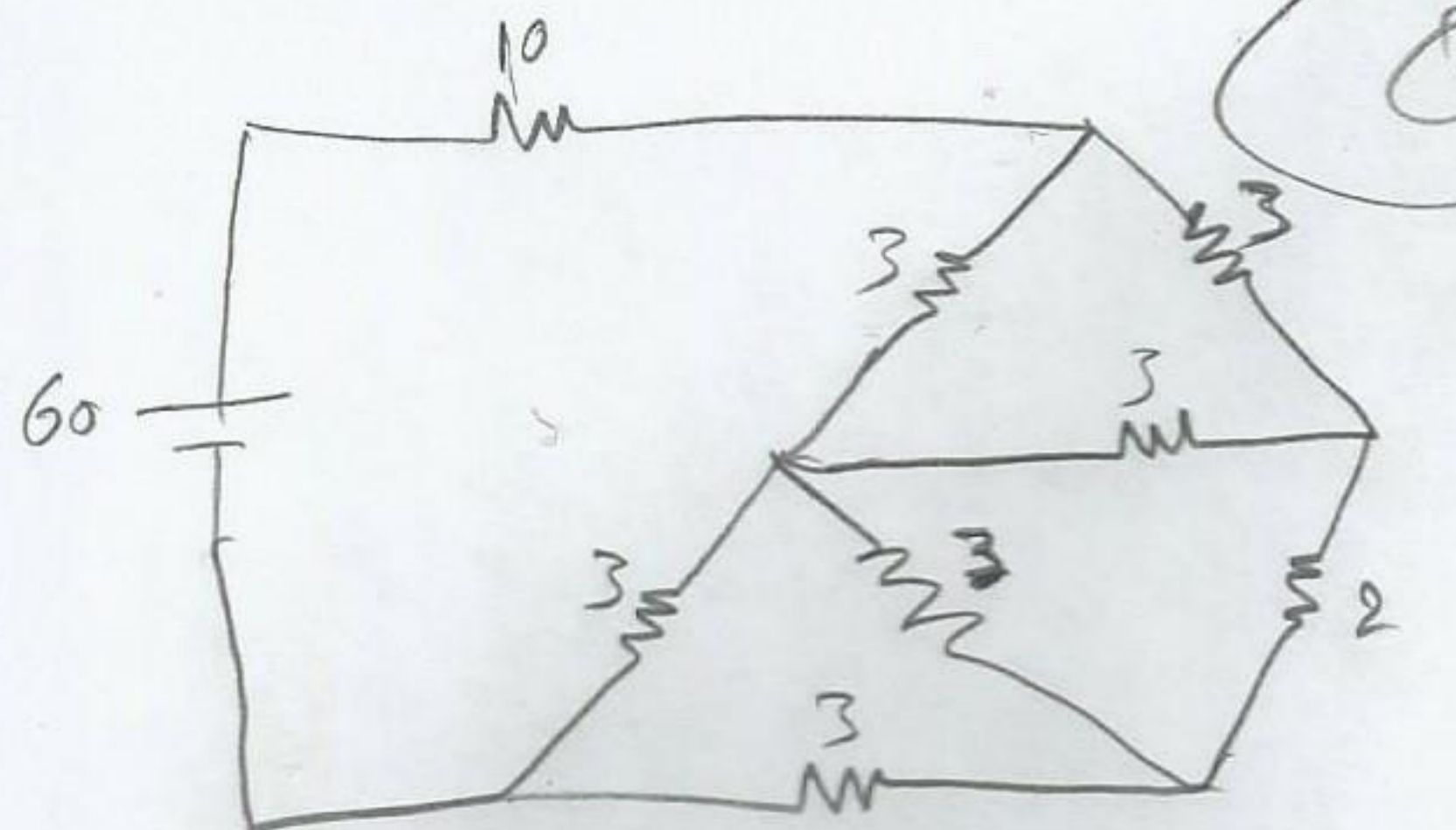
