

Pre-Algebra Course Syllabus

Teacher: Mr. Stanton

Room: 311

Email: jstanton@highland.k12.wi.us

Course Description:

Pre-Algebra gives students a strong foundation in algebra while also preparing them for the future study of geometry, probability, and data analysis. The focus is to make difficult math concepts and methods understandable and help students develop and practice skills that involve logical reasoning and problem solving.

Required Text: Larson Pre-Algebra – Common Core Edition

Course Content:

Chapter 1: Variables & Expressions
Chapter 2: Solving Equations
Chapter 3: Multi-Step Equations & Inequalities
Chapter 4: Factors, Fractions, & Exponents
Chapter 5: Rational Numbers & Equations
Chapter 6: Ratio, Proportion, & Probability
Chapter 7: Percents
Chapter 8: Linear Functions
Chapter 9: Real Numbers & Right Triangles
Chapter 10: Measurement, Area, & Volume
Chapter 11: Data Analysis & Probability
Chapter 12: Angle Relationships & Transformations

Course Evaluation:

Highland Universal Grading Scale

A+ = 98-100

A = 93-97

A- = 90-92

B+ = 87-89

B = 85-86

B- = 83-84

C+ = 81-82

C = 76-80

C- = 74-75

D+ = 72-73

D = 67-71

D- = 65-66

F = ↓ 65

The following categories will be used as percentages to calculate your overall grade.

WAC – 5%

Daily Work - 10%

Quizzes – 25%

Tests – 60%

There is no rounding on quarter or semester grades. In other words 89.99 is a B+, whereas 90.00 is an A-.

WAC – Writing Across the Curriculum

You will be required to write one essay per quarter pertaining to mathematics. This writing will be graded as 5% of your quarter grade. The attached rubric will be used to evaluate your writing. You will be required to revise your writing until it reaches a minimum of 3 (proficient) on the rubric in all categories before the end of the quarter. Your WAC will be one of your test corrections (see below) from the current quarter.

Daily Work:

Homework will be given daily. You will have 2 days to complete homework, but it is in your best interest to do the assignment as completely as possible **the day the homework is assigned**. Questions may be asked the following day, but I will only take a limited amount of questions. We may also be using IXL Math for daily homework. Homework is a tool for you to use that will ensure your understanding of the material. **IT IS YOUR RESPONSIBILITY TO COMPLETE THE WORK. YOU WILL BE RESPONSIBLE TO KNOW THE MATERIAL!**

Homework Expectations:

To receive full credit:

- Complete work neatly on a **SEPARATE SHEET**
- Include a heading in the upper right hand corner (name, class, assignment, and date)
- **SHOW ALL OF YOUR WORK.**
- Homework can be checked in two parts
 - Correctness
 - 3-6 problems will be chosen at random to be checked for correct answers
 - Completeness
 - All other problems will be checked to see if they are complete, not necessarily correct.
 - IXL is graded on a score scale based on your IXL percentage as follows
 - 85-100 = 4
 - 60-84 = 3
 - 35-59 = 2
 - 1-34 = 1

- $0 = 0$

- Late homework will be accepted for a maximum of 50% until the day of the exam for the chapter
- In class/flipped notes will be turned in at the end of the chapter as a separate homework assignment. There will be not late work accepted for notes

Class readiness and responsibility checks will also count in your daily work grade. This grade reflects your preparedness for class. Materials you will need for class everyday include:

- Writing Utensil
- Notebook or loose leaf paper
- Class notes and worksheet
- Quiz Practices or Test Reviews
- Calculator (Suggested TI-30X IIs)

Quizzes:

There will be a quiz in every chapter and some chapters may have 2 quizzes. All quizzes are comprehensive. This means that I will quiz you on any material we have covered throughout the year. Quiz practices will be given two days before the quiz and are expected to be completed before you take the quiz.

Tests:

There will be one test per chapter. The chapter test will cover material from the current chapter only. Test reviews will be given at least two days before the test. This is not a homework assignment but is expected to be completed in order to help you study and as a pre-requisite to earn a test correction (see below).

