

1. A plant can manufacture 55 golf clubs per day for a daily cost of \$7,450. For a daily cost of \$9,840 the plant can manufacture 75 golf clubs per day. Assuming that daily cost and production are linearly related, find the function that will give the daily cost as a function of the number of clubs produced.

$$\text{points: } (55, 7450) \text{ and } (75, 9840) \text{ and } m = \frac{9840 - 7450}{75 - 55} = 119.5$$

$$y - 7450 = 119.5(x - 55)$$

$$\text{can also use linear regression: cost } y = 119.5x + 877.5$$

2. The price-demand function for a product is given by $p = -0.115x + 435.78$, where p is in dollars and x is the number of items demanded. If the number of items demanded increased by 240, how will this affect the price of the items?

$$\text{Note: } -0.115 * 240 = -27.6$$

The price will decrease by \$27.60

3. Find the domain of the $f(x) = \frac{x - 4}{3x^3 - 10x^2}$

$$f(x) = \frac{x - 4}{x^2(3x - 10)}$$

domain is all real numbers except $x = 0$ and $x = \frac{10}{3}$