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### ECON102 Cost Curves Assignment

Instructions: for each of the situations described below, please draw the cost curves mentioned. Make sure that the relationship between the curves matches up with expectations about the curves and the description given. Recall shapes of the individual curves and where they intersect each other.

You may find it advantageous to work with other students (up to 3 others) on this assignment. When you are finished, please scan the document and **upload as a single .pdf file** named CostCurvesHW\_LAST\_FIRST.pdf where you insert your first and last name. If you work with other students, please include all your last names and no first names in the file name. It is due on April 26th by 11:59pm on Canvas. Improperly named files may not be graded.

## 1 All Cost Curves

1. Draw the following curves for a perfectly competitive firm: MR, MC, d, AVC, ATC. Show the profit-maximizing quantity and the price that the firm receives. Show the firm's supply curve as well by using a highlighter or a different color ink. You can draw this firm making profits, losses, or 0 economic profit, but please label which of the 3 you have drawn.



2. Draw the following curves for a monopoly firm: D, MR, MC, ATC. Show the profit-maximizing quantity and the price that the monopolist charges.

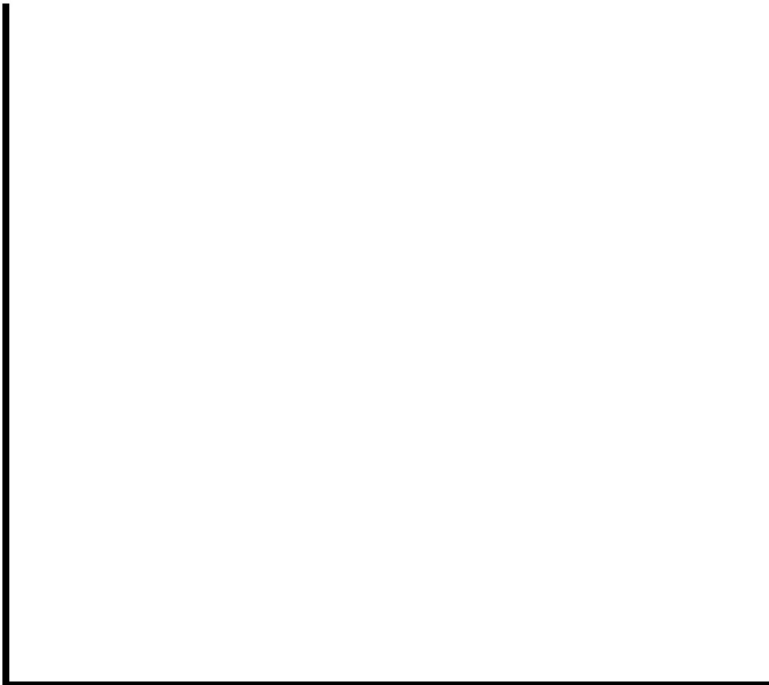


## 2 Perfect Competition

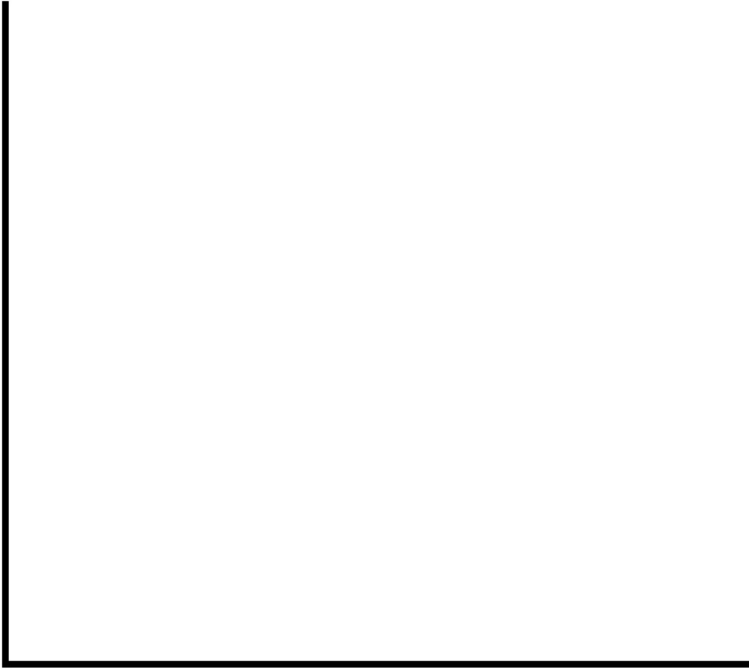
3. Draw a perfectly competitive firm's cost curves in long run equilibrium. Be sure to include MR, MC, d, and ATC. Show the profit-maximizing quantity and price charged. THINK about how the situation would change if the market price went up or down.



4. Draw a perfectly competitive firm's cost curves when they are making short-run profits. Be sure to include MR, MC, d, and ATC. Show the profit-maximizing quantity and price charged. Label the area that represents profit. Can you see the comparison between this graph versus the one you drew above? Focus on the price's relationship to the other curves.



