GAME INSTRUCTIONS

In this experiment, you have the role of an inventory manager. You must decide how many units of a product you want to order and stock to sell to your customers.

You are making these decisions over multiple rounds. In every round, you are deciding on an order quantity.

You are making your decision under uncertainty. This means at the time of the order decision you do not know the exact demand of the period. However, you do know the probability distribution of the demand. The demand for your product will be shown by a distribution curve, shown on the decision-making page. Demand is independent between rounds.

You have no starting inventory in your warehouse at the beginning of the game. You will order units which then get delivered before demand is realized. Any leftover inventory after demand is realized will be charged a salvage fee per unit left over.

For example:

Available inventory: 90 units
Demand: 80 units
Leftover inventory: 90-80=10 units

Salvage fees are charged for the resulting leftover 10 units that are stocked in inventory.

If you purchased too few units in a period to fulfill this period's demand, the unfulfilled demand is lost. You cannot reorder within a period or shift demand to later periods. For example:

Purchased inventory: 30 units
Demand: 80 units
Units Sold: 30 Units

You are trying to maximize your Profits in this experiment. Profit per round is calculated as follows:

*Profit per round = Selling price x units sold - purchasing price x order quantity – salvage fee * leftover inventory*

Therefore, profit = revenue - purchasing costs – salvage costs.

In this experiment, your costs will be displayed on the decision page.

Here are 2 examples of calculating the profit of a round:

Example 1:
selling price = $20 / unit
purchasing price = $7.5 / unit
salvage fee = $5 / unit
your order quantity = 50 units
demand = 20 units

Profit = $20 * 20 units [units sold = Minimum of demand and order quantity]
      - $7.5 * 50 units [order quantity]
      - $5 * 30 units [salvage inventory= order quantity - units sold]
      = - $125

Example 2:
Prices of example 1 apply here.

your order quantity = 50 units
demand = 100 units

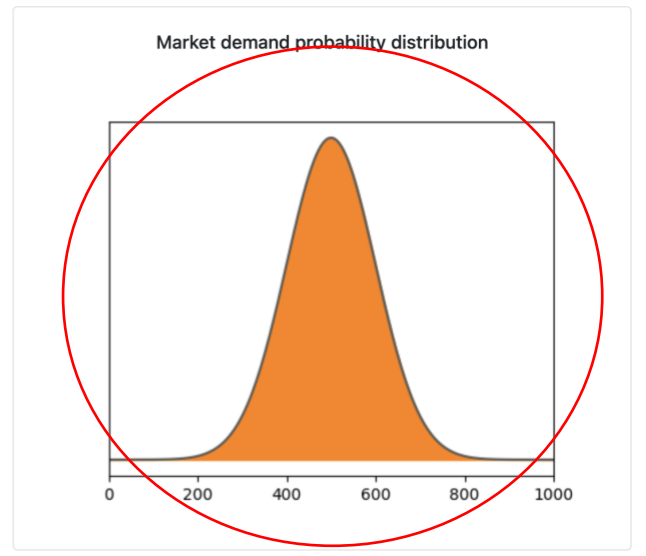Profit = $20 * 50 units [units sold = Minimum of demand and order quantity]
      - $7.5 * 50 units [order quantity]
      - $5 * 0 units [final inventory= 0]
      = $625

After clicking next below, you will come to the first demand page:

Game Parameters	
Retail	$43.00 / unit / period
Wholesale	$6.00 / unit / period
Salvage	$5.00 / unit / period
Demand Distribution	N~(500, 100)

Market demand probability distribution

These are the costs associated with the project. You can use these to manually calculate your profits throughout the experiment

This is the distribution of demand. N~ (500,100) signifies a normal distribution (N) with an average demand of 500 units and standard deviation of 100 units. You can use this data as a guide to determine how much you want to order in each round.

Game History Information

Quantities ordered & demanded in prior periods
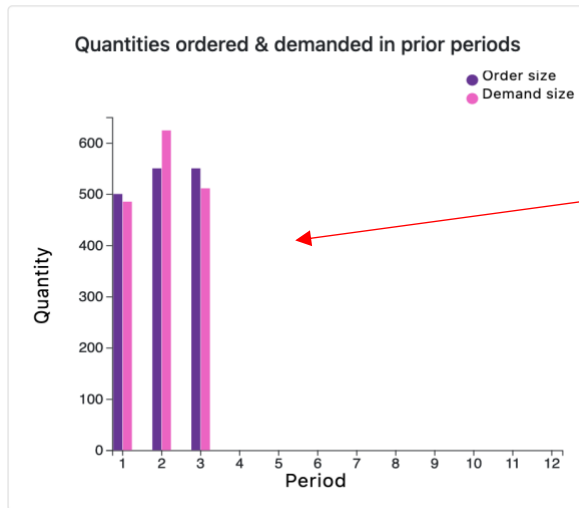
This is the graphical history of what you ordered (in purple) and what the actual demand was (in pink) for all prior rounds

Summary of key metrics of prior periods

Period	1	2	3	4	5	6	7
Order quantity	500	500	500				
Demand quantity (realized)	560	742	442				
Salvaged inventory	0	0	58				
Profit	$18500	$18,500	$15,716				
Cumulative profit	$18500	$37000	$52716				

This is the history (in numbers) including the profit realized per round and cumulative profit

At the bottom, there is a place for you to input how much you want to order for the next round.

Decision

Input how much you want to order here

Next

Click "Next" to proceed to the next screen. It will show you the results from this round!

Bonus pay will be calculated by multiplying profit from one round by .05%. For example, a single round profit of $7,000 would lead to a bonus pay of 7,000*.0005= $3.50. This pay will be given to you immediately after completing the game.

Please click the "Next" button below to start the game and thank you!