

— Cost, Revenue, Profit Analysis —

Suppose the cost function for a certain manufacturing process is given by

$$C(x) = 1200 + 40x - x^2$$

and that the commodity will sell for \$50/unit.

a) Write the marginal cost function:

b) Find $C'(15)$ and $C'(25)$.

c) Comment on the significance of these values (interpret each; compare them)

d) Write the profit function for this process.

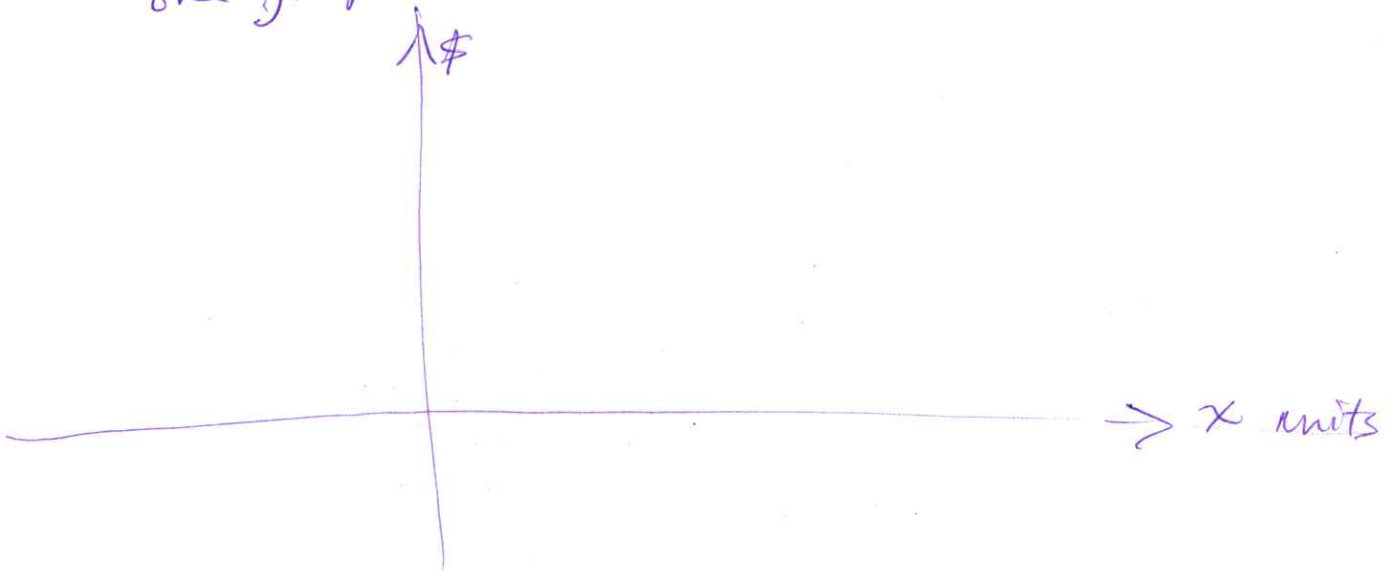
e) How many units must be sold in order for the manufacturer to break even

f) Compare revenue and cost at the value you found in (e). If you were correct, these values will be equal.

g) Compare $P(21) - P(20)$ with $P'(20)$.

h) Comment on the significance of this comparison.

i) Try making a rough sketch of $C(x)$, $R(x)$ & $P(x)$ on one graph.



Compare to the sketch in class on Wednesday.