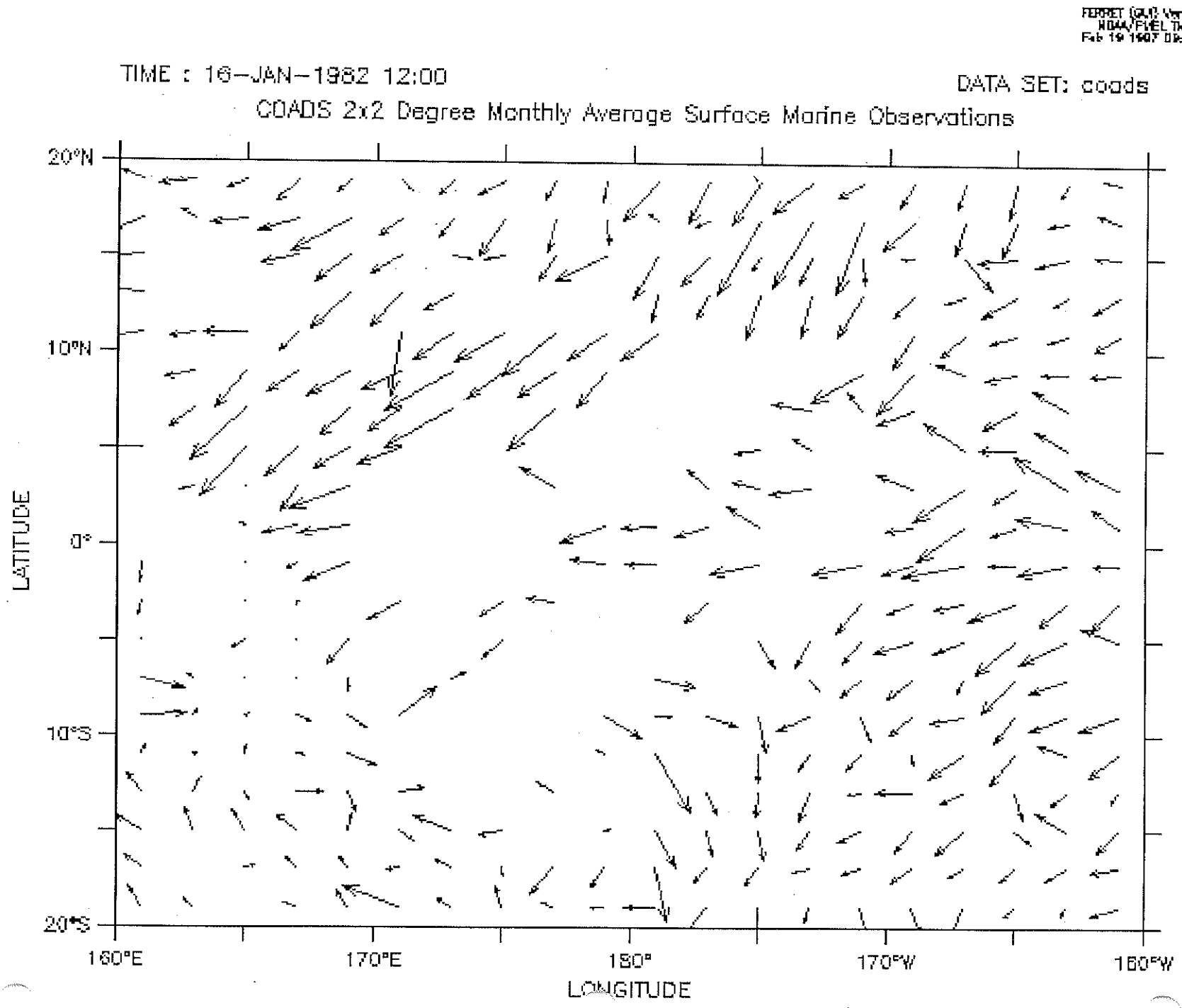



ZONAL WIND (M/S) , MERIDIONAL WIND (M/S)

What is the direction of the electric field produced by the two charges (⊕ and ⊖) at each of the indicated locations (1, 2, 3, 4)? The possible answers are shown at right.

