

Math 111 Winter 2018, Answers to Midterm I

1. The answers are given with acceptable error margins.
 - (a) 675 ± 15 dollars.
 - (b) 17.1 ± 1.5 dollars per cup
 - (c) 66 ± 1 cups
 - (d) 252.50 ± 25 dollars at about 97 ± 1 cups.
2. The answers are given with acceptable error margins.
 - (a) 2.80 ± 0.15 dollars per month.
 - (b) The slope is -1.05 ± 0.1 dollars per month so the change is -0.07 dollars. It is a decrease in price.
 - (c) At approximately 1.25 to 4.25 months and 8 to 11 months.
 - (d) At about 4.2, 16.8 and 11.4 months.
3.
 - (a) $MC(20) \approx 1.2$ or 1.3 dollars per book.
 - (b) $MC(15) \approx 9.6$ dollars per book.
 - (c) 137.50 dollars.
 - (d) About 5 dollars.
 - (e) About 41.5 hundred books.
4.
 - (a) $TC(x) = \frac{1}{3}x + \frac{80}{3}$.
 - (b) $TR(x) = 0.7x$
 - (c) At $x = 800/11 \approx 73$ things.
 - (d)

$$FC = \frac{80}{3}$$

$$MC = \frac{1}{3}$$

$$MR = 0.7$$