Quiz/Test Makeup Guidelines:

A student who is absent the day of a test has two school days to make up the quiz/ test. Other circumstances will be dealt with individually. If you feel that you have a unique circumstance that deserves an exception, **please talk to me in advance.**

Retake/Redo Guidelines:

Any student may retake any quiz for full credit regardless of the initial grade. There is a retake form (see attached) that must be completed before every retake. Quiz questions answered correctly may be banked if retake process has been started within one week and the quiz practice has been completed prior to the quiz. After one week, questions are unbanked and you must retake the entire assessment. You may retake any quiz **as many times as needed** to show mastery of the content before the end of the grading period. There are no retakes on tests.

Quiz Retake Form Example:

Math Quiz Retake Form

Assessment _____ Class _____ Name _____

- ☐ 1. Quiz Practice must be **COMPLETE AND TURNED IN BEFORE THE QUIZ** in order to bank questions on the retake. Attach the original quiz and the completed practice to the back of this sheet and turn it into the basket.
- ☐ 2. Complete all extra practice problems. **SHOW ALL OF YOUR WORK!** Turn this packet into the basket.
- ☐ a. Redo incorrect extra practice problems **ON A SEPARATE SHEET OF PAPER!** Turn this packet into the basket.
- ☐ 3. Schedule a time to complete the retake. Keep this packet to study from and turn it into the basket when you come to complete the retake.

Additional Teacher Requirements

Student Signature _____

Teacher Signature _____

Redo Date _____ Time/Period _____

Quiz questions may be "banked". Only incorrect problems must be retaken. Quizzes may be retaken as many times as needed.

I reserve the right to refuse a retake at any point if I feel you are abusing the retake process.

Test Corrections:

First of all, test corrections are structured to be time-consuming. Test corrections can help to relearn the material that you did not fully grasp the first time around. If done correctly when needed, test corrections can be a huge help to improving your grade.

Test Corrections are not an alternative to completing daily checks, chapter reviews, or studying. The daily checks and test review are meant to help you gain an understanding of the material so that you can be successful on the test. **If a test review is not completed, you lose the opportunity to make test corrections!**

Corrections Scale:

Test Score Make Up Points

98% to 100%	No Corrections
95% to 97%	up to a 97%
90% to 94%	up to a 96%
85% to 89%	up to a 94%
80% to 84%	up to a 92%
75% to 79%	up to an 89%
70% to 74%	up to an 85%
65% to 69%	up to an 80%
Below 65%	up to a 75%

Rules:

1. Tests may **NOT** leave my room.
2. You may complete one test correction per test.

How to do a Proper Test Correction:

1. Every wrong answer must be corrected. And by corrected I mean correct. You have your book, notes, daily checks, and me as resources.
2. One correction per page (you may use front and back of notebook paper).
3. You must **show work for every step** of the corrected problem from the beginning! This applies even if you only have a half point taken off for labels, plus or minus, etc.
4. You must explain, in a paragraph, an explanation of how you solved the problem correctly using full sentences, correct grammar, and vocabulary. These should be step by step instructions that show an understanding of **why** you are doing certain steps, and **how you know** you can do each step, **not** just listing the steps. You should treat this like you are **teaching** another student the material.

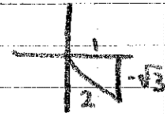
Test Correction Problem Example:

20. Find the trigonometric form of $4-4\sqrt{3}i$:

$$r(\cos\theta + i\sin\theta)$$

$$\begin{aligned} r &= \sqrt{4^2 + (4\sqrt{3})^2} \\ &= \sqrt{16 + 48} \\ &= \sqrt{64} \\ &= 8 \end{aligned}$$

$$\begin{aligned} \theta &= \tan^{-1}\left(\frac{-4\sqrt{3}}{4}\right) \\ &= \tan^{-1}(-\sqrt{3}) \\ &= -\pi/3 \\ &\quad 5\pi/3 \end{aligned}$$



$$8\left(\cos \frac{5\pi}{3} + i\sin \frac{5\pi}{3}\right)$$

The trigonometric form is $r(\cos\theta + i\sin\theta)$.

