Quiz 7

Question 1. *(10 marks)* The weekly demand for the Pilsar 25 colour LED television is

$$p = 600 - 0.05x \quad (0 \le x \le 12\,000)$$

were p denotes the wholesale unit price in dollars and x ~~denotes~~ denotes the quantity demanded. The weekly total cost function associated with manufacturing the Pilsar 25 is given by

$$C(x) = 0.000002x^3 - 0.03x^2 + 400x + 80\,000$$

where $C(x)$ denotes the total cost incurred in producing x sets.

(a) Find the revenue function $R(x)$ and the profit function $P(x)$

(b) Mind the marginal cost, marginal revenue and marginal profit function.

(c) Evaluate $C'(2000)$ and $P'(2000)$. What do these values tell us?