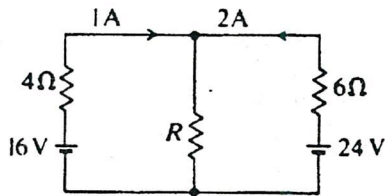
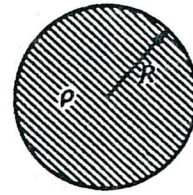


40. A closed surface, in the shape of a cube of side a , is oriented as shown above in a region where there is a constant electric field of magnitude E parallel to the x -axis. The total electric flux through the cubical surface is
- (A) $-Ea^2$
 (B) zero
 (C) Ea^2
 (D) $2Ea^2$
 (E) $6Ea^2$



41. In the circuit shown above, what is the resistance R ?
- (A) $3\ \Omega$ (B) $4\ \Omega$ (C) $6\ \Omega$
 (D) $12\ \Omega$ (E) $18\ \Omega$



42. The figure above shows a spherical distribution of charge of radius R and constant charge density ρ . Which of the following graphs best represents the electric field strength E as a function of the distance r from the center of the sphere?

