

Homework Ch. 11: Output and Cost

1. The news clips list some decisions made by Starbucks.
 - January 21, 2008: Starbucks will open 75 more stores abroad than originally predicted, for a total of 975
 - February 25, 2008: For three hours on Tuesday, Starbucks will shut down every single one of its 7,100 stores so that baristas can receive a refresher course
 - June 2, 2008: Starbucks replaces baristas with vending machines
 - July 18, 2008: Starbucks is closing 616 stores by the end of March

Short Run Decisions: a time frame in which the quantity of at least one factor of production is fixed

Long Run Decisions: a time frame in which the quantities of all factors of production can be varied

- The decisions made on _____ are short-run decisions because they _____.
 - February 25 and June 2; change a variable factor of production but not a fixed factor of production
 - The decisions made on _____ are long-run decisions because they _____.
 - January 31 and July 18; change Starbucks' plant
2. The past expenditure on a plant that has no resale value is called a _____ cost.
 - Sunk Cost
 - The only costs that influence a firm's current decisions are _____.
 - the short-run cost of changing its labor and the long-run cost of changing its plant
 3. The law of diminishing returns states that as a firm uses more of a _____ factor of production, with a given quantity of a _____ factor of production, the _____ product of the _____ factor eventually diminishes.

Diminishing Marginal Returns: occur when the marginal product of an additional worker is less than the marginal product of the previous worker

Law of Diminishing Return: as a firm uses more of a variable factor of production, with a given quantity of the fixed factor of production, the marginal product of the variable factor eventually diminishes

→ variable; fixed; marginal; variable

- Marginal product eventually diminishes because _____.

Marginal Product: eventually diminishes even if no workers are promoted

→ more and more workers are using the same capital and working in the same space

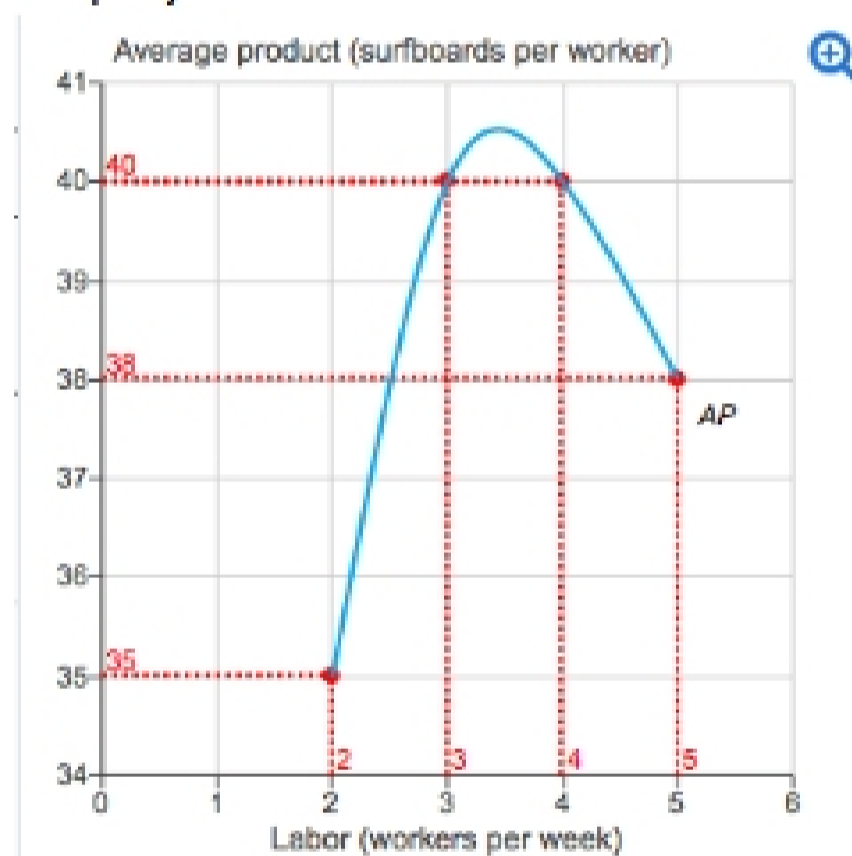
4. When marginal product exceeds average product, _____ product is increasing.
 When average product exceeds marginal product, _____ product is decreasing.
 → average; average

5. The table gives Sue's Surfboards' total product schedule:

Labor (workers per week)	Output (surfboards per week)	Average Product (surfboards per worker)
1	30	30 (30/1)
2	70	35 (35/2)
3	120	40 (40/3)
4	160	40
5	190	38
6	210	35

Draw the four points on the average product curve using the information in the table.
 Draw the average product curve. Label it.