5. Draw a perfectly competitive firm's cost curves when they are making short-run losses. Be sure to include MR, MC, d, and ATC. Show the profit-maximizing (aka loss-minimizing) quantity and price charged. Label the area that represents loss. Can you see the comparison between this graph versus the two other perfect competition graphs you drew above?

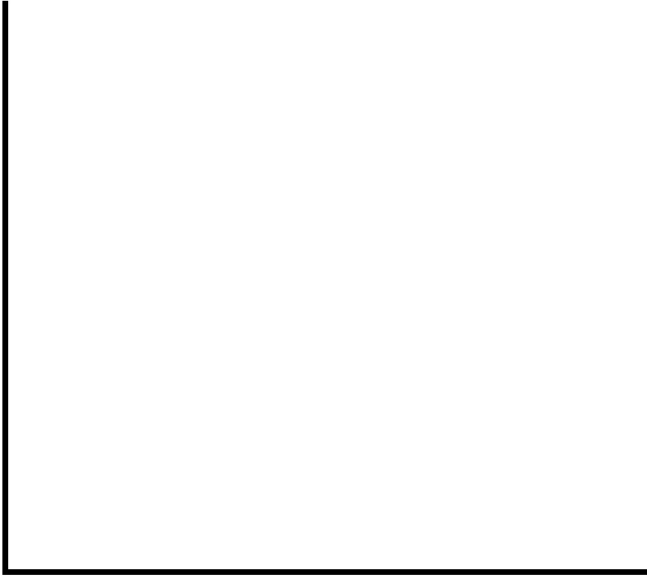


### 3 Monopoly

6. Draw a monopoly's cost curves when they are making profits. Be sure to include MR, MC, d, and ATC. Show the profit-maximizing quantity and price charged. Label the area that represents profit.



7. Draw a monopoly's cost curves when they are making losses. Be sure to include MR, MC, d, and ATC. Show the profit-maximizing (aka loss-minimizing) quantity and price charged. Label the area that represents loss.



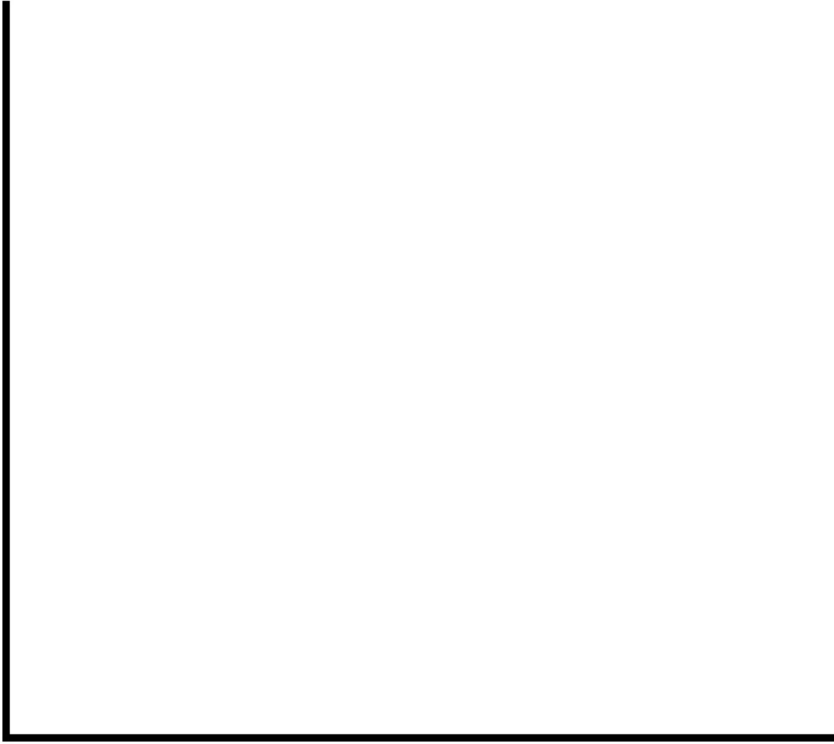
#### 4 Monopolistic Competition

Note: We're going to get into more of the details of monopolistic competition. Look ahead in the book for the long-run cost curves. Just like perfect competition, a monopolistically competitive firm earns 0 economic profit in the long-run. Think about what that means for their average total cost curve and the price they charge consumers. Other than earning 0 economic profit, you can draw these graphs as if they were monopoly graphs. We'll learn that actually, the demand is a little more elastic for monopolistic competition than monopoly but don't worry about making it look perfect.

8. Draw a monopolistically competitive firm's cost curves in long run equilibrium. Be sure to include MR, MC, d, and ATC. Show the profit-maximizing quantity and price charged.



9. Draw a monopolistically competitive firm's cost curves when they are making short-run profits. Be sure to include MR, MC, d, and ATC. Show the profit-maximizing quantity and price charged. Label the area that represents profit.



10. Draw a monopolistically competitive firm's cost curves when they are making short-run losses. Be sure to include MR, MC, d, and ATC. Show the profit-maximizing (aka loss-minimizing) quantity and price charged. Label the area that represents loss.

