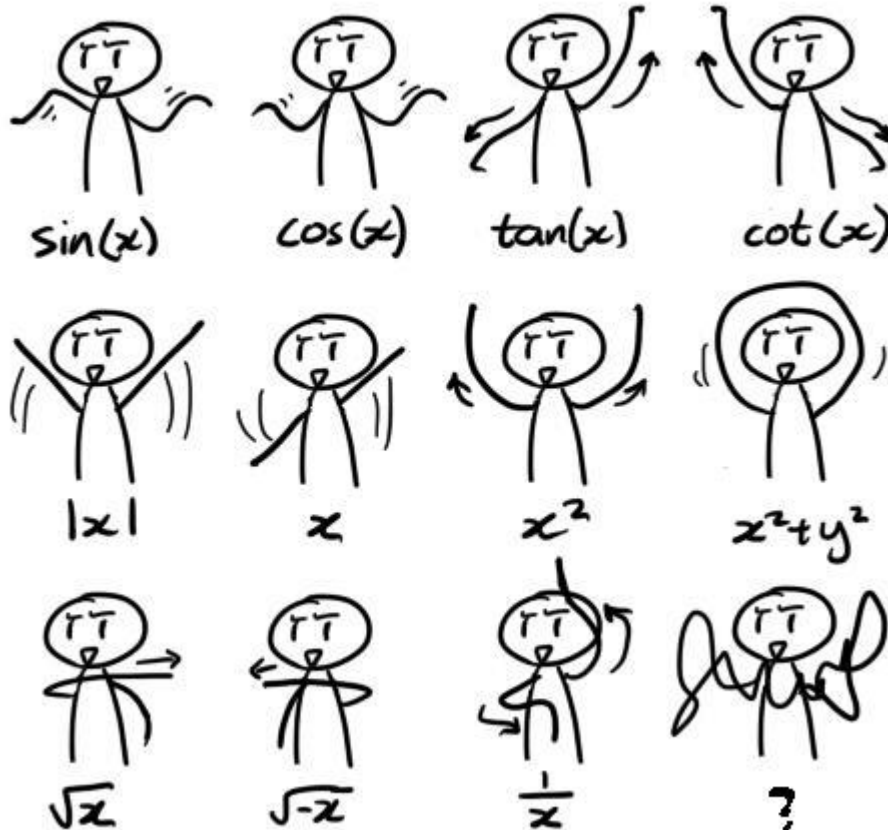


Algebra 2

Quarter Three

Beautiful Dance Moves



"The only way to learn mathematics is to do mathematics" –Paul Halmos

Overview

Lessons will be given in class. You will have multiple mini lessons throughout the week. If you are struggling with a concept, it is your responsibility to review the lessons and ask questions. I will answer any questions you have during the lesson but after that we will follow the “three before me” principle. You must ask three of your peers before you ask me for help.

Math Journal: I encourage use of your Algebra II journal during lessons and work time. I advise you to use your journal to take notes during lessons and to work on assignments. Make sure it is neat and organized. Any and all important information from the lessons should be kept in this journal. You will be able to use your journals for formative assessments (quizzes).

General Guidelines:

Problem Sets – 40% of your grade is based on completing each homework assignment.

Homework Assignments Are Recommended Problems For Learning (and are required to pass this class!!). It is recommended that you do the assignments or similar math problems in order for you to understand and retain the concepts. Use the work period to ask for help from your peers and teacher. **You will submit pictures of your assignments through Google Classroom by Sunday night (11:59pm) each week.**

Quizzes/Assessments – Quizzes/Assessments make up 30% of your grade and you must complete each quiz/assessment prior or on the date it is scheduled. **Remember: you can always use your notebook on quizzes and exams.** You must make at least 70% to “pass” the quiz/assessment. If you do not pass a quiz, you may retest using a similar exam during my tutoring hours. You may also correct quizzes for half the remaining credit.

