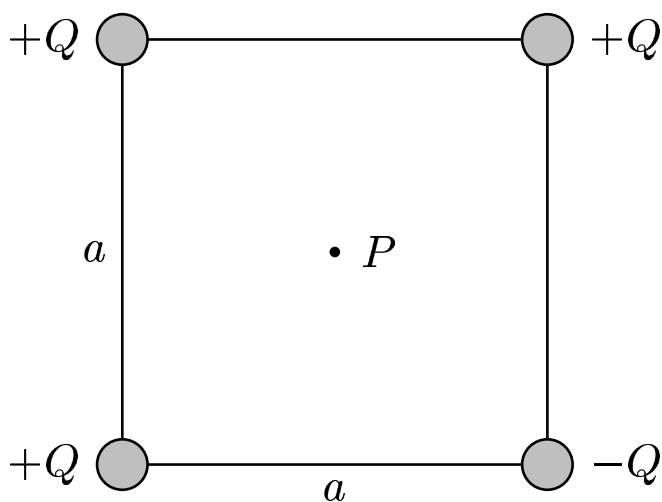


Four point charges are located a distance a apart at the corners of a square.



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

A) ↗

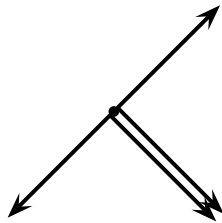
C) ↖

B) ↘

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**.

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