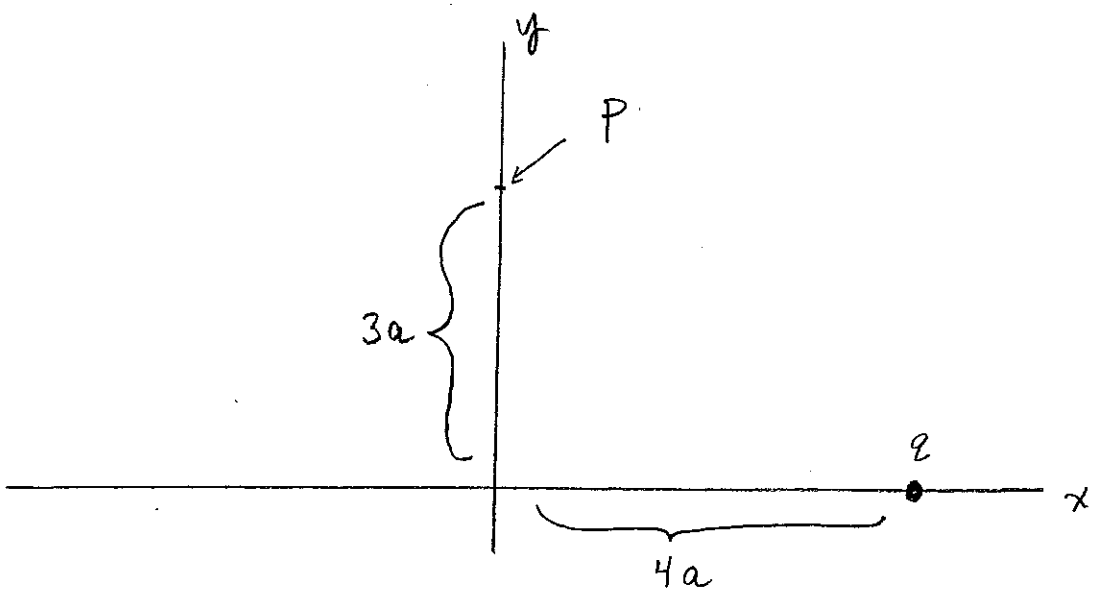

A →

B ←

C ↑

D ↓

E no direction




What is the magnitude $|\vec{E}|$ of the electric field at point P?

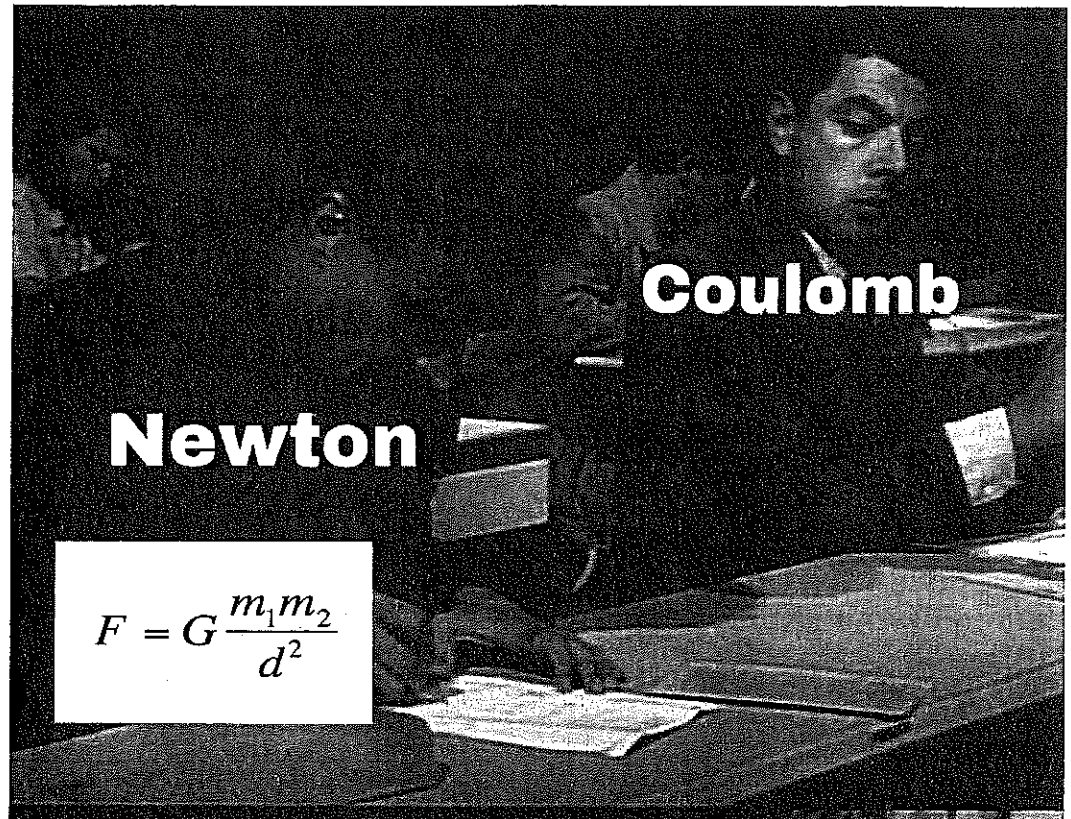
(A) $\frac{Kq}{a^2}$ (B) $\frac{Kq}{5a^2}$ (C) $\frac{Kq}{25a^2}$ (D) $\frac{Kq}{125a^2}$ (E) None of these

