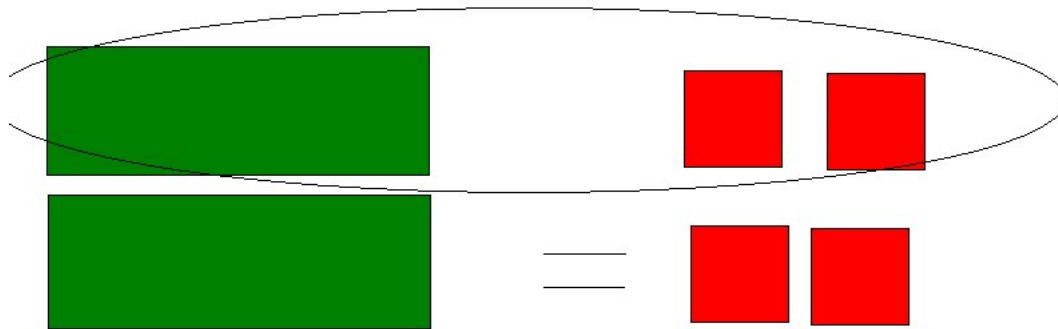




# Lawrence High School's Honors Algebra II 2019 Required Summer Assignment



$$x=2$$

$$2x/2=4/2$$



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To incoming Honors Algebra II Students:

To be best prepared for Honors Algebra II in September, you are assigned this mandatory summer review packet. You will submit this completed packet within the first full week of school. This assignment will be graded, and count as the first quiz of the first marking period. If you are struggling with concepts/material, below are some resources for you to reference.

**Google Classroom Group Code:**

- Go to [www.classroom.google.com](http://www.classroom.google.com)
- Click on I'm a Student
- Enter access code to access the class.
- **CODE 8mxhh2y**

This Google group has been established to provide you, the students, with support as a group. If you are struggling with concepts/material, there is a blog option to post questions to one another. In addition, you have the educational resources listed below for additional assistance. Remember the math course from the current school year is the prerequisite course for the course you have enrolled into for the Fall. Your personal notebook and handouts from this year's class are resources at your disposal.

**Directions:**

- Complete ALL problems.
- Show all work for every problem on a separate piece of paper, with your name on each sheet
- Your work should be neatly organized and clearly labeled.

**Scoring/Grading:** The Honors Algebra II Packet is worth a total of 40 points

- Each problem is worth 1 point
- Any problem with no work shown will receive 0 points.
- Your teacher will enter your earned grade into Genesis, which will become part of your first marking period grade.
- There will be a short quiz after selected Packet material is reviewed in class.

**Resources:** For additional examples and support you can reference any of the sites listed below and search the skill/concept.

- [www.algebra1.com](http://www.algebra1.com)
- KhanAcademy.com
- You Tube.com or Teacher Tube.com
- MathsPower4u.com
- IXL.com

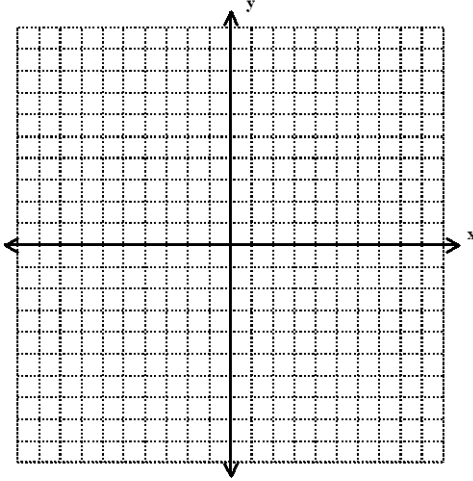
Lawrence High School  
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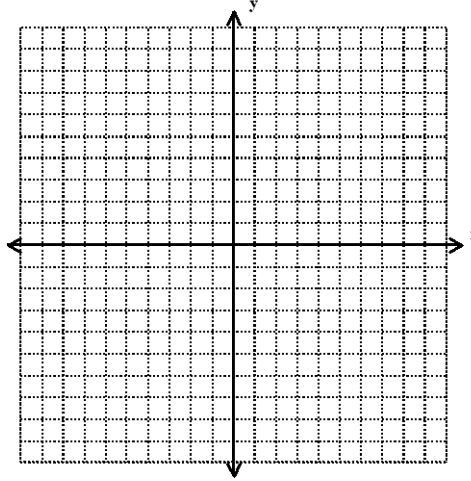
### Linear Equations

Graph the following linear equations.

