

Welcome Algebra Students!!!

Algebra: *noun*

Generalized version of arithmetic that uses variables to stand for unspecified numbers. Its purpose is to solve algebraic equations or systems of equations.

Your summer assignment is due the first day of school, Sept. 4, 2014.

If you successfully completed the Integrated Algebra Regents Exam in June, do the Geometry assignment on the back of this sheet.

Upon entering Integrated Algebra, there are certain topics with which you should be competent. Watch the online videos and take notes for the following chapters and sections:

1 - 1, 1 - 2, 1 - 3, 2 - 4, 2 - 5, 3 - 1.

Use the link below to access videos to aid in reviewing these topics.

http://www.jmap.org/JMAP_INTEGRATED_ALGEBRA_PEARSON_RESOURCES.htm

Present your answers and solutions to the questions below as you would like. [Write it out, type it, make a presentation, make a comic strip, make a video, write a song, etc.] Be creative! Please pay attention to detail and make sure your work is complete and correct.

Here are the questions:

- 1) What is algebra and why do we need it? How have you used algebra in your life (outside of math class)? **Provide an example.**
- 2) How is an expression different from an equation? **Provide an example.**
- 3) Solve for x . $2x - 5 = 11$ **Explain your steps.**
- 4) Emily said that the absolute value of any real number is always greater than or equal to the number. Do you agree with Emily? **Explain your answer.**
- 5) **Explain why 2 is the only even prime.**
- 6) The sum of two numbers is positive. One of the numbers is negative. Is the other number positive or negative? **Explain your answer.**
- 7) a. **Explain why the sum of a and 4 can be written as $a + 4$ or as $4 + a$.**
b. **Explain why 3 less than a can be written as $a - 3$ but not as $3 - a$.**

Welcome Geometry Students!!!

Geometry: *noun*

the branch of mathematics concerned with the properties and relations of points, lines, surfaces, solids, and higher dimensional analogs.

Congratulations on passing the Algebra Regents and/or Common Core exam. Your summer assignment is due the first day of school, Sept. 4, 2014.

It is important that you continue to develop your mathematical skills over the summer. Please watch the online Pearson videos and take notes for Chapter 1 (Tools of Geometry) and Chapter 2 (Reasoning and Proof). You can find the videos at the following link.

http://www.jmap.org/JMAP_GEOMETRY_PEARSON_RESOURCES.htm

After watching the videos, answer the questions below in complete sentences. Your answers should be typed (single spaced) or neatly handwritten. This assignment is due on September 9th (the first day of school). This assignment will be graded and count toward your first marking period grade.

Answer the following questions:

1) Create a glossary of definitions for the following terms:

- | | |
|------------------------|----------------------------|
| a. Point | h. Complementary Angles |
| b. Line | i. Supplementary Angles |
| c. Plane | j. Vertical Angles |
| d. Line Segment | k. Conditional Statement |
| e. Ray | l. Inverse Statement |
| f. Parallel Lines | m. Converse Statement |
| g. Perpendicular Lines | n. Biconditional Statement |

2) A section of the United States west of the Mississippi river is called the Great Plains. Explain why this area may be called a plane but how it is unlike the mathematical plane.

3) If an obtuse angle is bisected, what kind of an angle is each of the two angles formed? Explain your reasoning.

4) Explain the difference between inductive and deductive reasoning.

5) What makes a good definition? Why are good definitions important? Explain why "A hammer is a tool" is not a good definition.