Practice Questions:
Fixed & Variable Expenses and Breakeven Analysis

Name: _____ Date: _____

1. What is the general expense equation?

2. What are some examples of fixed expenses?

3. What are some examples of variable expenses?

4. What is the general revenue equation?

5. How is revenue different from profit?

6. A widget manufacturer's expense function is $E = 6.00q + 11{,}000$. What are the:

   a) Variable costs for each widget?

   b) Fixed costs?

   c) How much would it cost to produce 23 widgets?

   d) If the manufacturer had $11,564 to spend, how many widgets could they make?

7. The Gidget Widget Corporation produces widgets. The fixed expenses are $65,210 and the variable expenses are $4.22 per widget.

a) Write the expense function.

b) How much does it cost to make 540 widgets?

8. Another corporation makes mini-widgets. The variable expenses are $1.24 per mini-widget, and the fixed expenses are $142,900.

a) Write the expense function.

b) How much does it cost to make 250 mini-widgets?

9. Find the breakeven point of the expense function $E = 5.00q + 60{,}000$ and the revenue function, $R = 7.00q$.

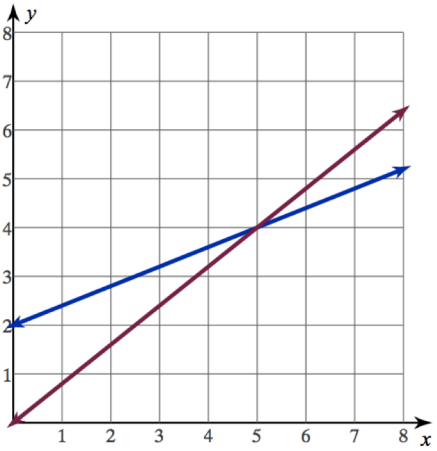
10. Wind Up Corporation manufactures widgets. The monthly expense equation is $E = 3.20q + 56{,}000$. They plan to sell the widgets to retailers at a wholesale price of $6.00 each. How many widgets must be sold to reach the breakeven point?

11. The Lerneg Corporation computed its monthly expense equation as E = 11.00q + 76,000. Its products will be sold to retailers at a wholesale price of $20.00 each. How many items must be sold to reach the breakeven point?

12. From the graph to the right, determine:

a) how many widgets a company should produce to breakeven.

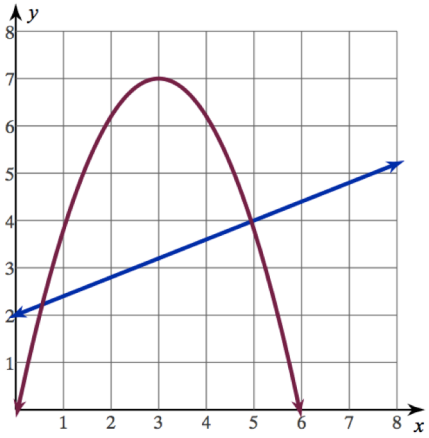
b) how much it would cost to produce that number of widgets.



13. From the graph to the right, determine:

a) how many widgets a company should produce to breakeven. (there are two answers here)

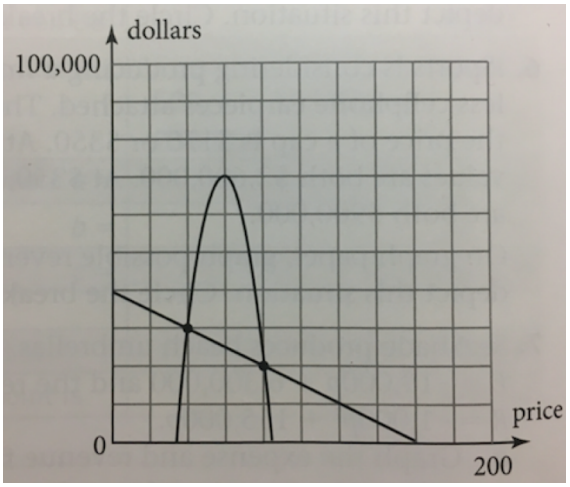
b) how much it would cost to produce those numbers of widgets.



14. SeaShade produces beach umbrellas. The expense function is $E = 11p - 9$ and the revenue function is $R = 2p^2 + 2p$. Determine the prices at the breakeven points.

15. A company produces sweaters. The expense function is $E = 4x - 8$ and the revenue function is $R = x^2 - 5x$.

16. Use the graph below to answer the following questions.



a) At what price is the maximum profit reached?

b) What are the breakeven prices?

c) Name two prices where the revenue is greater than the expenses.

d) Name two prices where the revenue is less than the expenses.