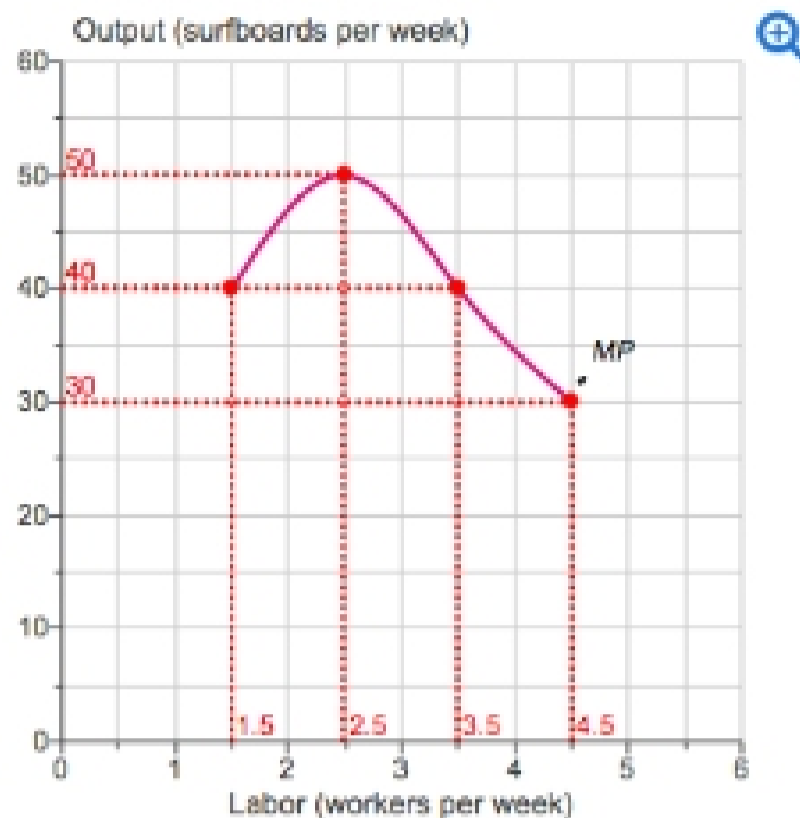
Average Product of Labor: equal to the total product divided by the quantity of labor employed



- If 6 workers can produce 210 surfboards a week, then average product is _____ surfboards per worker.
 → 210 surfboards / 6 workers = 35 surfboards per worker

6. The table gives Sue's Surfboards' total product schedule (same as above)
 Draw the four points on the marginal product curve, beginning with the increase in labor from 1 to 2 workers per week. Draw the marginal product curve. Label it.

Marginal Product of Labor: the change in total product that results from a one-unit increase in the quantity of labor employed

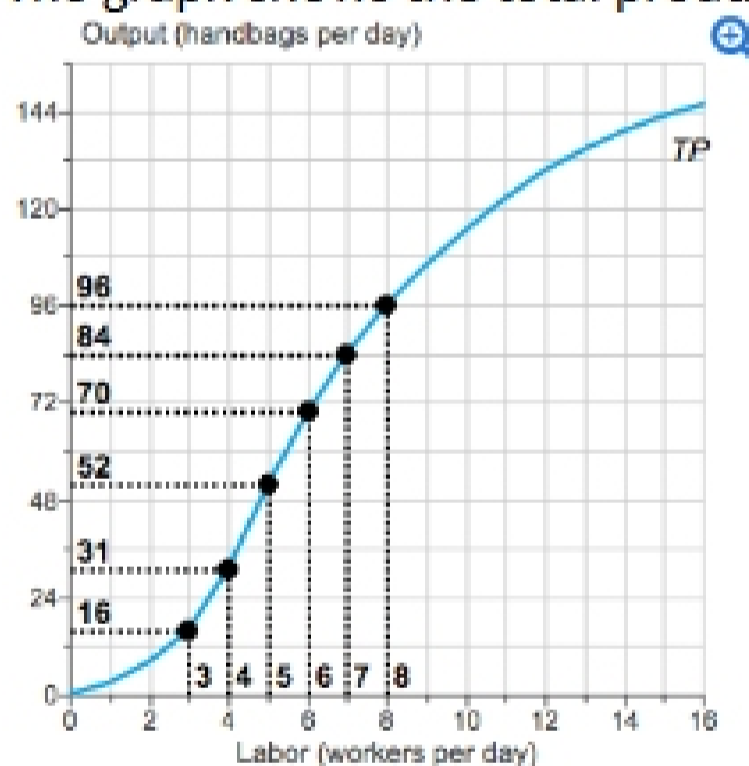


- If 5 workers produce 190 surfboards a week and 6 workers produce 210 surfboards a week, the marginal product of the 6th worker is _____ surfboards.
→ $210 - 190 = 20$ surfboards

7. Choose the correct statement

→ When marginal product of labor is greater than average product of labor and marginal product of labor is either increasing or decreasing, average product of labor is increasing

8. The graph shows the total product curve for a firm that produces handbags:



Marginal returns begin to diminish when the firm hires the _____ worker.

→ sixth

9. Indicate whether each of the following statements is true or false.

- The marginal cost curve intersects the average total cost curve at its maximum **F**
- The marginal cost curve intersects the average variable cost curve at its minimum **T**
- When marginal cost is greater than average variable cost, average variable cost is increasing **T**
- When marginal cost is less than average total cost, average total cost is decreasing **T**
- When marginal cost is greater than average fixed cost, average fixed cost is increasing **F**