**BA 353: Operations Management Decision Analysis Extra Credit**

Demand for a product is approximately normally distributed with mean 500 and standard deviation 100. (Since the normal distribution is continuous but you can only sell discrete amounts of products, make whatever assumptions you need to here…) The product sells for $35 and costs $20 to produce (or purchase) – that’s a $15 margin, I’m doing your work for you! You can supply any amount you want.

1. What’s the optimal amount to produce that will maximize your expected profit? [Hint: You can solve this with Excel or perhaps do some research on the “Newsvendor Model.”]
2. How does the answer change if you can salvage unsold products for $5 each?