

Math 141 Calculus Review Day 3

Homework 4.6.44

$$C(x) = 16,000 + 500x - 1.6x^2 + 0.004x^3$$

$$R(x) = x(1700 - 7x) = 1,700x - 7x^2$$

$$P(x) = R(x) - C(x) = -16,000 + 1,200x - 5.4x^2 - .004x^3$$

$$C'(x) = 500 - 3.2x + .012x^2$$

$$R'(x) = 1,700 - 14x$$

$$P'(x) = R'(x) - C'(x) = 1,200 - 10.8x - .012x^2$$

Some values:

x	$C(x)$	$R(x)$	$P(x)$	$C'(x)$	$R'(x)$	$P'(x)$
0	16000	0	-16000	500	1700	1200
20	25392	31200	5808	441	1420	979
21	25831	32613	6782	438	1406	968
50	37500	67500	30000	370	1000	630
51	37869	68493	30624	368	986	618
90	50956	96300	45344	309	440	131
91	51265	96733	45468	308	426	118
100	54000	100000	46000	300	300	0
110	56964	102300	45336	293	160	-133
111	57257	102453	45196	293	146	-147

