

Problem-Based Task: Supply and Demand

Ideal Electronics is determining the price of the newest tablet to hit the market. In an effort to make the most money and sell the most tablets, Ideal Electronics wants to price the tablet appropriately to the product's supply and demand. Supply is the number of tablets that are available and demand is the amount that buyers are willing to pay. The relationship between supply and demand often influences the price of products.

Supply is modeled by the linear function $f(x) = 0.3x + 100$, where $f(x)$ represents the price per tablet in dollars and x represents the number of tablets.

Demand is modeled in the following table, where $g(x)$ represents the price per tablet in dollars and x represents the number of tablets.

x	$g(x)$
100	490
300	370
500	250
600	190

Compare the properties of both of the functions described. At what point does the supply of tablets exceed the demand? Explain your reasoning.

