Rank the blocks in order of charge density. $(++) \mathrm{AE} \& \mathrm{~F}, \mathrm{~B} \& \mathrm{D}, \mathrm{C}(+)$

$$
V_{0}, Q_{0}, \rho_{0}
$$

Rank the blocks in order of total charge. (++) F, ABDE, C (+)
A

$$
\begin{aligned}
& \rho=2 \mathrm{Q}_{0} / \mathrm{V}_{0} \\
& V_{0}, 2 Q_{0}
\end{aligned}
$$

B

$$
\rho=\mathrm{Q}_{0} / \mathrm{V}_{0}
$$

C

$$
2 V_{0}, 2 Q_{0}
$$

$$
\begin{aligned}
& \rho=\mathrm{Q}_{0} / 2 \mathrm{~V}_{0} \\
& 2 V_{0}, Q_{0}
\end{aligned}
$$

$$
\mathrm{Q}=4 V_{0} \rho_{0}
$$

$$
2 V_{0}, 2 \rho_{0}
$$

The original block is split into $1 / 3$ and $2 / 3$ in several different ways. What are $Q, \lambda$, and $\rho$ ?

|  | Q | $\lambda$ | $\rho$ |
| :--- | :---: | :---: | :---: |
| A |  |  |  |
| B | Answers on |  |  |
| C | Next Slide |  |  |
| D |  |  |  |
| E |  |  |  |
| F |  |  |  |



The original block is split into $1 / 3$ and $2 / 3$ in several different ways. What are $Q, \lambda$, and $\rho$ ?

|  | Q | $\lambda$ | $\rho$ |
| :--- | :---: | ---: | :---: |
| A | $\mathrm{Q}_{0} / 3$ | $(1 / 3) \mathrm{Q}_{0} / \mathrm{L}_{0}$ | $\rho_{0}$ |
| B | $2 \mathrm{Q}_{0} / 3$ | $(2 / 3) \mathrm{Q}_{0} / \mathrm{L}_{0}$ | $\rho_{0}$ |
| C | $2 \mathrm{Q}_{0} / 3$ | $\mathrm{Q}_{0} / \mathrm{L}_{0}$ | $\rho_{0}$ |
| D | $\mathrm{Q}_{0} / 3$ | $\mathrm{Q}_{0} / \mathrm{L}_{0}$ | $\rho_{0}$ |
| E | $\mathrm{Q}_{0} / 3$ | $(1 / 3) \mathrm{Q}_{0} / \mathrm{L}_{0}$ | $\rho_{0}$ |
| F | $2 \mathrm{Q}_{0} / 3$ | $(2 / 3) \mathrm{Q}_{0} / \mathrm{L}_{0}$ | $\rho_{0}$ |



