

Quiz 8
Dec. 13, 2006

Suppose that

$$f(p) = 20p(30 - p)$$

is the demand for an item at price p (in dollars) with $p < 30$.

- (5 pts) Find the elasticity of demand

$$E = \lim_{h \rightarrow 0} \frac{\frac{f(p+h) - f(p)}{f(p)}}{\frac{h}{p}} = \frac{p}{f(p)} f'(p)$$

- (5 pts) Find the range of prices for which $E < -1$.

- (10 pts) Find the price that maximize the revenue ($R(p) = p f(p)$)