

20. We note that two resistors in parallel, say R_1 and R_2 , are equivalent to

$$R_{\text{parallel pair}} = \frac{1}{\frac{1}{R_1} + \frac{1}{R_2}} = \frac{R_1 R_2}{R_1 + R_2} .$$

This situation (Figure 28-27) consists of a parallel pair which are then in series with a single $2.50\,\Omega$ resistor. Thus, the situation has an equivalent resistance of

$$R_{\text{eq}} = 2.50\,\Omega + \frac{(4.00\,\Omega)(4.00\,\Omega)}{4.00\,\Omega + 4.00\,\Omega} = 4.50\,\Omega .$$