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

Given the network shown. Use the sign convention used in class, or make clear to the grader what convention you use.

(a) How many total junctions are there?
(b) How many total unknown currents are there?
(c) Write the junction equation for junction C using the current designations given.
(d) Write the loop equation for interior loop (A) going clockwise around the loop. Use the current designations given.

\[ (a) \text{ Answer: 3 (5 points)} \]
\[ \text{-2 for Answering 4} \]
\[ \text{-5 for anything else} \]

\[ (b) \text{ Answer: 6 (5 points)} \]
\[ \text{-2 for Answering 7} \]
\[ \text{-5 for anything else} \]

\[ (c) \text{ } I_1 = I_2 + I_5 + I_6 \text{ (5 points)} \]
\[ \text{-5 for anything else} \]

\[ (d) \text{ } E_1 - I_1 R_1 - E_2 - I_2 R_5 + I_3 R_7 - I_1 R_y = 0 \text{ (10 points)} \]
\[ \text{-3 for not (=0)} \]
\[ \text{-5 for wrong signs on } E_1 \text{ and } E_2 \]
\[ \text{-2 for other wrong signs} \]
\[ \text{-10 for anything else} \]