

Handout

Name:

Date:

Period:

Review Sheet – Graphing Linear Equations

1. What is a linear equation?
2. How do you graph a linear equation?
3. How do you know if an ordered pair is a solution to a linear equation?
4. How do you graph the ordered pair (4,-1) on the coordinate plane? Which one is the x coordinate and which one is the y?
5. Is (4,-1) a solution to the linear equation $y = -2x + 7$? Why?
6. If you know the x-coordinate, how do you determine the y-coordinate of any linear equation?
7. The x-coordinate of a linear equation is 2. The linear equation is $y = 4x - 4$. What is the corresponding y-coordinate? Plot this ordered pair on a graph using graph paper.
8. If another x-coordinate of the linear equation in #7 is 0, what will the corresponding y-coordinate be? Locate this point on the same graph as #7.
9. If a third x-coordinate of the linear equation in #7 is 3, what is the y-coordinate? Plot this point on the same graph as #7.
10. Play connect the dots for the points on the graph of #7-#9. What does this line represent?
11. Graph on graph paper: $y = 4x + 2$ Use a table of values for X and Y with at least 4 points on the graph
12. Graph on the same graph as number 11: $y = -\frac{1}{4} X + 3$ Use a table of values for X and Y with at least 4 points on the graph

Review Sheet –Slope and Rate of Change

13. Define slope.
14. How can you tell, just by looking, if the slope of a line is positive or negative?
15. What does a linear equation look like if the slope is 0?
16. Why is the slope of a vertical line undefined?
17. How do you calculate the slope of a line that runs between two points?
18.
 - (a.) Plot the points (6,3) and (1,1) on the same graph. Use graph paper.
 - (b.) Draw a line through these points.
 - (c.) Just by looking, determine if the slope is positive or negative.
 - (d.) Calculate the slope.
19.
 - (a.) On the same graph as #18, plot the points (0,4) and (-5,2).
 - (b.) Draw a line through these two points.
 - (c.) Calculate the slope.
20.
 - (a.) How do the slopes of #18 and #19 compare?
 - (b.) What does this mean?
21.
 - (a.) Plot the points (0,-3) and (-4,9) on a graph. Draw a line through these points. Is the line rising or falling from left to right? What does that mean about the slope?
 - (b.) What is the slope of this line?

- (c.) Plot the point $(1,-6)$ on this graph. It is on the same line as the points in part (a). What is the slope between $(-4,9)$ and $(1,-6)$?
- (d.) Did you get the same answer for (b) and (c)?
22. (a.) Plot the points $(3,4)$ and $(-9,-2)$ on the same graph as #21. Draw a line through these points. Is the line rising or falling from left to right?
- (b.) What is the slope of this line?
- (c.) The two lines on the graph SHOULD look perpendicular. How do their slopes compare?
- (d.) Are they perpendicular?

Review Sheet –Quick Graphs of Linear Equations

23. What is the x-intercept of a line?
24. What is the y-intercept of a line?
25. For the linear equation $y = -3x - 3$, what is the x-intercept? What is the y-intercept?
26. The general form of a linear equation is $y = mx + b$. What do m and b represent?
27. For the linear equation $y = -3x - 3$, what is the slope and y-intercept?
28. How do you change the linear equation $3y - x = 3$ so that it looks like $y = mx + b$? What will this equation look like after you do?
29. (a.) What is the slope of the equation in #28?
- (b.) What is the y-intercept of this equation?
30. Graph #28 on graph paper using $x=0$, $x=3$, and $x=-9$.