Final Assessment – The final will make up 30% of your grade. You will not be able to make up the final exam. That is why it is important that you record the notes from the lessons and you do the suggested homework assignments. Practice the concepts in order to master them. **Your final project is also a part of your final assessment grade.**

Lessons: Linear Systems and Matrices, and Quadratic Functions and Factoring

Big Ideas

- 1) Use the properties of exponents to graph and manipulate polynomials
- 2) Factoring and simplifying polynomial expressions
- 3) Applying the properties and operations of rational exponents
- 4) Graphing radical functions

Vocabulary

- 1) Radical
- 2) Inverse
- 3) Exponential Growth
- 4) Logarithm
- 5) Polynomial
- 6) Polynomial Long Division

Individual work

Guiding question 5:

How can we apply our knowledge of parabolas and quadratic functions in order to solve higher order polynomials? How can we model real world scenarios with polynomials?

1) **4.8 Use the Quadratic Formula and the Discriminant:**

_____ p.296 #'s 3 through 39 (odds)

2) **4.9 Graph and Solve Quadratic Inequalities:**

_____ p.304 #'s 3 through 25 (odds)

_____ p.305 #'s 47 through 47 (odds)

_____ **QUIZ FOR LESSONS 4.8 - 4.10 (January 3rd)**

3) **5.1 Use Properties of Exponents**

_____ p. 333 #'s 3 through 35 (odds)

4) **5.2 Evaluate and Graph Polynomial Functions**

_____ p. 341 #'s 3 through 49 (odds)

5) **5.3 Add, Subtract, Multiply Polynomials**

_____ p. 349 #'s 3 through 25 (odds)

_____ p. 350 #'s 52 through 55 (all)

6) **5.4 Factor and Solve Polynomial Equations**

_____ p. 356 #'s 3 through 29 (odds)

_____ p. 358 #'s 58, 59, 60, 61

7) **5.5 Apply the Remainder and Factor Theorems**

_____ p. 366 #'s 3 through 9 (all), 21-28 (all)

_____ **CHAPTER 5 ASSESSMENT (January 21st)**

Guiding question 6:

How do we manipulate radical expressions? What connection is there between squares and square roots? What techniques can we take advantage of to simplify radical expressions?

8) 6.1 Evaluate n^{th} Roots

_____ p. 417 #'s 3 through 31 (odds)

_____ p. 418 #'s 60, 61, 63

9) 6.2 Apply Properties of Rational Exponents

_____ p. 424 #'s 3 through 39 (odds)

_____ p. 425 #'s 71 through 77 (odds)

10) 6.3 Perform Function Operations and Composition

_____ p. 432 #'s 3 through 35 (odds)

_____ QUIZ FOR LESSONS 6.1 – 6.3 (March 3rd)**11) 6.4 Use Inverse Functions**

_____ p. 442 #'s 3 through 27 (odds)

_____ p. 444 #'s 46, 47, 49

12) 6.5 Graph Square Root and Cube Root Functions

_____ p. 449, #'s 3 through 33 (odds)

13) 6.6 Solve Radical Equations

_____ p. 456, #'s 3 through 31 (odds)

_____ CHAPTER 6 ASSESSMENT (March 13th)

Guiding question 7:

How do we model population growth in Biology and compound interest in Finance? Is there any special growth rates? How do we graphically represent large ranges?

14) 7.1 Graph Exponential Growth Functions

_____ p. 482 #'s 3 through 29 (odds)

_____ p. 484 #'s 35, 36, 37

14) 7.2 Graph Exponential Decay Functions

_____ p.489 #'s 3 through 23 (odds), 30

15) 7.3 Use Functions Involving e

_____ p.495 #'s 3 through 49 (odds)

_____ QUIZ FOR LESSONS 7.1 – 7.3 (March 24th)**16) 7.4 Evaluate Logarithms and Graph Logarithmic Functions**

_____ p. 503 #'s 3 through 43 (odds)

17) 7.5 Apply Properties of Logarithms

_____ p. 510 #'s 3 through 42 (odds)

Final Assessment Week of April 3rd:

_____ Chapter 5, 6, 7 Final

_____ Final Project