Mesh Analysis Examples

\[ V_2 = 50 I_2 \]

\[ I_1 = 0.14 \times 50 I_2 = 2 I_2 \]

Mesh 2:

\[ 100 [I_2 - I_1] + 50 I_2 + 10 = 0 \]

\[ 100 [I_2 - 2I_2] + 50 I_2 = -10 \]
\[ -100 I_2 + 50 I_2 = -10 \]
\[ 20 I_2 = -10 \]
\[ I_2 = 0.5 A \]

\[ V_2 = 10 V \]

\[ I_1 = 0.4 A \]

Note: Must first get all dependent terms expressed in terms of mesh currents.

Dependency Equation:

\[ V_2 \text{ dependent current} \]