Honors Algebra 2 Summer Assignment 2016-2017 School Year

Name:_____

Assignment Due Date: First Day of Honors Algebra 2

Assignment Test Date: Fourth Day of Honors Algebra 2

DUE DATE: First Day of Class

This packet is due by the first day that you are scheduled for Algebra 2 class. If you have Algebra 2 in the fall semester, the packet is due August 29th. If you don't have Algebra 2 until the spring semester, it will be due the first day of class in January.

*It can be dropped off to Mrs. Flood or Mrs. McFarland. Our contact information is at the bottom of this sheet. It can also be placed in either of our mailboxes in the main office.

Graphing Calculator

As stated in the Course-Selection Guide, a graphing calculator is required for this course. Acceptable calculators include the TI-83, TI-83 Plus, TI-84 Plus, and TI-84C (or CE). These calculators can be purchased online or at local stores like Staples, Wal-Mart, Target, etc. The graphing calculators can be used in future math classes as well as on the SAT, ACT, and AP Exams. If necessary, a student can borrow a graphing calculator from his/her teacher for the semester.

Extra Help

-Algebra 2 online textbook:
www.pearsonsuccessnet.com username: eahsalg2 password: algebra2

-Patrick Just Math Tutorials: http://patrickjmt.com

-Khan Academy: https://www.khanacademy.org

-TeacherTube: www.teachertube.com

Contact Information

Mrs. Lisa Flood
Room D210
Email: floodl@eastonsd.org

Mrs. Kristina McFarland
Room C202
Email: mcfarlandk@eastonsd.org

Have a great summer and we look forward to seeing you in the fall or spring!

On the following pages are problems for you to complete. Please show all of your work, where work is needed. All of the topics covered are a review of topics from previous math courses, and nothing requires new learning. Understanding these topics will be a requirement for success in Honors Algebra 2, as teachers will not be doing an extensive review of these previously taught concepts.

Please have the following packet completed and ready to be turned in at the start of the class. If a student does not complete the summer assignment and/or pass the first test on this material, it will be strongly encouraged that the student is removed from Honors Algebra 2.

I certify that I have read and understand the directions above and that the work in this packet is my own.

Student signature: _____

CHAPTER 1

Simplify by combining like terms.

1) $4y-7y^2+9y+10y^2-13y$

Simplify/Evaluate using the order of operations. (Show each step-do NOT plug into calculator)

2) $10\div 5(2-3)^2+9\div 9+9$

Evaluate each expression for the given value. (Show each step-do NOT plug into calculator)

3) $5x^2-9x+10$ when $x=4$

4) $4xy-9y+20x-10$ when $x=-1$ and $y=2$

5) $-6x-(7-10x)$ when $x=-2$

6) $-x^2-17$ when $x=-2$

Solve the equation for the variable.

7) $7y + 5 = 6y + 11$

8) $9(z - 3) = 12z$

9) $\frac{3}{4}x - 2 = -1$

10) $3(y + 3) + 5y = 4(2y + 1) + 5$

11) $\frac{2}{3}x - 8 = \frac{1}{3}x + \frac{4}{3}$

12) $\frac{1}{2}(8y - 24) - 4y = -14$

Solve each inequality. Graph the solution on a number line.

13) $6 - 5x > 6$

14) $\frac{1}{2}(4x + 6) + 2 < 11$

15) $8x > -32$ *or* $-6x \leq 48$

16) $-4 \leq 2x - 3 < 15$

17) The cost of a field trip is \$220 plus \$7 per student. If the school can spend at most \$500, how many students can go on the field trip? Write an inequality and solve it.

Solve each absolute value equation.

18) $|3x| = 9$

19) $|5x - 10| = 20$

20) $|4 - 2y| + 5 = 9$

21) $3|2x - 1| - 2 = 13$

Solve the absolute value inequality. Graph the solution on a number line.

22) $|2x - 7| > 5$

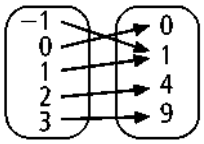
23) $2|4x + 1| - 5 \leq 1$

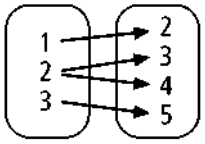
CHAPTER 2

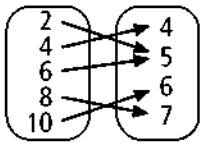
24) Identify the domain and range and make a mapping diagram: {(−4, 1), (−3, 5), (−1, 0), (6, 2), (9, 5)}

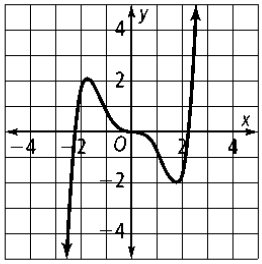
Is the relation a function?

