***Welcome to Pre-Calculus!***

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You are not alone during this distance learning situation. We are all in this together. I will learn from you and you from me and other appropriate resources. Hang in there folks.

**Materials:**

* Computer device, Scientific Calculator or Graphing Calculator
* Notebook, pencil, folder, and big eraser

**Classcodes for Google Classroom:** **Classcodes for Khan Academy:**

Pre-Calculus 3rd       enzlyts Pre-Calculus 3rd       Z2X9C5TB

Pre-Calculus 4th       m66eugr Pre-Calculus 4th       TZDYVU4U

**Teacher Advice:**

* Math is not a spectator sport. You cannot learn much mathematics just by watching other people do it.  You must engage.
* Connect with others during this novel COVID-19 time.
* You are expected to schedule time for each course an average of 15-30 minutes per school day.
* You are expected to learn many things by reading, but school is designed so that you do not have to learn everything by yourself.
* If you do not understand immediately, don’t give up.  Try YouTube videos and Khan Academy HINTS.

I look forward to working with every single one of you!  Hang in there and be nice to yourself!!!  You can and will be successful!  **T. J. Manthey**

***LEARNING TARGETS for chapters 7, 9, 8, 11***

**Chapter 7 - Trigonometric Identities and Equations (7.1-7.5)**

LT#1 ---

LT#2 I can simplify trigonometric expressions using reciprocal, quotient, and Pythagorean identities. 7.1

LT#3 I can find a trigonometric value given information about another trig function and/or the quadrant. 7.1-7.2

LT#4 I can use algebraic manipulation and established trigonometric identities to verify other trigonometric identities. 7.2

LT#5 I can use the sum or difference, double angle, and half angle identities to find an exact value. 7.3-7.4

LT#6 I can use trigonometric identities to solve trigonometric equations. 7.5

**Chapter 9 – Polar Coordinates and Complex Numbers (9.1-9.3, 9.5-9.8)**

LT#7 I can plot ordered pairs given in polar coordinates and I can graph basic polar equations. 9.1-9.2

LT#8 I can determine the distance between two points in polar form. 9.1

LT#9 I can convert between polar and rectangular coordinates and equations. 9.3

LT#10 I can add, subtract, multiply, and divide complex numbers. 9.5

LT#11 I can convert complex numbers between polar and rectangular forms and give their graphs. 9.6

LT#12 I can find the products and quotients of complex numbers in polar form. 9.7

LT#13 I can find powers and roots of complex #’s in polar and rectangular forms using DeMoivre’s Theorem. 9.8

**Chapter 8 – Vectors and Parametric Equations (8.1-8.7, 10.6)**

LT#14 I can write and graph vectors in 2-D and 3-D and Write vectors as a sum of unit vectors. 8.2-8.3

LT#15 I can add, subtract, and use scalar multiplication to find the magnitude of a vector. 8.1-8.3

LT#16 I can find the angle between two vectors and the magnitude of a resultant given two vectors in either rectangular or polar form. 8.5

LT#17 I can find the inner (dot) product of two vectors and I understand that this result is a number which can be used to determine the perpendicularity of the two vectors. 8.4

LT#18 I can find the cross product of two vectors and I understand that this vector is perpendicular to both of the original two vectors. 8.4

LT#19 I can use vectors to model and solve real world problems. 8.5

LT#20 I can convert a linear equation to parametric form and vice versa. 8.6

LT#21 I can model the motion of a projectile using parametric equations. 8.7

LT#22 I can identify and find a rectangular equation for a curve defined parametrically and vice versa. 10.6

**Chapter 11 – Exponential and Logarithmic Functions (11.1-11.7)**

LT#23 I can solve exponential equations. 11.1

LT#24 I can use the properties of exponents to simplify and evaluate expressions. 11.1-11.2

LT#25 I can graph an exponential function or inequality. 11.2

LT#26 I can write an equation that models exponential growth or decay and use it to make predictions. 11.2-11.3

LT#27 I can simplify and evaluate logarithmic expressions and solve logarithmic equations using the properties of logarithms. 11.4

