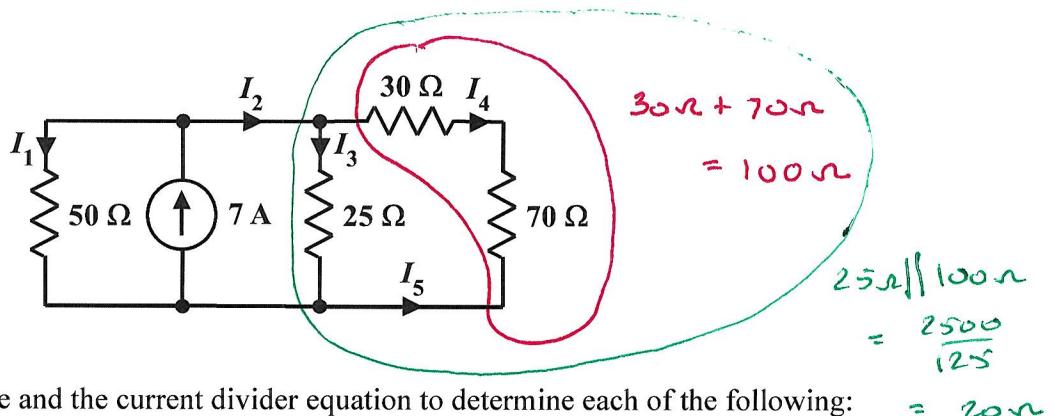


EE 2240
Homework Problem #012



Use equivalent resistance and the current divider equation to determine each of the following:

a. I_1

$$I_1 = \frac{\frac{1}{50}}{\frac{1}{50} + \frac{1}{25} + \frac{1}{100}} \cdot 7A = \frac{2}{2+4+1} \cdot 7A = 2A$$

b. I_2

$$I_2 = \frac{\frac{1}{20}}{\frac{1}{50} + \frac{1}{20}} \cdot 7A = \frac{5}{2+5} \cdot 7A = 5A$$

c. I_3

$$I_3 = \frac{100}{25+100} \cdot I_2 = \frac{100}{125} \cdot 5A = 4A$$

d. I_4

$$I_4 = \frac{25}{25+100} \cdot I_2 = \frac{25}{125} \cdot 5A = 1A$$

e. I_5

$$I_5 = -I_4 = -1A$$