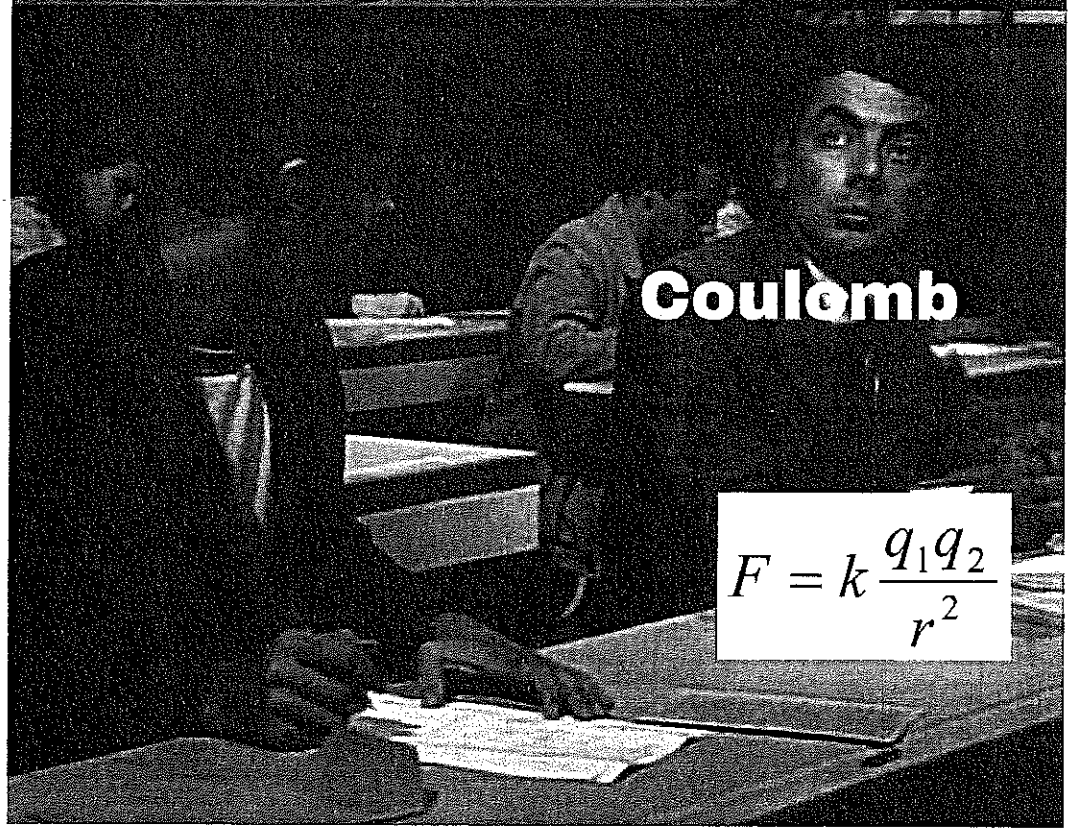
What is the $y$-component $E_y$ of the electric field at point P?

