For the arrangement of capacitors shown below:

a. What is the equivalent capacitance of all 4 capacitors? (4 points)

b. If the arrangement is connected to a 6 volt battery, what is the voltage across the 4 F capacitor? (3 points)

b. If the arrangement is connected to a 6 volt battery, what is the charge on the 6 F capacitor? (3 points)
Series \& parallel, \( V_{\text{add}} \)

\[
\begin{align*}
\frac{10F}{24C} \quad V &= \frac{8}{4} = \frac{24}{12} = 2\, V \\
\frac{6F}{24C} \quad V &= \frac{24}{6} = 4\, V
\end{align*}
\]

Back to parallel, \( V_{\text{same}}, \ fall \)

\[
\begin{align*}
\frac{8}{6} &= (4)(4) \\
&= 16C
\end{align*}
\]

(V) \( \frac{4F}{4V} \) \( \frac{2F}{4V} \) \( \frac{8\, C}{8\, C} \)

b) \( V = 4\, V \) \( \text{Write} \)

Back to series, \( V_{\text{same}}, \ fall \)

\[
\begin{align*}
\frac{8}{16C} \\
\frac{8}{8C} \\
\frac{6}{8C}
\end{align*}
\]

c) \( 8\, C \)