LT#28 I can graph logarithmic functions and inequalities. 11.4

LT#29 I can solve logarithmic equations using common or natural logs. 11.5-11.6

LT#30 I can model real world situations using exponential and logarithmic functions. 11.5-11.7

***Honors Pre-Calculus B***

***Required Learning Targets***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Book Section** | **LEARNING TARGET** | **LT #** | **EFFORT NEEDED** | **DONE** | **RETEST DONE** |
| 7.1 | I can simplify trigonometric expressions using reciprocal, quotient, and Pythagorean identities. | **2** |  |  |  |
| 7.1–7.2 | I can find a trigonometric value given information about another trig function and/or the quadrant.  | **3** |  |  |  |
| 7.2–7.4 | I can use algebraic manipulation and established trigonometric identities to verify other trigonometric identities. | **4** |  |  |  |
| 7.3–7.4 | I can use the sum or difference, double angle, and half angle identities to find an exact value.  | **5** |  |  |  |
| 7.5 | I can use trigonometric identities to solve trigonometric equations. | **6** |  |  |  |
| 7.5 | I can express my solutions in the correct form (radians, degrees, principal values, and all reals). (embedded) |  |  |  |  |
| 9.1–9.2 | I can plot ordered pairs given in polar coordinates and I can graph basic polar equations. | **7** |  |  |  |
| 9.1 | I can determine the distance between two points in polar form.  | **8** |  |  |  |
| 9.3 | I can convert between polar and rectangular coordinates and equations.  | **9** |  |  |  |
| 9.5 | I can add, subtract, multiply, and divide complex numbers.  | **10** |  |  |  |
| 9.6  | I can convert complex numbers between polar and rectangular forms and give their graphs.  | **11** |  |  |  |
| 9.7 | I can find the products and quotients of complex numbers in polar form.  | **12** |  |  |  |
| 9.8 | I can find powers and roots of complex #’s in polar and rectangular forms using Demoivre’s Thm | **13** |  |  |  |
| 8.1-8.3 |  I can write & graph vectors in 2-D & 3-D and Write vectors as a sum of unit vectors. | **14** |  |  |  |
| 8.2–8.3 | I can add, subtract, and use scalar multiplication to find the magnitude of a vector.  | **15** |  |  |  |
| 8.5 | I can find the angle between two vectors and the magnitude of a resultant given two vectors in either rectangular or polar form. | **16** |  |  |  |
| 8.4 | I can find the inner (dot) product of two vectors and I understand that this result is a number which can be used to determine the perpendicularity of the two vectors | **17** |  |  |  |
| 8.4 | I can find the cross product of two vectors and I understand that this vector is perpendicular to both of the original two vectors.  | **18** |  |  |  |
| 8.5 | I can use vectors to model and solve real world problems.  | **19** |  |  |  |
| 8.6 | I can convert a linear equation to parametric form and vice versa. | **20** |  |  |  |
| 8.7 | I can model the motion of a projectile using parametric equations. | **21** |  |  |  |
| 10.6 | I can identify and find a rectangular equation for a curve defined parametrically and vice versa. | **22** |  |  |  |
| 11.1 | I can solve exponential equations.  | **23** |  |  |  |
| 11.1–11.2 | I can use the properties of exponents to simplify and evaluate expressions. | **24** |  |  |  |
| 11.2 | I can graph an exponential function or inequality.  | **25** |  |  |  |
| 11.2–11.3 | I can write an equation that models exponential growth or decay and use it to make predictions.  | **26** |  |  |  |
| 11.4 | I can simplify and evaluate logarithmic expressions and solve logarithmic equations using the properties of logarithms.  | **27** |  |  |  |
| 11.4 | I can graph logarithmic functions and inequalities. | **28** |  |  |  |
| 11.5–11.6 | I can solve logarithmic equations using common or natural logs.  | **29** |  |  |  |
| 11.5–11.7 | I can model real world situations using exponential and logarithmic functions. | **30** |  |  |  |