



2 mda - 1 = 1 ecuación independiente

Método de los nudos

$$\frac{V_A - 100}{20} + \frac{V_A}{10} + \frac{V_A + 200}{30} = 0$$

$$\frac{V_A}{20} - \frac{100}{20} + \frac{V_A}{10} + \frac{V_A}{30} + \frac{200}{30} = 0$$

$$V_A \left(\frac{1}{20} + \frac{1}{10} + \frac{1}{30} \right) + 1'66 = 0$$

$$V_A = \frac{-1'66}{\frac{11}{60}} = \frac{-1'66}{0'183} = \underline{\underline{-9'02V}}$$

$$I_1 = \frac{V_A - 100}{20} = \frac{-9'02 - 100}{20} = \underline{\underline{-5'45A}}$$

$$I_2 = \frac{V_A + 200}{30} = \frac{-9'02 + 200}{30} = \underline{\underline{+6'36A}}$$

$$I_3 = \frac{V_A}{10} = \frac{-9'02}{10} = \underline{\underline{-0'902A}}$$