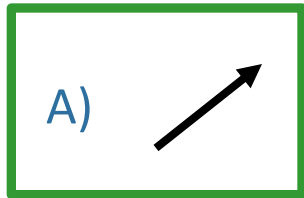
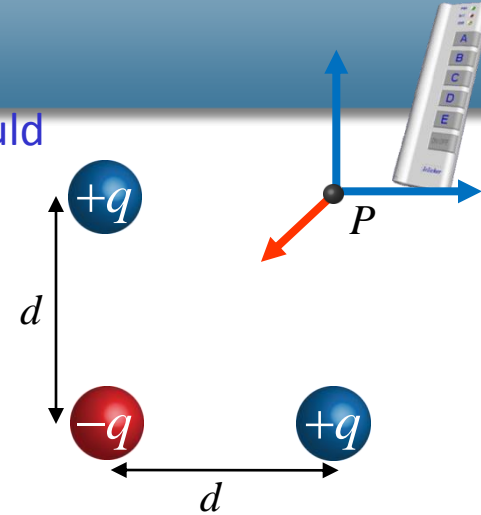


Example

“More examples of electric fields of different charge distributions would be nice (for example, charges arranged in a circle or square).!”

What is the direction of the electric field at point P , the unoccupied corner of the square?



B)



C) $E = 0$

D)

Need to know d

E)

Need to know d & q

Calculate E at point P .

$$\vec{E} = \sum_i k \frac{Q_i}{r_i^2} \hat{r}_i$$

$$E_x = k \left(\frac{q}{d^2} - \frac{q}{(\sqrt{2}d)^2} \cos \frac{\pi}{4} \right)$$

$$E_y = k \left(\frac{q}{d^2} - \frac{q}{(\sqrt{2}d)^2} \sin \frac{\pi}{4} \right)$$