

Name _____

Serial # _____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

1) Suppose that a manufacturer will place 1000 units of a product on the market when the price is \$10 per unit, and 1400 units when the price is \$12 per unit. Find the supply equation for the product assuming the price p and quantity q are linearly related.

2) The demand function for a manufacturer's product is $p = f(q) = 1200 - 3q$, where p is the price (in dollars) per unit when q units are demanded (per week). Find the level of production that maximizes the manufacturer's total revenue and determine this revenue.

3) Solve the following system algebraically:
$$\begin{cases} 5x + 2y = 36 \\ 8x - 3y = -54 \end{cases}$$

4) Solve the system:
$$\begin{cases} y^2 = x - 4 \\ x - y = 4 \end{cases}$$