

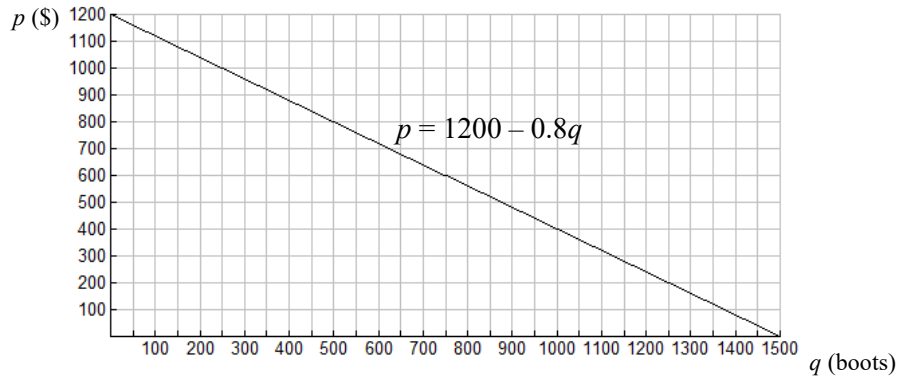
Revenue Rectangles

1. What price, p would result in the following demands? For each q , find the corresponding p . Then find the revenue $R = pq$. Sketch a rectangle that has an area that represents the revenue for each case.

- a. The quantity demanded is $q = 250$ boots.

This occurs for $p = \$$ _____

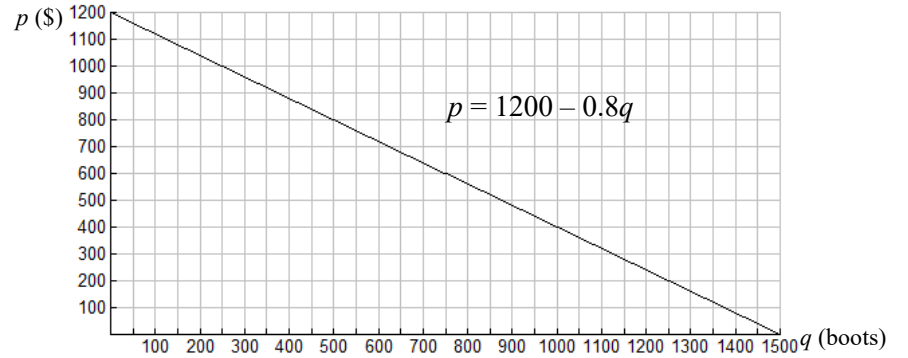
The revenue is \$ _____



- b. The quantity demanded is $q = 500$ boots.

This occurs for $p = \$$ _____

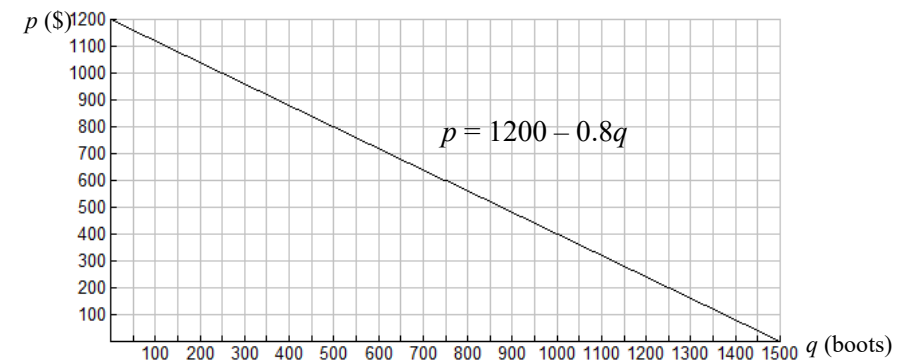
The revenue is \$ _____



- c. The quantity demanded is $q = 1000$ boots.

This occurs for $p = \$$ _____

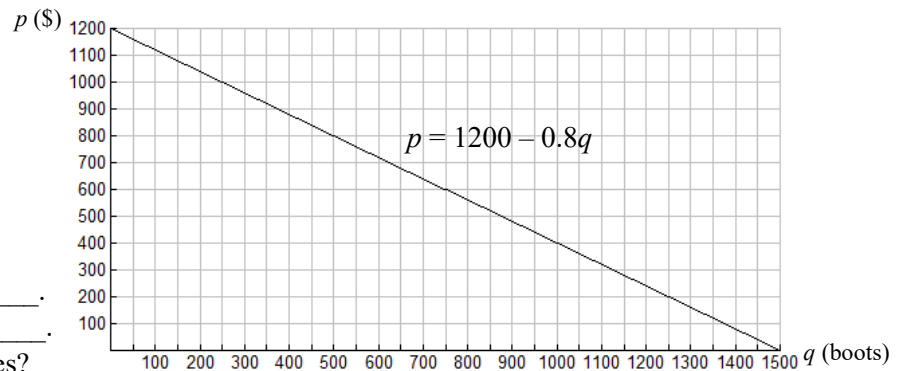
The revenue is \$ _____



- d. The quantity demanded is $q = 1250$ boots.

This occurs for $p = \$$ _____

The revenue is \$ _____



- e. If $q = 0$, then $p = \$$ _____ and $R = \$$ _____.

If $q = 1500$, then $p = \$$ _____ and $R = \$$ _____.

What is true about rectangles for these cases?

2. Use your answers to part #1 to complete the table.
Use a table feature of a grapher to produce the table to check.
Enter $y1 = 1200 - 0.8x$ with $\Delta Tbl = 250$.
Enter $y2 = x*y1$

3. What price p and demand q will maximize revenue?
 $q =$ _____ boots, $p = \$$ _____, $R = \$$ _____
Sketch this **Revenue Rectangle** on one of these graphs above.
What do you notice about this special rectangle?

Demand, q , (boots)	Price, p , (dollars)	Revenue (dollars)
0		
250		
500		
1000		
1250		
1500		