

5.6 Revenue Maximization vs Profit Maximization

Monday, 24 October 2022 16:15

Summary	<ul style="list-style-type: none"><li></li></ul>																								
	<p><math>Predicted\ Demand = Intercept + Slope \times Price = b_0 + b_1x</math></p> <ul style="list-style-type: none"><li>We've assumed that the <i>Marginal cost</i>, <math>c = 15</math></li></ul> <p><math>Revenue = Predicted\ Demand \times Price</math></p> <p><math>Profit = Predicted\ Demand \times (Price - marginal\ cost)</math> <math>= D(p) \times (p - c)</math></p>																								
<ul style="list-style-type: none"><li>Notice that the revenue maximizing price and the profit maximizing price are different</li></ul>	<p>This is the scatter plot we got in the analysis:</p> <div><p>Revenue vs Profit</p><table><caption>Approximate data points from the Revenue vs Profit plot</caption><tr><th>Price (x)</th><th>Revenue (y)</th><th>Profit (y)</th></tr><tr><td>0</td><td>0</td><td>-15000</td></tr><tr><td>10</td><td>40000</td><td>-10000</td></tr><tr><td>18</td><td>55000</td><td>0</td></tr><tr><td>25</td><td>45000</td><td>18000</td></tr><tr><td>30</td><td>35000</td><td>15000</td></tr><tr><td>40</td><td>0</td><td>-10000</td></tr><tr><td>50</td><td>-50000</td><td>-30000</td></tr></table></div>	Price (x)	Revenue (y)	Profit (y)	0	0	-15000	10	40000	-10000	18	55000	0	25	45000	18000	30	35000	15000	40	0	-10000	50	-50000	-30000
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	<ul style="list-style-type: none"><li>It is clear that optimal price for revenue and optimal price for profit are not the same.</li></ul>																								