(A) $\frac{4Kq}{5a^2}$ (B) $\frac{3Kq}{25a^2}$ (C) $\frac{4Kq}{125a^2}$ (D) $\frac{3Kq}{125a^2}$ (E) None of these

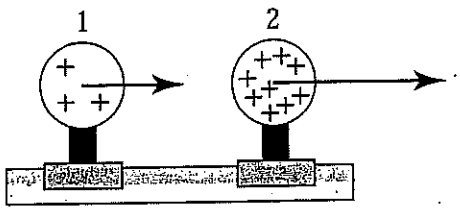
What is the $x$-component $E_x$ of the electric field at point P?

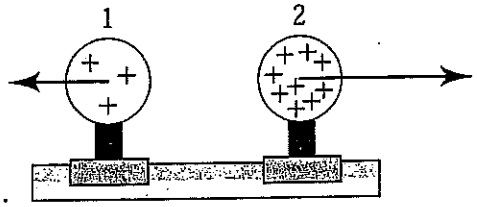
(A) $\frac{4Kq}{5a^2}$ (B) $\frac{3Kq}{25a^2}$ (C) $\frac{4Kq}{125a^2}$ (D) $\frac{3Kq}{125a^2}$ (E) None of these

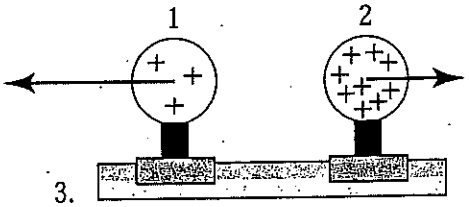

Coulomb
Newton
$F = G\frac{m_1 m_2}{d^2}$

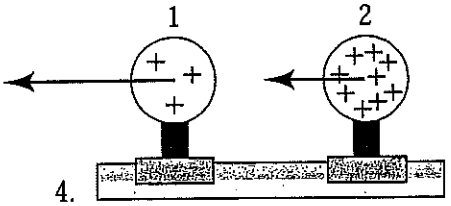

Coulomb
$F = k\frac{q_1 q_2}{r^2}$

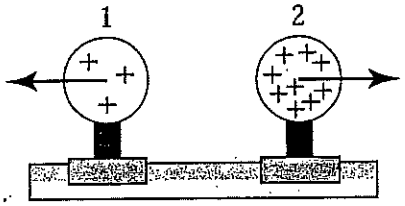
Two uniformly charged spheres are firmly fastened to and electrically insulated from frictionless pucks on an air table. The charge on sphere 2 is three times the charge on sphere 1. Which force diagram correctly shows the magnitude and direction of the electrostatic forces:

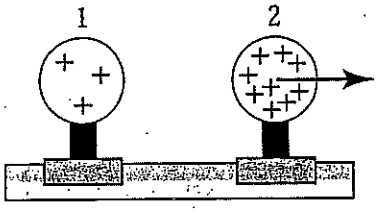
1.



2.



3.



4.



5.



6.



