Honors Geometry
Summer Assignment 2019
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Note: This assignment is optional and will not be graded. However, you are encouraged to review all the topics and attempt the problems.

Instructions:

- There will be a test the first week or two of school on the following six topics. These topics are topics covered in previous math classes.
- Make sure to show **ALL** your work!
- If you feel that you are having trouble with any particular topic, email me. I can give you more practice and walk you through the steps to ensure that you are ready to take the course.
- The purpose of this summer assignment is for me to make sure you understand these concepts going into the school year and are ready for honors level work.
- **Calculators should not be used for the summer assignment.** We will **NOT** be using calculators during the school year, until we start doing trigonometry. Adding, subtracting, multiplying, dividing, etc. should be done on paper or mentally. This summer is the opportunity to practice your math skills without a calculator.
- During the summer break you will have the opportunity to email me, ask questions, and prepare for this test. I will be checking my email during the summer. Try to do a little work each week.

Topic 1: Order of Operations, Adding, subtracting, multiplying and dividing integers.

1) $8 - 1 - (18 - 2) \div 8$

2) $10 + 3 - (-8)$

3) $7 \times 5 \times -5$

4) $\frac{60}{-15}$

5) $-1 - 10$

Topic 2: Fractions and Decimals.

1) Write each as a decimal. Use repeating decimals when necessary.
   a) $\frac{1}{111}$ b) $\frac{1}{125}$

2) Write each as a fraction.
   a) 0.005 b) 0.27

3) Solve: $(-1\frac{7}{8}) + (-3\frac{1}{2})$

4) Solve: $2\frac{4}{5} - \frac{5}{8}$

5) Solve: $8.7 + 3.8 + 12.3$

6) Solve: $(-5.6) - (-12.6) + (-6.6)$

7) Write each as a decimal. Round to the thousandths place.
   a) 0.3% b) 445%

8) Write each as a percent. Round to the nearest tenth of a percent.
   a) 3.63 b) 0.03

9) Write each as a fraction.
   a) 71% b) 58%

10) Write each as a percent. Use repeating decimals when necessary.
   a) $\frac{1}{10}$ b) $\frac{3}{8}$

11) Find the product. $(-1\frac{5}{7}) \times (-2\frac{1}{2})$

12) Find the quotient. $(-3\frac{7}{10}) \div (2\frac{1}{4})$

13) Find the product. $8.1 \times 8.6 \times -5.2$

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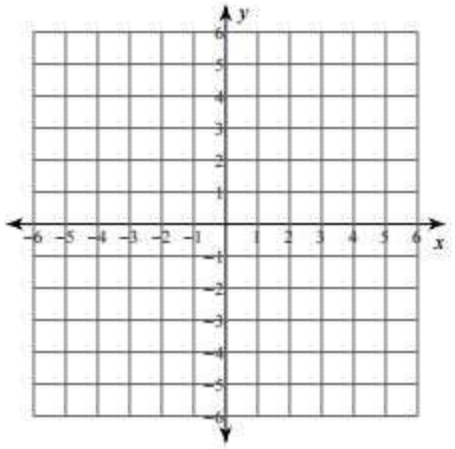
Topic 3: Linear Equations and Slope.

1) Graph.

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

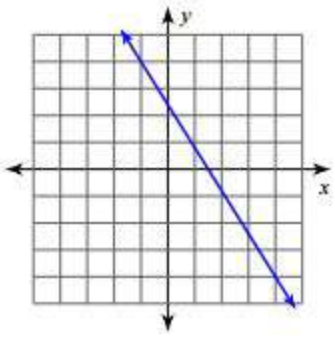


2) Write slope-intercept form of the equation. $11x - 8y = -48$

3) Write the standard form of the equation of the line through the given point with the given slope. Through (-1 ,2), slope = 2

4) Write the point-slope form of the equation of the line described. Through (-4, -1), parallel to $y = -\frac{1}{2}x - 1$

5) Find the slope from the graph.



6) Find the slope. $-30 + 10y = -2x$

7) Find the slope from these two points. (9 , 3) and (19, -17).

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Topic 4: Solving Equations.

1) $\frac{x}{-4} - 5 = -8$

2) $\frac{r - 8.7}{3.6} = 3.722$

3) $-5(1 - 5x) + 5(-8x - 2) = -4x - 8x$

4) $24a - 22 = -4(1 - 6a)$

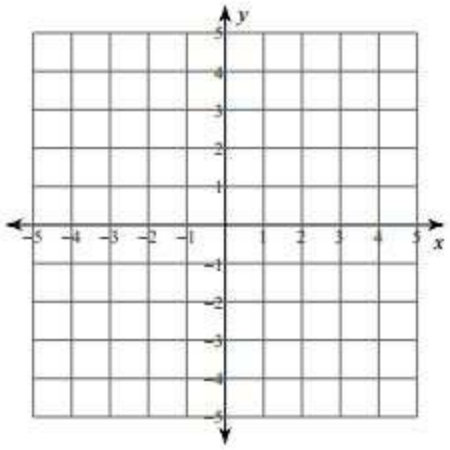
5) $56 = \frac{x}{20}$

Topic 5: Solving systems of equations.

1) Use graphing.

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

$y = -x + 1$



2) Use elimination.

$3 + 2x - y = 0$
$-3 - 7y = 10x$

3) Use substitution.

$-2x - y = -9$
$5x - 2y = 18$

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Topic 6: Square Roots.

1) Simplify.
   a) $-3\sqrt{7} - 2\sqrt{8} - 4\sqrt{6} - 2\sqrt{8}$

   b) $\sqrt{5}(-4\sqrt{6} + \sqrt{10})$

   c) $\dfrac{3\sqrt{3}}{\sqrt{5}}$

   d) $\dfrac{3\sqrt{5}}{2\sqrt{2}}$