



$$\begin{array}{ll}
 R_1 = 60 \, \Omega & R_2 = 6 \, \Omega \\
 R_3 = 10 \, \Omega & R_4 = 20 \, \Omega \\
 E_1 = 15 \, \text{V} & E_2 = 10 \, \text{V}
 \end{array}$$

- 1) What is the relationship between the magnitudes of the currents I_3 (through resistor R_3) and I_4 (through resistor R_4)? [4]
 - a) $|I_3| > |I_4|$
 - b) $|I_3| = |I_4|$
 - c) $|I_3| < |I_4|$
- 2) What is the current I_1 through resistor R_1 ? (A positive value means current flows in the direction of the arrow on the diagram.) [4]
- 3) What is the current I_2 through resistor R_2 ? (A positive value means current flows in the direction of the arrow on the diagram.) [6]
- 4) What is the potential difference $V_{\mathbf{B}} - V_{\mathbf{C}}$ between points **B** and **C**? [6]