

Factor Market Free-Response Question

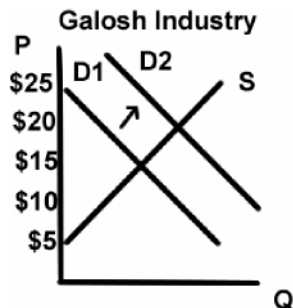
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The Reffbru Galoshes Company (RGC) manufactures a waterproof overshoe. Currently the standard yellow galoshes sell for \$15 a pair. There are many manufacturers of this standard yellow galosh. The Reffbru Galoshes Company can sell as many pairs as it wants.

The RGC pays its workers \$900 a week. The following is the weekly production function of the company:

# Wkrs	output
0	0
1	50
2	140
3	220
4	290
5	330
6	360

- Determine the marginal product and the marginal revenue product of each potential employee.
 - How many workers should the firm employ?
 - Explain your answer.
- Now assume that the standard yellow galosh industry is affected by a prolonged period of wet weather and the impact of this is illustrated in the following graph:



- Determine the change if any on the marginal product and/or marginal revenue product of the Reffbru Galoshes Co. that result from the above change in the industry.
 - How many workers will the firm hire now?
 - Explain your answer.

Now suppose that new technology increases the output per worker in the industry by 20%. This increase in technology also returns the selling price to \$15 per pair

4. For the Reffbru Galosh Co. calculate the effect of the new technology on
 - A. Production function
 - B. Marginal product of each worker
 - C. Marginal revenue product of each worker
 - D. Determine how many workers the company should hire.
 - E. Explain your answer.

The Reffbru Galosh Co. also is producing a line of fashion galoshes that offers the firm a slightly differentiated product. The weekly Production function and the weekly Demand Schedule for this fashion line is as follows:

Fashion Galoshes

# of workers	output
0	0
1	40
2	90
3	135
4	175
5	205
6	230

RGC Fashion Galoshes

Price \$	Qty demanded
60	0
55	40
50	90
45	135
40	175
35	205
30	230

- 5 . A. Determine the marginal product and the marginal revenue product of each worker.
- B. How many workers will the company hire for its fashion galoshes line?
- C. Explain why.