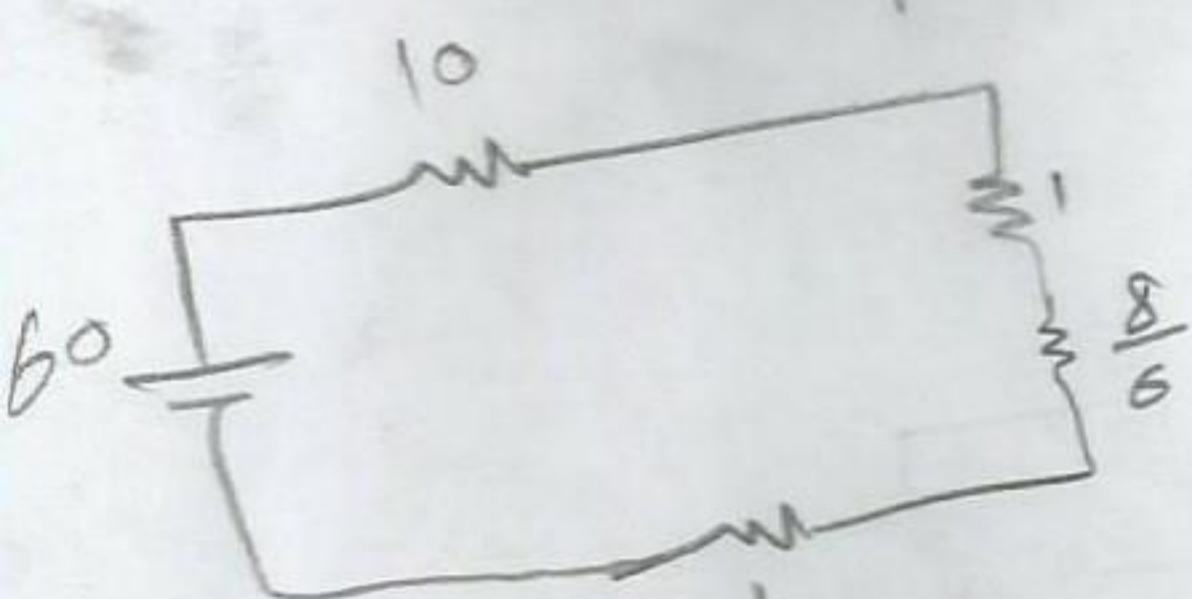
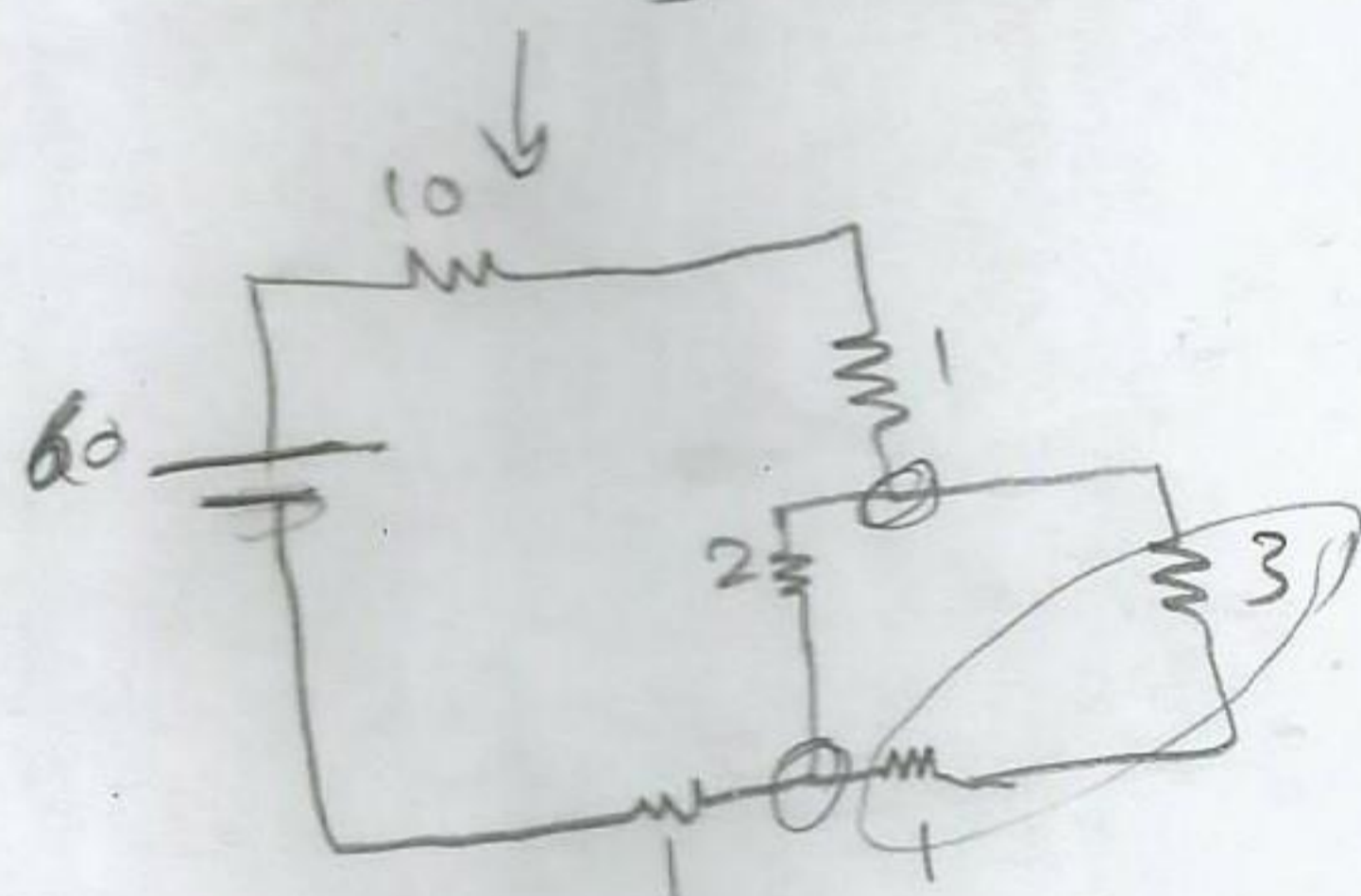
