

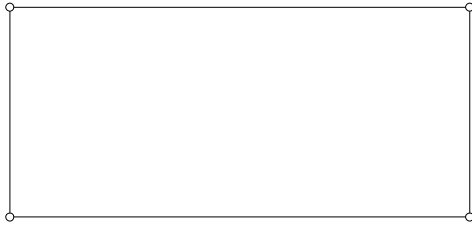
## Handout # 18

1. Last week the Dandy Doughnut Company sold 9500 dozen doughnuts at \$9 per dozen. The D.D.Co. feels that for every \$.50 per dozen the price is reduced, an additional 3000 dozen doughnuts will be sold.
  - a. Write an equation that expresses revenue in terms of the number of \$.50 reductions.
  
  
  
  
  
  
  
  
  
  
  - b. CTS
  
  
  
  
  
  
  
  
  
  
  - c. A price of \_\_\_\_\_ per dozen produces sales of \_\_\_\_\_ dozen and a maximum revenue of \_\_\_\_\_.
  
  
  
  
  
  
  
  
  
  
  - d. Graph the equation in a) and c)
  
  
  
  
  
  
  
  
  
  
  - e.

Price/Dozen	Dozen Sold	Revenue
\$9.00		
7.5		
5.5		
3.5		

2.

1.8 mi

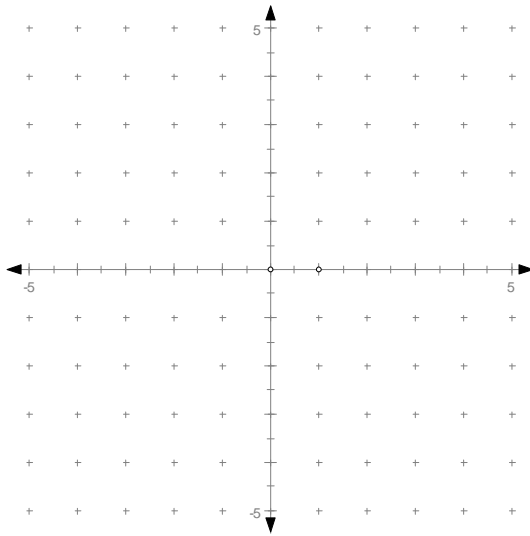


2000 feet

area =          acres

3. Graph.

$$y = \frac{x+4}{x-3} \text{ and } y=1$$



Solve.

4.  $\log_4 8 = 2x - 7$

5.  $8^x = 32$

6.  $\log_{\frac{1}{9}} \sqrt{27} = x + \frac{1}{2}$

7. The area of triangle with sides of 13, 14, and 15 is 84. What is the area of a triangle with sides of 39, 42, and 45? Explain how you got your answer.

8. Molly has 20% more dimes than quarters and 25% more nickels than dimes. The value is \$13.38. How many quarters, dimes, and nickels?

9. Factor.  $6x^6 - 49x^3 + 8$