7. none of the above

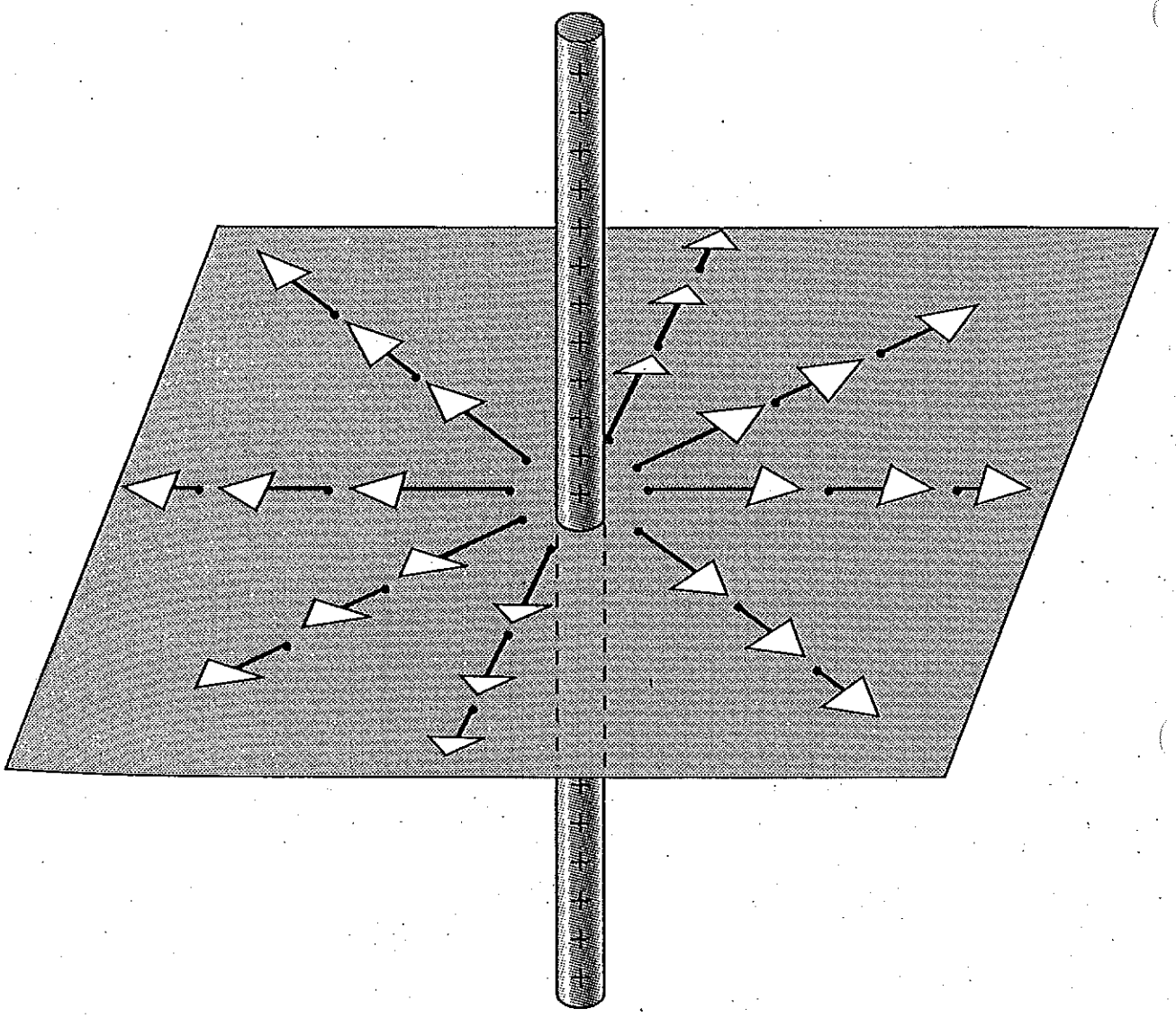
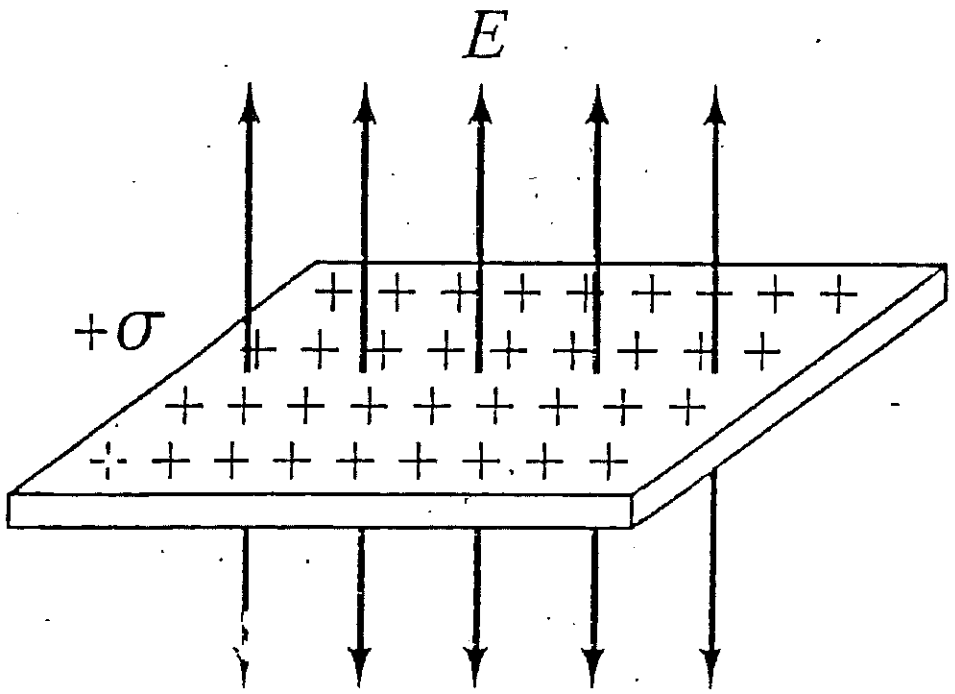
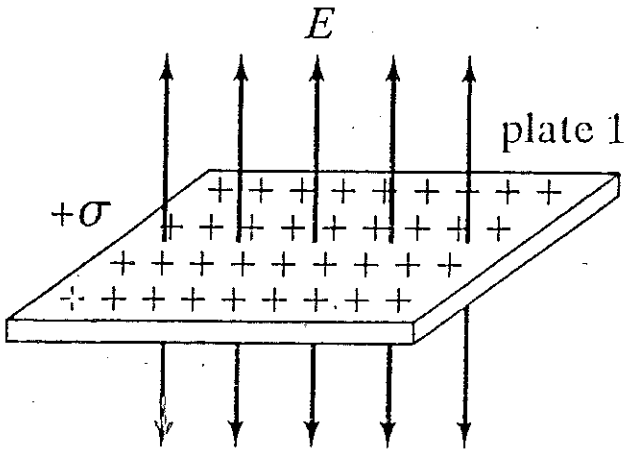
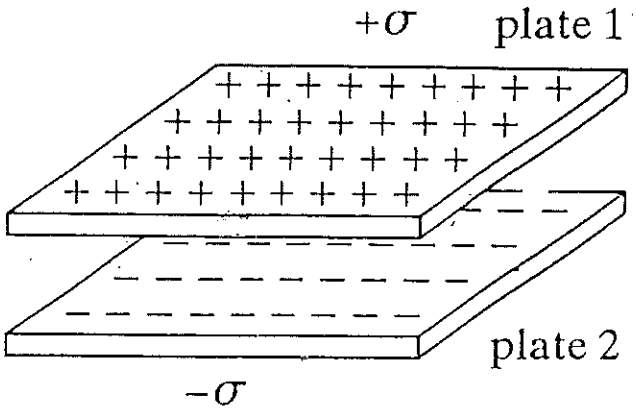


