

>

restart :

>

$$fsolve\left(\left[\frac{V_1}{3} + 5 + \frac{V_1}{6} + \frac{V_1 - (V_2 - 12)}{4} = 0, \frac{V_2}{8} + 4 + \frac{V_2 - 12 - V_1}{4} = 0\right], \{V_1, V_2\}\right)$$

$$\{V_1 = -14.85714284, V_2 = -12.57142856\}$$

(1)

>

$V_1 := -14.85714284$

$V_1 := -14.85714284$

(2)

>

$V_2 := -12.57142856$

$V_2 := -12.57142856$

(3)

>

$$I_4 := \frac{V_1 - (V_2 - 12)}{4}$$

# Current away from node 1 through  $R_3$

$I_4 := 2.428571430$

(4)

>

$4 \cdot I_4$

# Voltage across  $R_3$ , assuming  $V_1$  more positive

$9.714285720$

(5)