Your business has demand \( f(p) = 200(30-p) \),

whom is price elastic? At price \( p = 12 \), should you raise prices?

\[
F'(p) = -200 \\
E(p) = \frac{pF'(p)}{f(p)} = \frac{-200p}{6000-200p} < -1
\]

\[
-200p < -6000 + 200p \quad 6000 < 400p \\
15 < p < 30 \quad \text{why?} \\
F(30) = 0, \text{ problem does not make physical sense for } p \geq 30
\]

At \( p = 12 \), demand is inelastic, should raise prices.