

Question

The price elasticity of demand will be equal:

$$E_d = \frac{\Delta Q_d}{\Delta P} \cdot \frac{P}{Q_d},$$

where ΔQ_d is changing in quantity, ΔP is changing in price, Q_d is quantity (before these changes) and P is price (before changes).

In our case we have that $Q_d = 100,000$, $P = \$1.90$. And changes are equal:

$$\Delta Q_d = 120,000 - 100,000 = 20,000;$$

$$\Delta P = \$1.50 - \$1.90 = -\$0.40.$$

So, we will have:

$$E_d = -\frac{20,000}{\$0.40} \cdot \frac{\$1.90}{100,000} = -0.95.$$

Answer: -0.95.