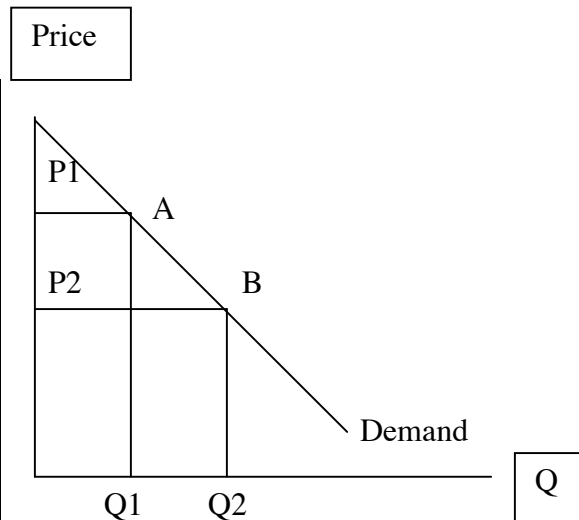


IMPORTANT FORMULAS FOR PRICE ELASTICITY
 ECONOMICS 130-MICROECONOMICS
 Paul Briggs-Windward CC

As you know, price elasticity of demand is a measure of how consumers respond to a change in the price of a product. This responsiveness is measured by the percentage change of consumer purchases given a percentage change in the price of the product. There are 3 formulas that can be used when calculating the price elasticity of demand and are used in different circumstances.

For now, let's consider the following data:

Price	Quantity
\$4	10
\$10	30



The first formula is the **Percentage Formula**, which is expressed as:

$$\frac{\text{Percent}\Delta Q_d}{\text{Percent}\Delta \text{Price}}$$

Calculate the Price Elasticity of Demand with both an increase in price and a decrease in price. Do you get the same answer or different answers? Why do you get different answers?

If you get different answers for a price increase vs. a price decrease, it is necessary to make sure that the bases are the same with either calculation. This can be achieved with the **Midpoint Formula**.

$$\frac{\frac{Q_1 - Q_2}{(Q_1 + Q_2)/2}}{\frac{P_1 - P_2}{(P_1 + P_2)/2}}$$

Now calculate the Price Elasticity of Demand with both an increase and a decrease in price and see if you get the same answer.