

Here is the formula for price elasticity between two points (p_1, q_1) and (p_2, q_2) :

$$\text{Price Elasticity} = \frac{\frac{\Delta q}{q_1}}{\frac{\Delta p}{p_1}}$$

Rearrange the formula and use the assumption that to write a formula for price elasticity of demand at the point . Select the correct formula below.

Answer:

$$\begin{aligned}\frac{\frac{\Delta q}{q_1}}{\frac{\Delta p}{p_1}} &= \frac{\Delta q}{q_1} * \frac{p_1}{\Delta p} \\ &= \frac{\Delta q}{\Delta p} * \frac{p_1}{q_1} \\ &= \frac{dq}{dp} \Big|_{p_1} * \frac{p_1}{q_1}\end{aligned}$$