

60. We use  $\Phi = q_{\text{enclosed}}/\varepsilon_0$  and the fact that the amount of positive (negative) charges on the left (right) side of the conductor is  $q$  ( $-q$ ). Thus,  $\Phi_1 = q/\varepsilon_0$ ,  $\Phi_2 = -q/\varepsilon_0$ ,  $\Phi_3 = q/\varepsilon_0$ ,  $\Phi_4 = (q - q)/\varepsilon_0 = 0$ , and  $\Phi_5 = (q + q - q)/\varepsilon_0 = q/\varepsilon_0$ .