Answer on Question #48715 – Math – Algebra

Suppose consumers will purchase q units of a product at a price of 70q+5 dollars per unit. What is the number of units that must be sold in order to obtain revenue of at least $90?

Solution.

Revenue = price * no. of units purchased, $q \geq 0$, because units of a product are non-negative. Therefore

$$q(70q + 5) \geq 90 \rightarrow \quad 70q^2 + 5q - 90 \geq 0 \rightarrow \quad q \geq 1.1$$

Thus, it must be sold 2 units.