

INDEPENDENT PRACTICE WORKSHEET

CHAPTER 4

Name _____ Class _____ Date _____

4.3 THE LIMITS TO MAXIMIZING OPERATION PIZZA—HOW BIG SHOULD IT GROW?

Imagine that you are in charge of a school fund raiser to make money for a school trip. The plan is to sell pizza at school football and soccer games. You are responsible for making and selling the pizza for each game. The work area or cooking facilities are limited. You must decide how many workers will be. Study the chart below.

Number of Workers	Total Output in slices of pizza	Output Per Additional Worker (in slices)
0	0	0
1	40	40
2	120	80
3	250	a. _____
4	400	b. _____
5	500	c. _____
6	550	d. _____
7	550	e. _____
8	500	f. _____

- Fill in the blanks on the chart to show the output added by each additional worker. To find each amount, subtract the output before the worker was added from the output after the worker was added.
- According to the chart, the pizza operation will experience increasing gains up to a point because of the division of labor or economies of scale. Up to what point do the gains continue to increase for each worker added? Gains continue to increase up to worker number _____. Explain the reasons for the increasing gains. _____
- At what point in your operation will you experience the law of diminishing returns? You will experience this beginning with worker number _____. Suggest some reasons for the diminishing returns. _____
- Since your workers are all volunteers who do not get paid, when would it make sense to stop adding workers? It would make sense to stop adding workers after worker number _____.
- Assume each worker gets paid \$50 a day and each pizza slice is sold at \$2, at what point would you stop adding workers? You would stop adding workers after worker number _____.