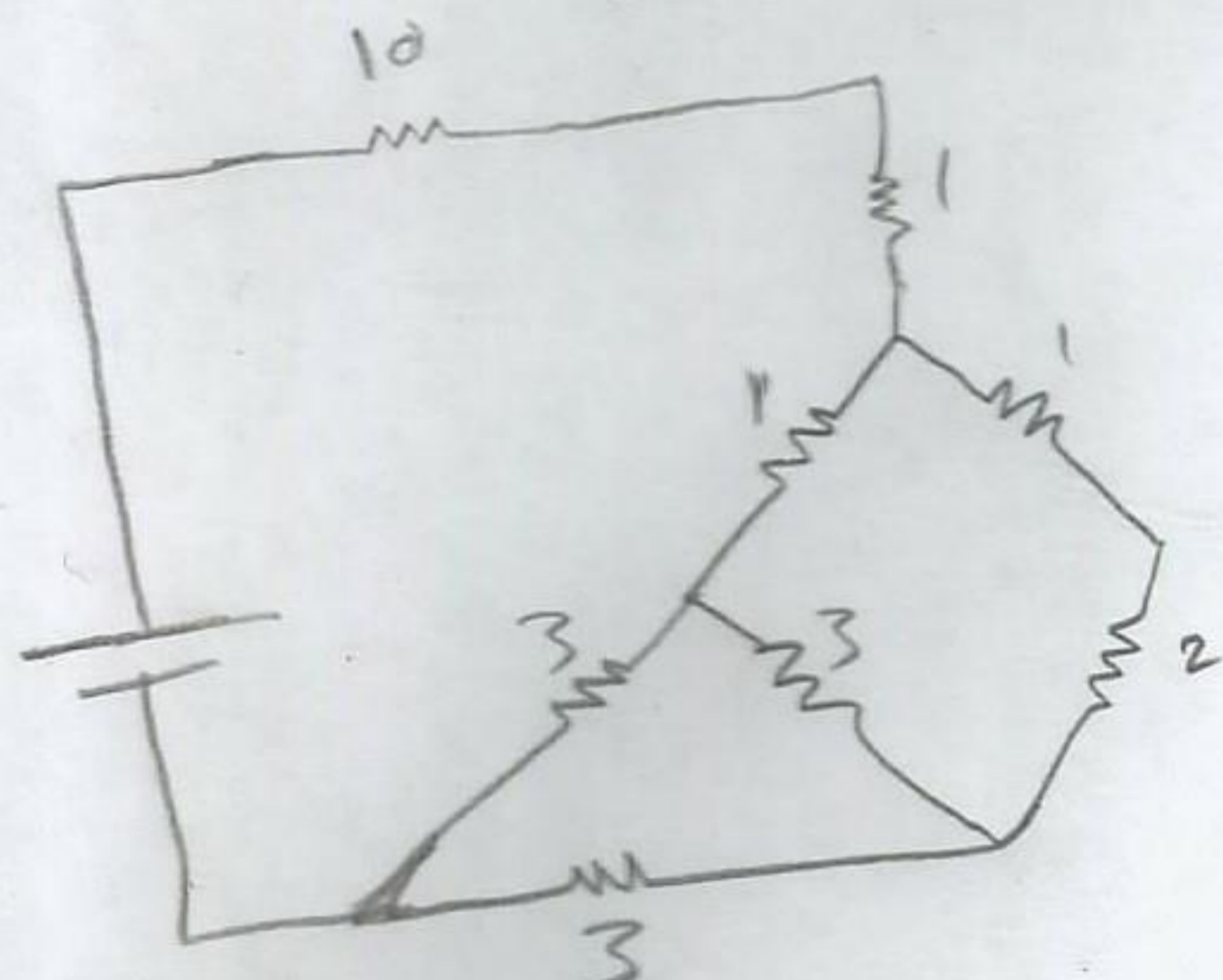