You will need to find this form from the standard form given $a+bi$. First you can find the r using the equation

$r = \sqrt{a^2 + b^2}$. Plug in the numbers given and simplify the answer. $r = \sqrt{4^2 + (4\sqrt{3})^2} = \sqrt{64} = 8$.

Next find the θ , to do this you use the equation $\theta = \tan^{-1}\left(\frac{b}{a}\right)$. Plug the numbers in $\theta = \tan^{-1}\left(\frac{-4\sqrt{3}}{4}\right) = \tan^{-1}(-\sqrt{3})$. Then

draw where you would find this on the coordinate plane to find the radian measure. You would find this triangle in Quadrant IV. The triangle will be

a $30^\circ, 60^\circ, 90^\circ$ triangle. You know this because the hypotenuse is 2, the adjacent side is 1 and the opposite side is $-\sqrt{3}$. The reference angle is a 60° or $\pi/3$.

However since this is a negative $\pi/3$, when need to use $5\pi/3$ because it is the same measurement but the positive direction.

Then add the θ and r you just found into the trig form. Your answer should be $8(\cos 5\pi/3 + i\sin 5\pi/3)$.

Name: _____ Date: _____

Math WAC Rubric

Category	4	3	2	1
Original Problem	The entire original problem is present, complete with directions, diagrams, etc.	The original problem is present, but is missing either the directions or diagram.	The original problem is present, but is missing both the directions and diagram.	The original problem is incomplete and is missing both the directions and diagram.
Work & Correct Answer	Every step of the problem is present and clear with no missing "mental math" steps. Uses graph paper and accurate diagrams if necessary.	Most steps of the problem are present and clear with a few "mental math" steps implied. Uses handmade "graph paper" or inaccurate diagram.	Some steps of the problem are present with a few "mental math" steps, but missing a few key components. Sloppy drawn graph paper or diagram.	Only a couple of steps of the problem are present with multiple "mental math" steps or missing key components. No graph paper or diagram.
Explanation of Process	Process of solving is detailed and complete. The "how" and "why" of each step is explained in detail. The explanation is effective "teaching" and could be used to solve future problems of the same structure.	Process of solving is complete. The "how" and "why" of each step is somewhat explained. The explanation could be used to solve the same problem, but not other problems of the same structure.	Process of solving is complete but vague. The "how" of each step is explained, but is missing the "why". The explanation only addresses the same problem, but structure is not examined.	Process of solving is incomplete. The "how" and "why" of each step are not addressed. The explanation would not "teach" how to solve this or other problems of the same structure.
Neatness	Well organized and overall neat presentation of paper. Handwriting is consistent and legible with good use of margins and spacing.	Well organized, but paper is frayed, crumpled, stained, etc. Handwriting is consistent and legible with minor inconsistencies in margins or spacing.	Basic organization, but paper has frayed edges, is crumpled, stained, etc. Handwriting can be read, but is sloppy or inconsistent. Margins and/or spacing are not well used.	Not well organized and paper is frayed, crumpled, stained, etc. Handwriting is difficult or impossible to read and is inconsistent in size, spacing, margins or use of space.
Structure, Grammar, Mechanics, & Spelling	All sentences are well constructed and have varied structure and length. Correct mathematical vocabulary is used appropriately, and there are no errors in grammar, mechanics, and/or spelling.	Most sentences are well constructed. Math vocabulary is present, but there are a few errors in grammar, mechanics, and/or spelling.	Sentences are well constructed, but they have a similar structure and/or length. Limited or incorrect mathematical vocabulary and several errors in grammar, mechanics, and/or spelling.	Sentences sound awkward, are repetitive, or difficult to understand. No mathematical vocabulary and numerous errors in grammar, mechanics, and/or spelling.