**FIGURE 26-7.** Electric field due to a positively charged rod. The field has cylindrical symmetry about the axis of the rod.


E
+σ

The charge per unit area is $+\sigma$ on plate 1 and $-\sigma$ on plate 2.
The magnitude of the electric field associated with plate 1 is $\sigma/2\epsilon_0$.




When the two plates are placed parallel to one another, the magnitude of the electric field is

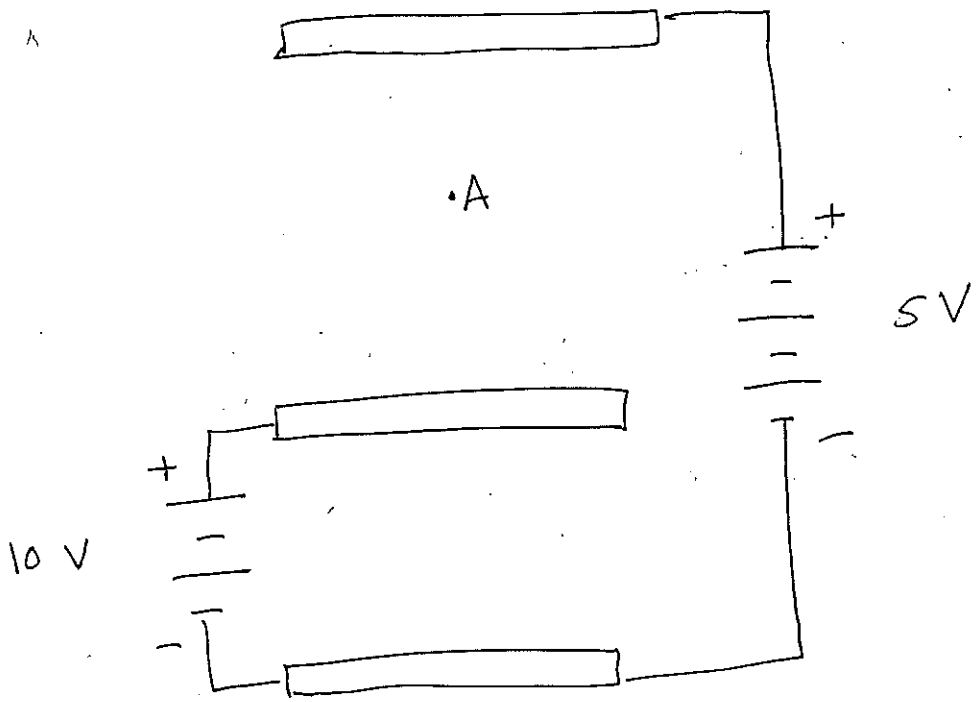
(a) $\sigma/\epsilon_0$ between, zero outside