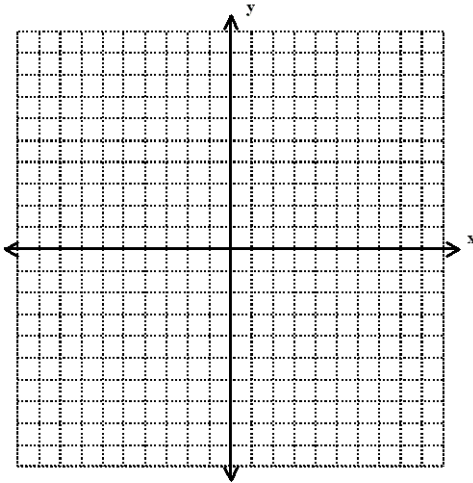
1.  $y = \frac{1}{2}x - 3$



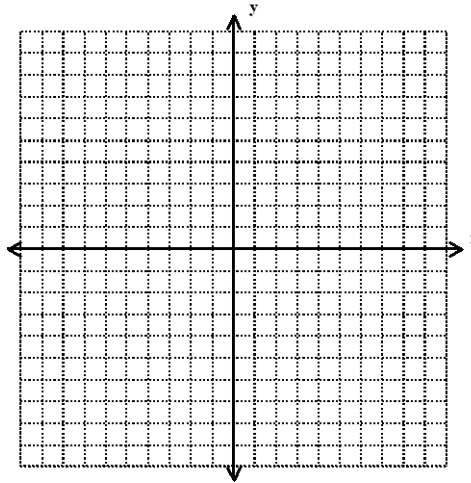
2.  $2x + 3y = 6$



3.  $x = 3$



4.  $Y = -1$





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**Determine the linear equation, in slope intercept form, given the information:**

5. line that goes through the point (2,1)  
And has a slope of 0
6. Line that goes through the point (1,5) and the  
slope is undefined
7. line that goes through these points  
(3, 2) and (-1, 1)
8. Line that goes through the point (4, 5) and is  
perpendicular to the line  $y = 4x - 2$
9. line that has a slope of 2 and goes  
through the origin
10. Line that goes through the point (-5, -2) and is  
parallel to the line  $y = -\frac{3}{4}x + 2$

**Perform the operation(s). Write the fractional answers in simplest form.**

11.  $\frac{5}{8} - \frac{5}{12} + \frac{1}{6}$

12.  $\frac{2x}{5} + \frac{x}{10}$

13.  $\frac{11}{x} \div \frac{3}{4}$

14.  $\left(\frac{2}{5} \div 4\right) - \left(4 \cdot \frac{3}{8}\right)$

15. 
$$\frac{\frac{2}{3(-2-6)}}{-\frac{2}{5}}$$

**Perform the operations.**

16.  $(6x + 5) - (8x + 15)$

17.  $(2x^2 + 1) - (x^2 - 2x + 1)$

18.  $-4(2x + 1)$

19.  $(x + 3)(x - 4)$

20.  $(7x + 1)(4x - 3)$

21.  $(2x - 5y)^2$



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**Factor the following expressions.**

22.  $4x + 16$

23.  $x^3 - x^2$

24.  $x^2 + x - 2$

25.  $x^2 + 5x + 6$

26.  $x^2 - x - 6$

27.  $3x^2 - 5x + 2$

28.  $2x^2 - x - 1$

29.  $5x^2 + 26x + 5$

30.  $2x^2 - x - 21$

**Use the distance and/or the midpoint formulas for #31 & 32:**

31. Find the midpoint and the distance between the points  $(-2, 1)$  and  $(3, 4)$

32. Show that the points  $(2, 1)$ ,  $(4, 0)$  and  $(5, 7)$  are the vertices of a right triangle.

**Make sure you know the perfect square for numbers 1 through 12 and 15. Know the perfect cubes 1 through 5.**

**Simplify the following radicals.**

33.  $\sqrt{81}$

34.  $\sqrt{8}$

35.  $\sqrt{32}$

**Solve the equations.**

36.  $3x - 5 = 2x + 7$

37.  $4y + 2 - 5y = 7 - 6y$

38.  $\frac{5x - 4}{5x + 4} = \frac{2}{3}$

**Solve the inequality and graph on a number line.**

39.  $-7x \geq x - 24$

40.  $4(x + 1) < 2x + 3$

