

1. Consumer Surplus

The demand for a product, in dollars, is $p = 1200 - 0.2q - 0.0001q^2$
Find the consumer surplus when the sales level is 500.

2. Producer Surplus

An electronic manufacturer estimates that the supply function for its digital clocks is

$$S(q) = 5.4 + 0.001q^{1.2} \text{ dollars.}$$

Find the producer surplus when the number of clocks sold is 2000.