

62. The potential difference across R_2 is

$$V_2 = iR_2 = \frac{\mathcal{E} R_2}{R_1 + R_2 + R_3} = \frac{(12\text{ V})(4.0\,\Omega)}{3.0\,\Omega + 4.0\,\Omega + 5.0\,\Omega} = 4.0\text{ V} .$$