SHOW ALL WORK!!!!!
REPORT ALL NUMBERS TO THREE SIGNIFICANT FIGURES:
Use the conversion constants and data given on the front cover.

(a) Calculate the current in \( R_1 \).
(b) Calculate the power being dissipated in \( R_2 \).
(c) Calculate the voltage in \( R_3 \).

\[ \epsilon = 150 \text{ volts}; R_1 = 67.6 \, \Omega; R_2 = 200 \, \Omega; R_3 = 100 \, \Omega \]

\[ I_1 = \frac{\epsilon}{R_1} = \frac{150}{67.6} \approx 2.22 \, \text{A} \]

\[ E = I_1 R_1 + I_2 R_{23} \]

\[ V_4 = V_3 = 74.8 \, \text{V} \]

\[ (b) P_1 = I_1^2 R_1 = (1.12)^2 \times 67 = 84 \, \text{W} \]

\[ (c) V_2 = V_3 = 74.8 \, \text{V} \]

\[ I_1 = I_1 + I_9 \]

\[ \epsilon = I_1 R_1 - I_2 R_2 = 0 \]

\[ E = -I_1 R_1 - I_2 R_2 = 0 \] (or \( -I_1 R_2 + I_2 R_2 = 0 \))

\[ I_1 = 0.748 \]

\[ I_2 = 0.572 \]

\[ I_1 = 1.12 \]