Question from Practice

#14. \( q = 80 - 2p \), \( 0 \leq p \leq 40 \)

Find price elasticity of \( D \)

\[
E = \frac{-dq}{dp} \cdot \frac{p}{q}
\]

Find \( q = \ldots \cdot p \)

*only way to solve for elasticity - has to be in this format*

Step 1. Find \( \frac{dq}{dp} = -2 \) *Is a constant

Step 2. \[ E = \frac{-2p}{80 - 2p} \]

Then clean up algebra.

\[
E = \frac{2p}{40 - 2p} = \frac{p}{20 - p} \quad \text{Formula for elasticity of } D.
\]