

64. Consider the lowest branch with the two resistors $R_1 = 3.0\,\Omega$ and $R_2 = 5.0\,\Omega$. The voltage difference across the $5.0\,\Omega$ resistor is

$$V = i_2 R_2 = \frac{\mathcal{E} R_2}{R_1 + R_2} = \frac{(120\,\text{V})(5.0\,\Omega)}{3.0\,\Omega + 5.0\,\Omega} = 7.5\,\text{V} .$$