

62. This can be approached more than one way, but the simplest is to observe that the net potential (using Eq. 25-27) due to the  $+2q$  and  $-2q$  charges is zero at both the initial and final positions of the movable charge ( $+5q$ ). This implies that no work is necessary to effect its change of position, which, in turn, implies there is no resulting change in potential energy of the configuration. Hence, the ratio is unity.