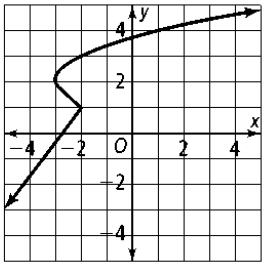
Determine if each relation is a function.

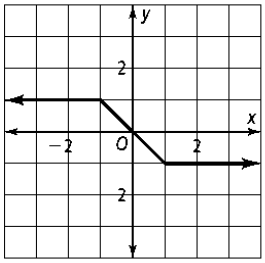
25) 

26) 

27) 

28) 

29) 

30) 

Write a function rule to model the cost of renting a truck for one day. Then evaluate the function for the given number of miles.

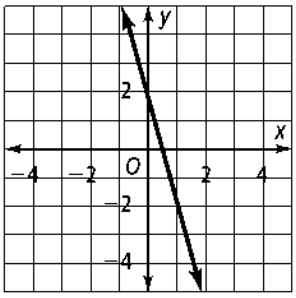
31) Daily rental: $19.95
Rate per mile: $.50 per mile
Miles traveled: 73 miles

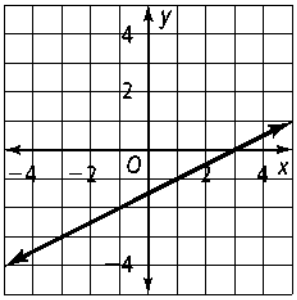
Find the slope of the line between each pair of points.

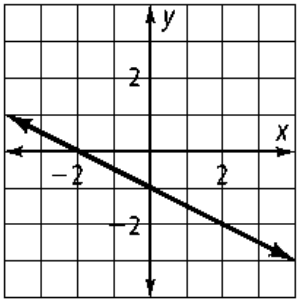
32) $(-10,-6)$ and $(-2,-4)$ 33) $(4,9)$ and $(4,-2)$ 34) $(-3,-3)$ and $(-1,-3)$

35) Find the value of k so that the line passes through (2,-3) and (k, 7) and has slope of -2.

Find the slope and y-intercept of each line and then write the equation of the line in slope-intercept form.

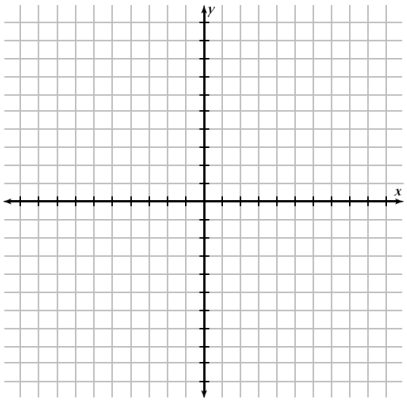
36) 

37) 

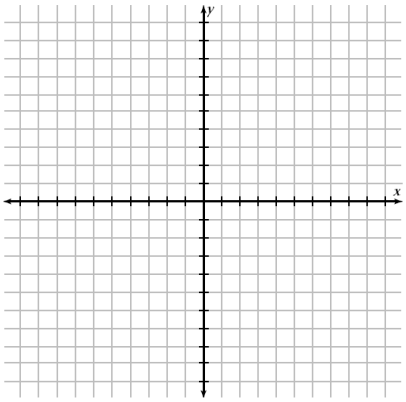
38) 

Graph each line or inequality.

