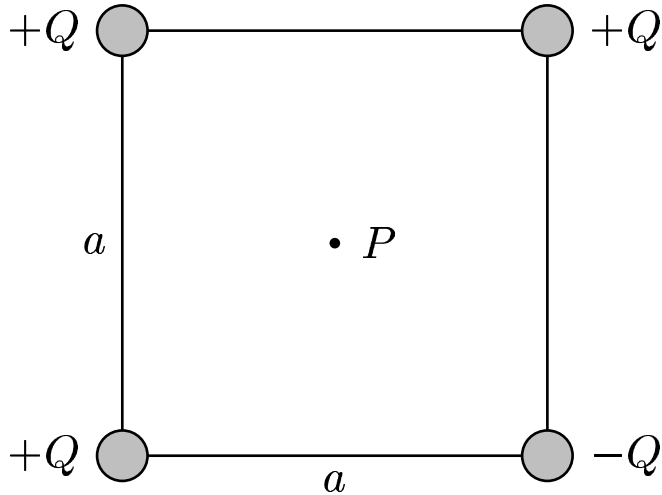






Four point charges are located a distance a apart at the corners of a square.



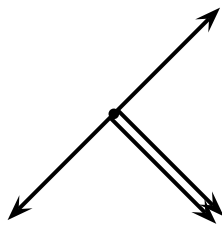
Determine the direction of the electric field at a point P located at the center of the square.

- A) 
 B) 

- C) 
 D) 

Coulomb's law is $\vec{E} = k \frac{Q}{r^2} \hat{r}$.

$$\|\vec{E}\| = 2 \frac{Q}{\left(\frac{a}{\sqrt{2}}\right)^2} = 4 \frac{Q}{a^2}.$$



Answer **B**.