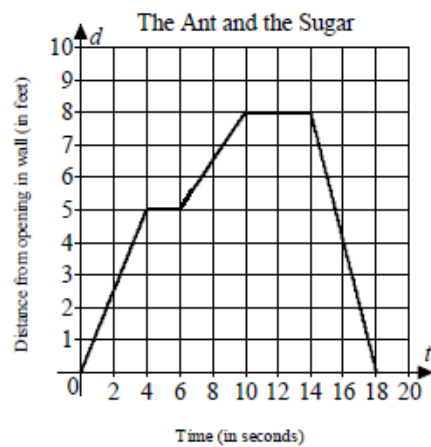


Modeling HW Quiz 1C

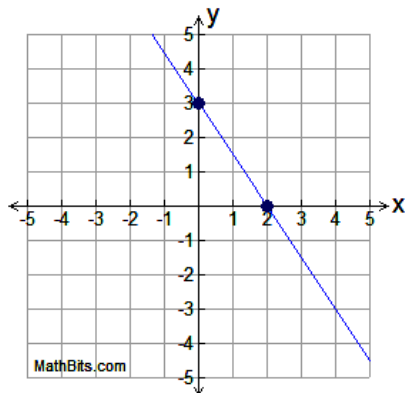
Name _____



1. Find the average rate of change of the Ant for time $t = 14$ to $t = 20$. Include the units of change.

2. Find the average rate of change of the Ant for time $t = 0$ to $t = 6$. Include the units of change.

3. Find the slope and y-intercept of the line given in the graph below. Then write the equation.



4. Find the slope and y-intercept of the line given the table below, then write the equation

x	-15	-12	-9	-6	-3
y	15	19	23	27	31

5. Given the slope and y-intercept write the equation: Slope = -5 y-intercept = 12

6. i. Find the slope of the line given 2 points in coordinate form.
 ii. Write the equation for the line in point slope form: $y - y_1 = m(x - x_1)$
 iii. Rewrite the equation in slope-intercept form ($y = mx + b$) by distributing and collecting like terms

a) $(-5, 9)$ and $(-3, 15)$

b) $(-2, 7)$ and $(5, -7)$

7. Write the equation, in point slope form, of the line that would go through the **point (5, -2)** and would be **parallel** to the line $y = \frac{-5}{3}x + 1$.
8. Write the equation, in point slope form, of the **line** that would go through the **point (6, -7)** and would be **parallel** to the line **$-4x + 8y = 16$** .
9. Write the equation, in point slope form, of the **line** that would go through the **point (5, -2)** and would be **perpendicular** to the line $y = \frac{-5}{3}x + 1$.
10. Write the equation, in point slope form, of the **line** that would go through the **point (6, -7)** and would be **perpendicular** to the line **$-4x + 8y = 16$** .
11. Determine if the two lines are parallel, perpendicular or neither. Explain.
 $-6x + 3y = 10$ and $y = 2x + 2$

Solve the following equations for x.

12) $5(x - 3) = 5x + 3x - 21$

13) $\frac{x+10}{5} = \frac{6}{3}$

Solve the following inequality for x. Graph on a number line. Give the result in interval notation

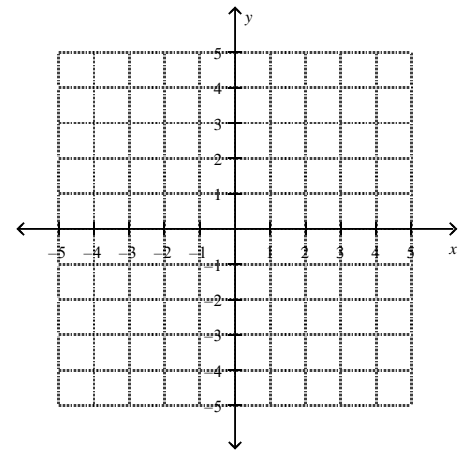
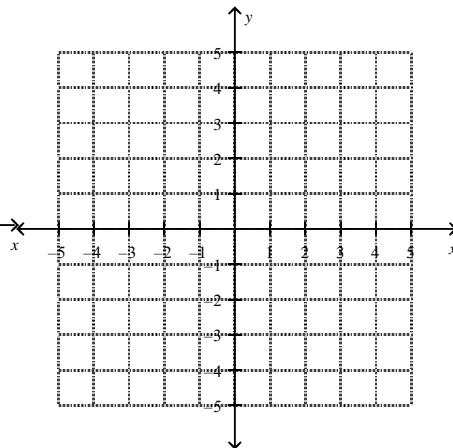
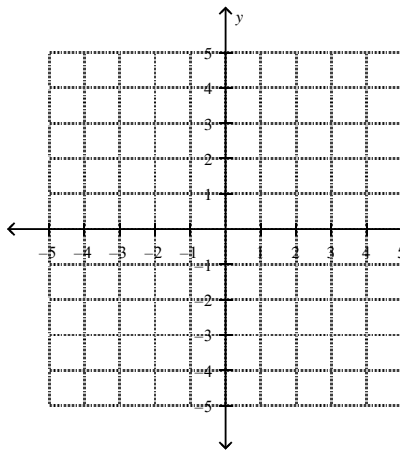
14) $-5(3x + 2) < 6(2x + 9)$

Graph each linear equation below. Then determine if the line is increasing or decreasing

15. $y = \frac{-2}{5}x + 4$

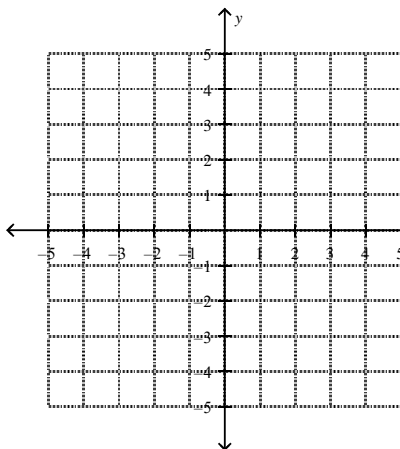
16. $-3x + 4y = -12$

17. $y + 3 = 3(x - 1)$



Graph each line and then give the slope.

18. $x = -3$



19. $y = 2$

