Name: _____ **Math 1030 Quiz #4A** (June 16th, 2010)

1. Bob's store sells a lot of ice cream bars. In fact, Bob plans on selling 15000 bars this year. Suppose that Bob pays \$2 per bar and \$60 to get a shipment delivered. Bob has also estimated that his inventory costs are \$0.85 per bar per year (base inventory costs on the average with all the standard assumptions). If $C(x)$ is Bob's ice cream bar cost function...

   $C(x) =$ _____

   Bob's ideal EOQ is _____. His minimal annual cost is \$ _____.

2. When Bob charges \$5 he usually sells 20 bars in a day. On the other hand, if Bob charges \$3 he usually sells 45 bars in a day.

   Given this data, Elasticity $E =$ _____.

   If Bob's point elasticity is $\varepsilon = 0.876$ when he charges \$5.50, should Bob raise or lower the price to increase his revenue? Or has Bob already maximized his revenue?

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Name: _____ **Math 1030 Quiz #4B** (June 16th, 2010)

1. Bob's store sells a lot of ice cream bars. In fact, Bob plans on selling 5000 bars this year. Suppose that Bob pays \$3 per bar and \$125 to get a shipment delivered. Bob has also estimated that his inventory costs are \$0.50 per bar per year (base inventory costs on the average with all the standard assumptions). If $C(x)$ is Bob's ice cream bar cost function...

   $C(x) =$ _____

   Bob's ideal EOQ is _____. His minimal annual cost is \$ _____.

2. When Bob charges \$6 he usually sells 10 bars in a day. On the other hand, if Bob charges \$4 he usually sells 25 bars in a day.

   Given this data, Elasticity $E =$ _____.

   If Bob's point elasticity is $\varepsilon = 4.321$ when he charges \$6, should Bob raise or lower the price to increase his revenue? Or has Bob already maximized his revenue?

Name: _____ **Math 1030 Quiz #4B** (June 16th, 2010)

1. Bob's store sells a lot of ice cream bars. In fact, Bob plans on selling 5000 bars this year. Suppose that Bob pays \$3 per bar and \$125 to get a shipment delivered. Bob has also estimated that his inventory costs are \$0.50 per bar per year (base inventory costs on the average with all the standard assumptions). If $C(x)$ is Bob's ice cream bar cost function...

   $C(x) =$ _____

   Bob's ideal EOQ is _____. His minimal annual cost is \$ _____.

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   Given this data, Elasticity $E =$ _____.

   If Bob's point elasticity is $\varepsilon = 4.321$ when he charges \$6, should Bob raise or lower the price to increase his revenue? Or has Bob already maximized his revenue?