

## Answer on Question #80403 – Math – Calculus

### Question

If the price in dollars of stereo system is given by  $p(q) = 1000/q^2 + 1000$

### Solution

The revenue function:  $R(q) = pq = \left(\frac{1000}{q^2} + 1000\right)q = 1000q + \frac{1000}{q}$ .

The marginal revenue function:  $\frac{dR}{dq} = 1000 - \frac{1000}{q^2}$ .

$$\frac{dR}{dq} \Big|_{q=10} = 1000 - \frac{1000}{10^2} = 1000 - 10 = 990.$$