(b) $\sigma/\epsilon_0$ between, $\pm\sigma/2\epsilon_0$ outside

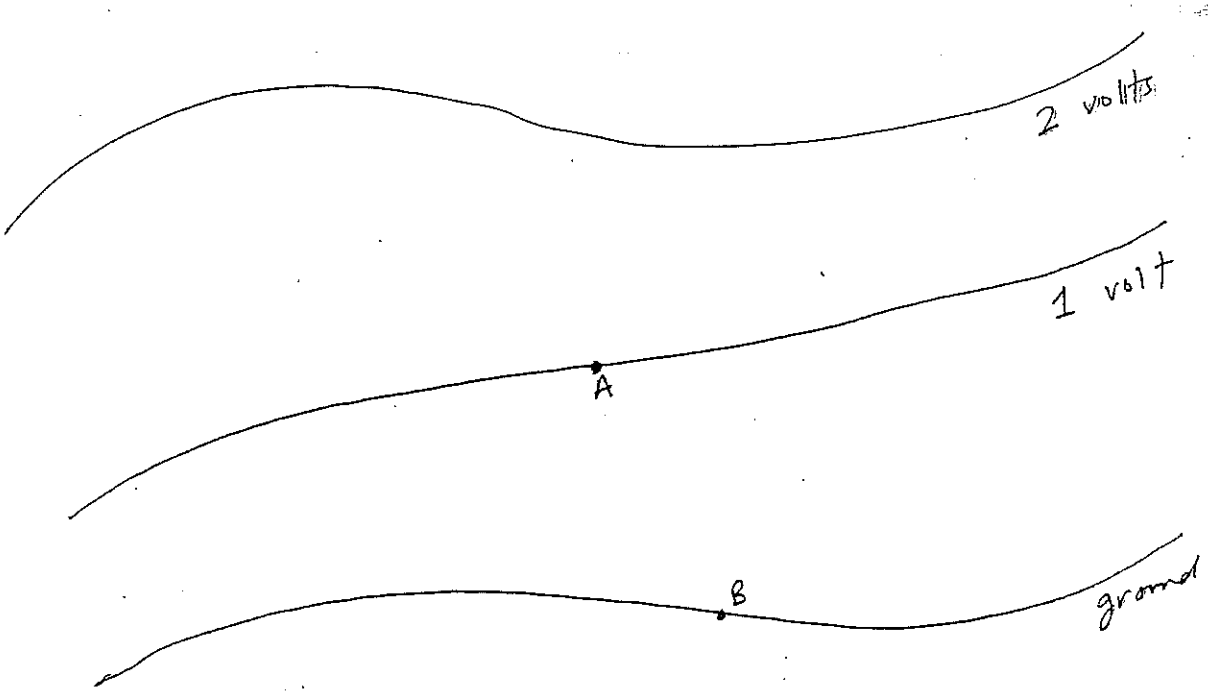
(c) zero both between and outside

(d) $\pm\sigma/2\epsilon_0$ both between and outside

(e) none of the above




Which way does $\vec{E}$ point at A?




DOES AN ELECTRON HAVE MORE ELECTROSTATIC POTENTIAL ENERGY AT "A" OR "B"?

WHAT IS THE DIFFERENCE IN POTENTIAL ENERGY (IN JOULES) BETWEEN THESE TWO POINTS?