Problem 27.23

The temperature dependence of a resistor is defined as:

$$R = R_o\left[1+\alpha\left(T-T_o\right)\right]$$

$$\Rightarrow \quad R - R_o = \alpha R_o\left(T-T_o\right)$$

$$\Rightarrow \quad \frac{R-R_o}{R_o} = \alpha\Delta T$$

$$= \left(5x10^{-3}\right)(25)$$

$$= .12$$