1. A plant can manufacture 60 golf clubs per day for a daily cost of \$6,857. For a daily cost of \$8236 the plant can manufacture 85 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 nubmer of clubs produced.

   points: $(60, 6857)$ and $(85, 8236)$ and $m = \dfrac{8236 - 6857}{85 - 60} = 55.16$

   $y - 8236 = 55.16(x - 85)$

   can also use linear regression: cost $y = 55.16x + 3547.4$

2. The price-demand function for a product is given by $p = -0.24x + 275.9$, where p is in dollars and x is the number of items demanded. If the number of items demanded increased by 180, how will this affect the price of the items?

   Note: $-0.24 * 180 = -43.2$

   The price will decrease by \$43.20

3. Find the domain of the function $f(x) = \dfrac{x + 5}{4x^3 + 7x^2}$

   $f(x) = \dfrac{x + 5}{x^2(4x + 7)}$

   domain is all real numbers except $x = 0$ and $x = \dfrac{-7}{4}$