Mental Math:

We will have Mental Math Monday every week unless otherwise stated. Mental Math is extra credit toward your daily work. **MENTAL MATH DOES NOT COUNT AGAINST YOU!**

There will be 10 questions that I feel you should be able to do in your head without writing down any work. You may not use your book, notes, or a calculator. You will only write down the answers to the questions on the board. Again this does not count against you, so give every question your best effort. Five extra credit points may be used to get points back on quizzes if you have a qualifying mistake (missed positive or negative, simple math error, etc.) that will be determined by Mr. Stanton. If you have more than 20 mental math points left at the end of the quarter they can be used to “round up” your final grade. For example an 82.5% (C+) could be rounded up to an 83% (B-). Each week you can get a maximum of 10 extra credit points and a minimum of 3 if you give your best effort.

If we do not have school on Monday we will not have Mental Math. If you are absent for a Mental Math, there is no opportunity for a makeup. You simply will not receive any extra credit that week.

Website:

My website can be accessed from the Highland High School webpage by following the links from high school, to high school staff, then by clicking on the website link below my name.

There will be valuable links to each class that will include; an outline of the notes we will cover in class, the homework from that week, and videos that are recorded every day from the lecture in class. These videos record the lesson from the SMART board that we covered in class, and can be very helpful when studying outside of school or in case of an absence.

Flipped Classroom:

We will be frequently doing what’s called a flipped classroom. This is where you will watch the video of the lecture the **night before class**. Then, class time will be used for homework. This way I am available to help you with all of the homework and it will give us more time to have discussions about concepts and analysis of the material.

This only works if you commit to watching the videos and taking notes ahead of time! You will not be able to complete the homework in class without first watching the lesson.

If you do not have access to high speed internet at home, I have flash drives that I will load the video lessons onto and you will be allowed to check out both a flash drive and a netbook if needed. **PLEASE TALK TO ME AHEAD OF TIME IF THIS IS THE CASE.**

General Classroom Policies:

The classroom is a place for learning and exploration. Failure is simply our First Attempt In Learning. As such, it is essential that each of us work to create and maintain that environment. To that end each student is expected to:

- Come to class on time, **with all required materials**, ready to learn
- Actively participate; both in individual and group work, as well as discussion
- Respect each other, the teacher, and the environment
- Take responsibility for your learning, **ask questions when necessary**
- Any violations of school rules or disrespect will be subject to:
 - Verbal reminders
 - Retention after class/resource/school
 - Office referral
 - Detention & parent contact
- Encourage active participation and healthy group discussions by:
 - Acknowledging participation – even if incorrect
 - Allowing explanations
 - No negative comments such as “That’s so dumb”
 - Any other words/phrases I find offensive
- CELL PHONES/HEADPHONES/CHROMEBOOKS/ETC.
 - There will be **no electronics** allowed in the classroom for any reason unless otherwise stated
 - If I **see** or hear (even on vibrate) a cell phone/smartwatch/headphones/Chromebook I will take it and it can be picked up at the end of the day.

Highland High School
1030 Cardinal Drive
Highland, WI 53543

- ☐ I understand the homework policy and agree that math requires repetition to achieve mastery; therefore time should be spent on math outside of class. **This time varies depending on the individual and difficulty of the material.** Adequate time should be spent to achieve desired level of mastery.
- ☐ I understand the quiz and test policy, and agree to take advantage of every opportunity given to improve in mathematics.
- ☐ I am aware of the website and the resources it provides.
- ☐ I understand the flipped classroom and agree to watch all necessary videos, when assigned, to be prepared for class.
- ☐ I have read the student contract and understand the course requirements, guidelines and classroom policy for math class.
- ☐ I understand that **my grade in this class is a reflection of how well I know the material and not based on effort.**
- ☐ I understand the **policy for cell phone/smartwatch/headphones/Chromebook** in the classroom.

Date: _____

Student's Signature _____

Parent/Guardian Signature _____