7. A car radio designed to operate from 6.3 volts draws 4.5A of current. What should the value of resistor “R” be if the radio is to be used in a 12.6 volt car? What should the power rating of the resistor be?

\[ R = \frac{V}{I} = \frac{12.6V}{4.5A} = 2.8\Omega \]

\[ P = IV = 4.5A \times 6.3V = 28.35W \]