

Math 1314  
Homework 8

Enter your answers in the EMCF titled “Homework 8” at [casa.uh.edu](http://casa.uh.edu) before the due date/time. In the problem numbers given below, Problem 4.2 56 refers to Chapter 4, Section 2, Problem 56. The problems can be found in the online text.

Work the problems listed below. Round answers to four decimal places. Match your answers with the answers given in the answer bank below. Answers in the answer bank may be used more than once or not at all.

1. **Problem 4.2.12, find the linear cost function. Write your equation in terms of dollars. Note that the cost data is given in millions of dollars. So, for example, 1.01 million is 1010000.**
2. **Problem 4.2.12, find the linear demand function.**
3. **Problem 4.2.12, write the revenue function.**

- |                                     |                                     |
|-------------------------------------|-------------------------------------|
| A. $f(x) = 0.1033x + 738.913$       | B. $f(x) = 246.7391x + 363913.0435$ |
| C. $f(x) = -0.2311x^2 + 659.417x$   | D. $f(x) = -0.1033x^2 + 738.913x$   |
| E. $f(x) = 246.7391x - 363913.0435$ | F. $f(x) = 341.1161x + 294131.2078$ |
| G. $f(x) = -0.2311x + 659.417$      | H. $f(x) = -0.1033x + 738.913$      |
| I. Answer is not listed             |                                     |

Work the problems listed below. Round answers to four decimal places, unless the answer is given in dollars. In that case, round to two decimal places. Match your answers with the answers given in the answer bank below. Answers in the answer bank may be used more than once or not at all.

4. **Problem 4.2.6, break even revenue in dollars**
5. **Problem 4.2.10, break even quantity in units**
6. **Problem 4.2.12, break even quantity in units, find the smallest positive value (Note: You found the equations for Problem 6 in problems 1 – 3 above.)**
7. **Problem 4.2.16, equilibrium quantity in units**
8. **Problem 4.2.16, equilibrium price in dollars**
9. **Problem 4.2.24, equilibrium quantity in units**
10. **Problem 4.2.24, equilibrium price in dollars**

**Answers:**

- |             |                         |            |             |
|-------------|-------------------------|------------|-------------|
| A. 471.4286 | B. 4                    | C. 8339.41 | D. 308      |
| E. 915.0874 | F. 8.5194               | G. 572000  | H. 4.7321   |
| I. 1906     | J. 2288                 | K. 2.08    | L. 10245.90 |
| M. 162.86   | N. Answer is not listed |            |             |