

4. We use the fact that electric flux relates to the enclosed charge: $\Phi = q_{\text{enclosed}}/\epsilon_0$.

- (a) A surface which encloses the charges $2q$ and $-2q$, or all four charges.
- (b) A surface which encloses the charges $2q$ and q .
- (c) The maximum amount of negative charge we can enclose by any surface which encloses the charge $2q$ is $-q$, so it is impossible to get a flux of $-2q/\epsilon_0$.