Q-1



$\Delta \rightarrow Y : \frac{R}{3}$

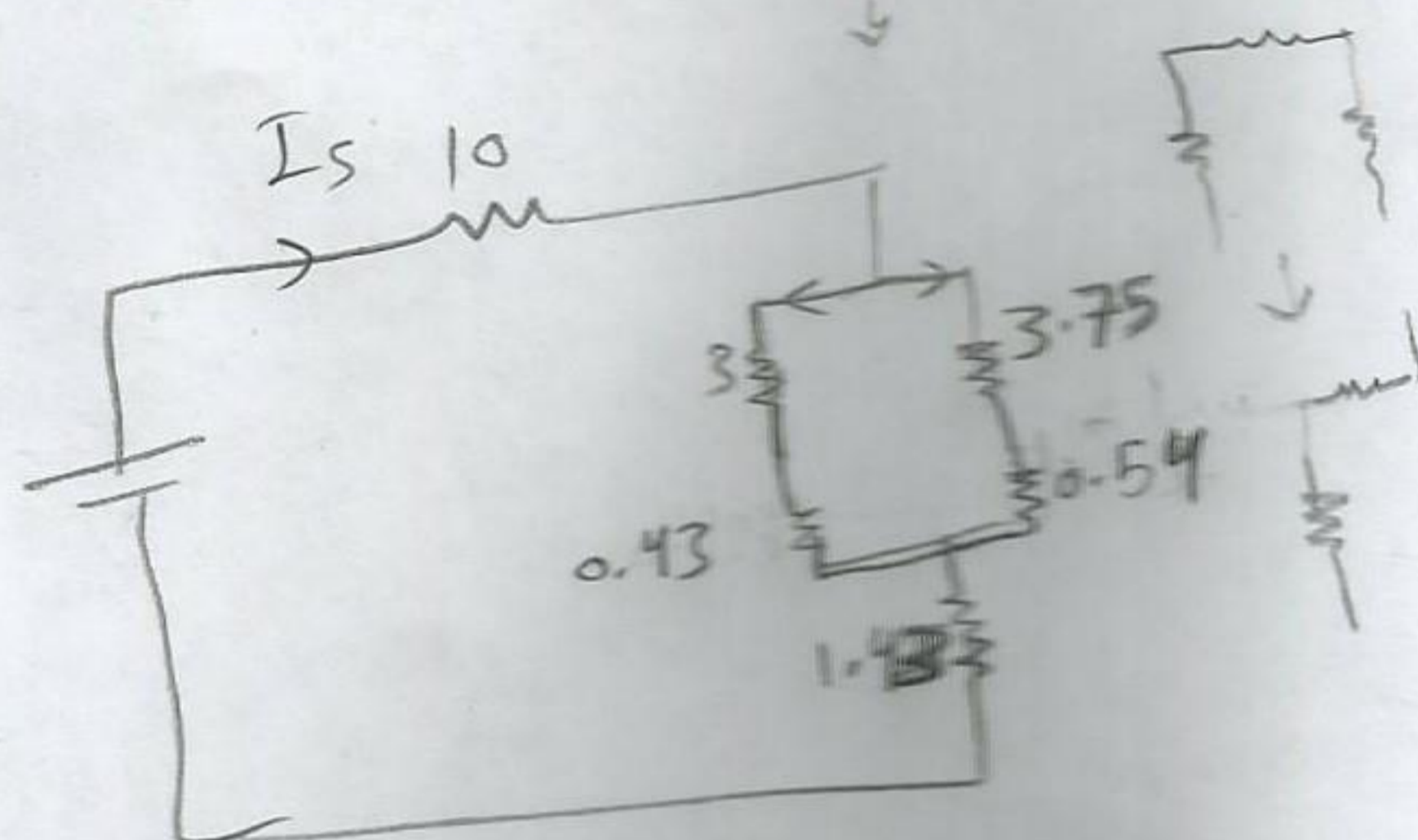
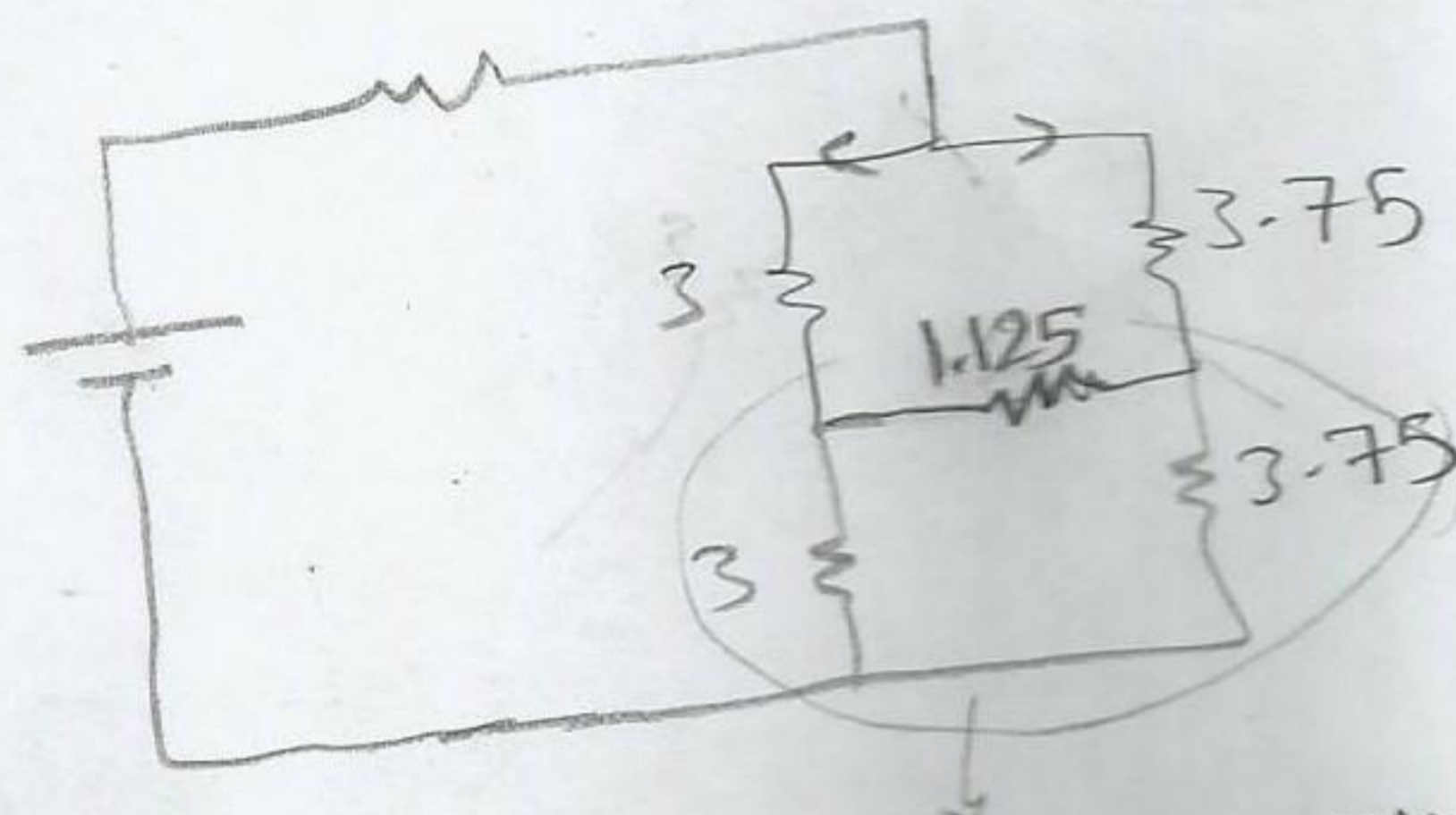
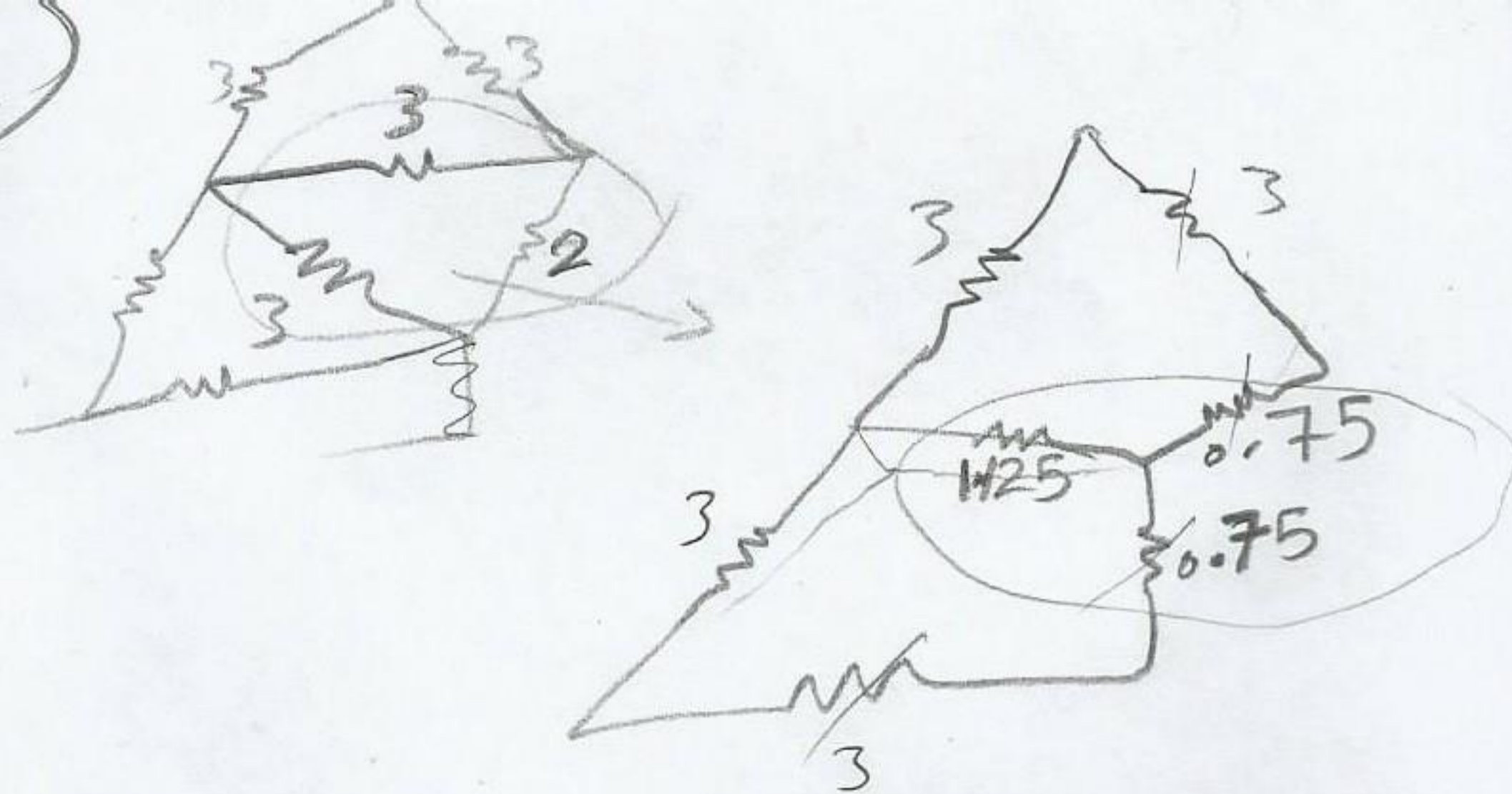


(a) $R_T = 12 + \frac{8}{6} = 13.33 \Omega$

(b) $I_S = \frac{60}{13.33} = 4.5 \text{ A}$

(d) $P_T = I_S V_S = 270 \text{ W}$
 $= I^2 R_T = 270 \text{ W}$

(c)



(a) $R_T = 10 + 1.43 + (3.43 // 4.29)$
 $= 13.33 \Omega$

(b) $I_S = \frac{60}{13.33} = 4.5 \text{ A}$

(c) $I_1 = 4.5 \times \frac{4.29}{4.29 + 3.43}$

$I_1 = 2.5 \text{ A}$

(d) $P_T = I_S^2 R_T$
 $= 4.5^2 \times 13.3$
 $= 270 \text{ W}$