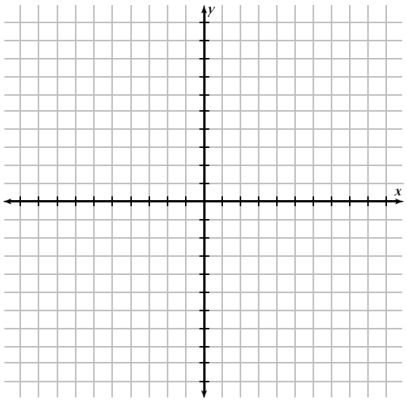
39) $y = -\frac{2}{3}x + 5$



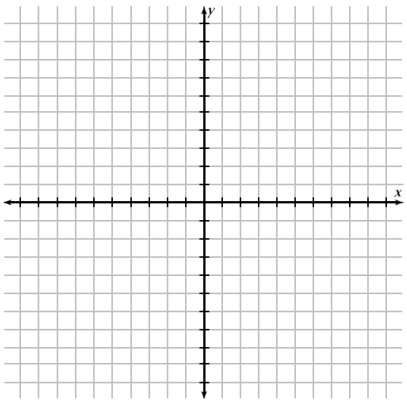
40) $x = -3$



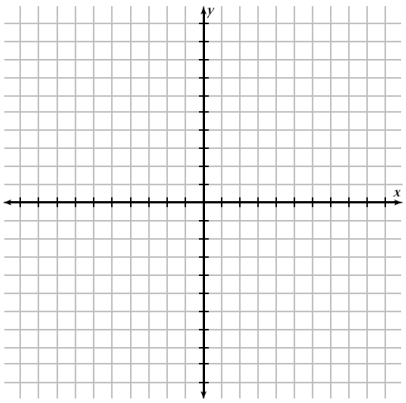
41) $4x + 3y = 12$



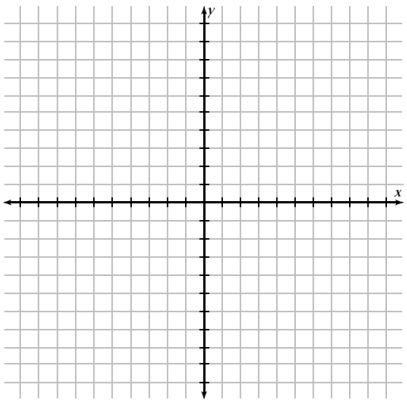
42) $y < x$



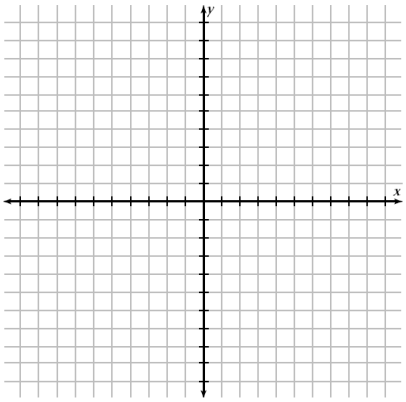
43) $3y \geq -3x + 6$



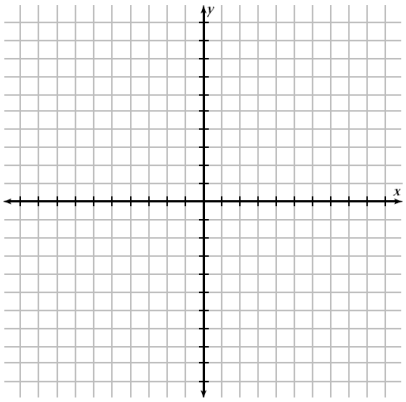
44) $x = \frac{1}{5}y - 1$



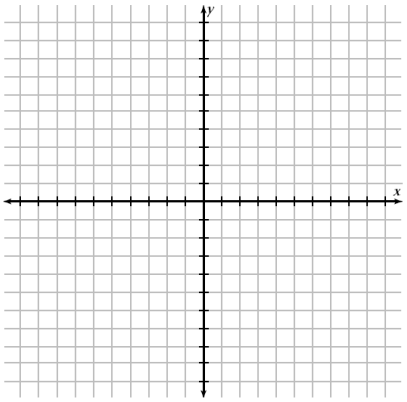
45) $x + 6 > 0$



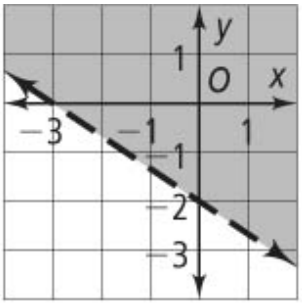
46) $5 - y \geq x$

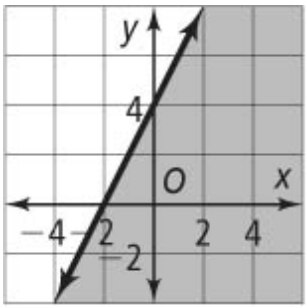


47) $5x - 2y < -10$



Write the inequality from each graph.

48) 

49) 

Find the x- and y-intercepts. Make sure to write the answers as ordered pairs.

50) $-6x+4y=36$

51) $y=4x$

52) $y=-4x+12$

53) $x=15$

54) $y=7$