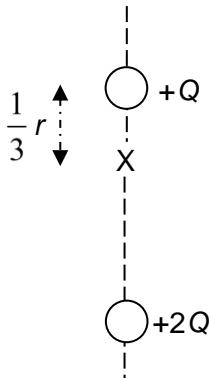


- 20** Two point charges of $+Q$ and $+2Q$ are lined up along a vertical straight line as shown below. The distance between them is r .



Which set of values correctly gives the electric field strength and the electric potential at point X, a distance $\frac{1}{3} r$ from the $+Q$ charge?

| | electric potential | electric field strength |
|---|-------------------------------|---|
| A | $\frac{3Q}{2\pi\epsilon_0 r}$ | $\frac{9Q}{8\pi\epsilon_0 r^2}$ downwards |
| B | $\frac{3Q}{2\pi\epsilon_0 r}$ | $\frac{9Q}{8\pi\epsilon_0 r^2}$ upwards |
| C | $\frac{3Q}{8\pi\epsilon_0 r}$ | $\frac{9Q}{8\pi\epsilon_0 r^2}$ upwards |
| D | $\frac{3Q}{8\pi\epsilon_0 r}$ | $\frac{9Q}{4\pi\epsilon_0 r^2}$ downwards |