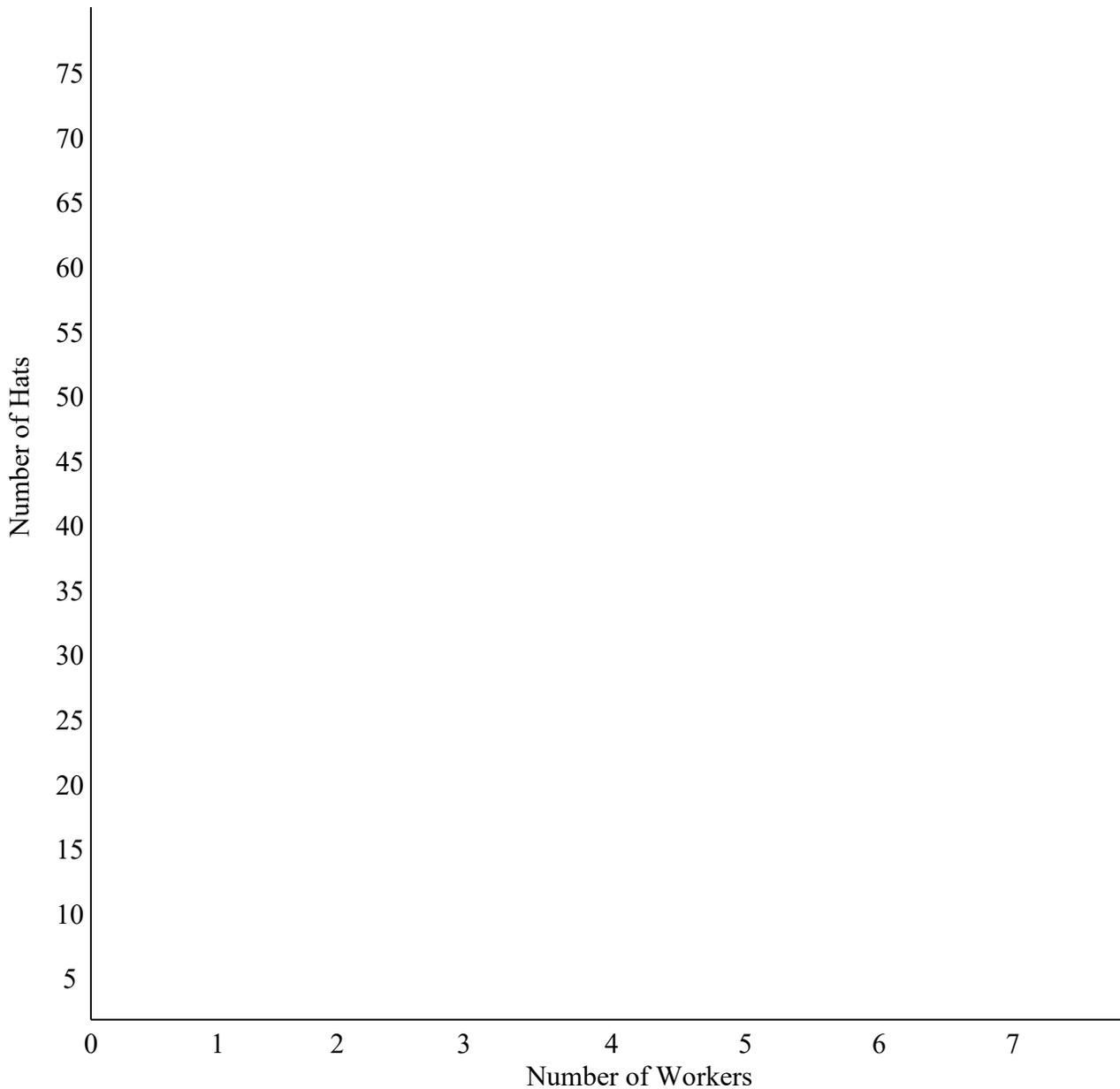Name: _____

Team: _____

Short-Run Production Function for Tony's Hat Store

Quantity of Input (workers hired)	Total Product (Total hats produced)	Marginal Product (additional hats from each worker)	Average Product (hats per worker)
0	0		
1	10		
2	25		
3	45		
4	60		
5	70		
6	75		
7	70		

Graph TP, MP*, AP, and identify regions of increasing, decreasing, and marginal returns

Number of Hats

Number of Workers

*Graph MP between workers

Definitions:

Total Product (TP)=

Marginal Product (MP)=

Average Product (AP)=

The Law of Diminishing Marginal Returns-

      Stage I: Increasing marginal returns

      Stage II: Decreasing marginal returns

      Stage III: Negative marginal returns

Questions:

1. How many hats can three workers make?

2. How many additional hats are made as a result of hiring the 5th worker?

3. On average, how many hats can 2 workers make?

4. At what point does marginal product diminish?

5. Does total product decrease when marginal product falls?

6. When marginal product is zero, what happens to total product?

7. The hiring of which worker leads to 20 additional hats being produced?

8. How many workers does it take to make 60 hats?

9. What is the result of hiring the 7th worker? Why?

10. What causes increasing marginal returns?

11. How does MP affect AP? How is this demonstrated by the curve?