Pre-calculus Lesson Plan

| Week of: <br> May 15 | Lesson | Objective | Activities, Methods, or <br> Procedures | Homework |
| :--- | :--- | :--- | :--- | :---: |
| Monday | Review for semester exam | $\bullet$ | $\bullet$ | $\bullet$ |
| Tuesday | Semester exams | $\bullet$ | $\bullet$ | $\bullet$ |
| Wednesday | Semester exams | $\bullet$ | $\bullet$ | $\bullet$ |
| Thursday |  | $\bullet$ | $\bullet$ | $\bullet$ |
| Friday |  | $\bullet$ | $\bullet$ | $\bullet$ |


| Week of: May 8 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | 12.4 Derivatives | - Find instantaneous rates of change by calculating derivatives <br> - Use the product and quotient rules to calculate derivatives | - Teacher led examples <br> - Student practice | - Per homework guide |
| Tuesday | 12.4 Derivatives | - Find instantaneous rates of change by calculating derivatives <br> - Use the product and quotient rules to calculate derivatives | - Teacher led examples <br> - Student practice | - Per homework guide |
| Wednesday | 12.5 Area under a curve and integration | - Approximate the area under a curve using rectangles <br> - Approximate the area under a curve using definite integrals and integration | - Teacher led examples <br> - Student practice | - Per homework guide |
| Thursday | 12.5 Area under a curve and integration | - Approximate the area under a curve using rectangles <br> - Approximate the area under a curve using definite integrals and integration | - Teacher led examples <br> - Student practice | - Per homework guide |
| Friday | Quiz 12.4-12.5 | $\bullet$ | $\bullet$ | - |


| Week of: May 1 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | Quiz 12.1-12.2 | - | - | - |
| Tuesday | 12.3 Tangent lines and velocity | - Find instantaneous rates of change by calculating slopes of tangent lines <br> - Find average and instantaneous velocity | - Teacher led examples <br> - Student practice | - Per homework guide |
| Wednesday | 12.3 Tangent lines and velocity | - Find instantaneous rates of change by calculating slopes of tangent lines <br> - Find average and instantaneous velocity | - Teacher led examples <br> - Student practice | - Per homework guide |
| Thursday | Test 12.1-12.3 | - | $\bullet$ | - |
| Friday | 12.4 Derivatives | - Find instantaneous rates of change by calculating derivatives <br> - Use the product and quotient rules to calculate derivatives | - Teacher led examples <br> - Student practice | - Per homework guide |


| Week of: <br> April 24 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | Chapter 7 test | $\bullet$ | - | - |
| Tuesday | 12.1 estimating limits graphically | - Estimate limits of functions at fixed values <br> - Estimate limits of functions at infinity | - Teacher led examples <br> - Student practice | - Per homework guide |
| Wednesday | 12.1 estimating limits graphically | - Estimate limits of functions at fixed values <br> - Estimate limits of functions at infinity | - Teacher led examples <br> - Student practice | - Per homework guide |
| Thursday | 12.2 evaluating limits algebraically | - Evaluate limits of polynomial functions at selected points <br> - Evaluate limits of polynomial functions at infinity | - Teacher led examples <br> - Student practice | - Per homework guide |
| Friday | 12.2 evaluating limits algebraically | - Evaluate limits of polynomial functions at selected points <br> - Evaluate limits of polynomial functions at infinity | - Teacher led examples <br> - Student practice | - Per homework guide |


| Week of: April 17 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | No School | - | - | - |
| Tuesday | 7.5 Parametric Equations | - Graph parametric equations. <br> - Solve problems related to the motion of projectiles. | - Teacher led examples <br> - Student practice | - Per homework guide |
| Wednesday | 7.5 Parametric Equations | - Graph parametric equations. <br> - Solve problems related to the motion of projectiles. | - Teacher led examples <br> - Student practice | - Per homework guide |
| Thursday | Review | - | - | - |
| Friday | Chapter 7 test |  | - | - |


| Week of: April 10 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | 7.4 Rotations and Conic Sections | - Find rotation of axes to write equations of rotated conic sections <br> - Graph rotated conic sections | - Teacher led examples <br> - Student practice | - Per homework guide |
| Tuesday | 7.5 Parametric Equations | - Graph parametric equations. <br> - Solve problems related to the motion of projectiles. | - Teacher led examples <br> - Student practice | - Per homework guide |
| Wednesday | 7.5 Parametric Equations | - Graph parametric equations. <br> - Solve problems related to the motion of projectiles. | - Teacher led examples <br> - Student practice | - Per homework guide |
| Thursday | Chapter 7 test | $\bullet$ | $\bullet$ | $\bullet$ |
| Friday | No School |  | $\bullet$ | $\bullet$ |


| Week of: April 3 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | Students out for track | - | - | - |
| Tuesday | Homework day (7.1-7.3) | - | - | - |
| Wednesday | 7.4 Rotations and Conic Sections | - Find rotation of axes to write equations of rotated conic sections <br> - Graph rotated conic sections | - Teacher led examples <br> - Student practice | - Per homework guide |
| Thursday | 7.4 Rotations and Conic Sections | - | - Teacher led examples <br> - Student practice | - Per homework guide |
| Friday | No School |  | - | - |


| Week of: March 27 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | 7.2 Ellipse | - | - Teacher led examples <br> - Student practice | - Per homework |
| Tuesday | Quiz 7.1-7.2 | - | - | - |
| Wednesday | 7.3 Hyperbola | - Analyze and graph equations of hyperbolas. <br> - Use equations to identify types of conic sections. | - Teacher led examples <br> - Student practice | - Per homework |
| Thursday |  | - | - Teacher led examples <br> - Student practice | - Per homework |
| Friday | Test 7.1-7.3 |  | - | - |


| Week of: March 20 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | 7.1 Parabolas | - Analyze and graph equations of parabolas <br> - Write equations of parabolas | - Teacher led examples <br> - Student practice | - Per homework guide |
| Tuesday | 7.1 Parabolas | - | - Teacher led examples <br> - Student practice | - Per homework guide |
| Wednesday | 7.2 Ellipses and Circles | - Analyze and graph equations of ellipses and circles. <br> - Use equations to identify ellipses and circles. | - Teacher led examples <br> - Student practice | - Per homework guide |
| Thursday | 7.2 Ellipses and Circles | - | - Teacher led examples <br> - Student practice | - Per homework guide |
| Friday | Homework day |  | - | - |


| Week of: March 13 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | Review/homework day | - | - | - |
| Tuesday | Test (6.4-6.5) | - | - | - Chapter 6 homework due |
| Wednesday | 7.1 Parabolas | - Analyze and graph equations of parabolas <br> - Write equations of parabolas | - Teacher led examples <br> - Student practice | - Per homework guide |
| Thursday | 7.1 Parabolas | - | - Teacher led examples <br> - Student practice | - Per homework guide |
| Friday | No School | - | - | - |


| Week of: March 6 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | 6.4 partial Fractions | - Write partial fraction decompositions of rational expressions with linear factors in the denominator. <br> - Write partial fraction decompositions of rational expressions with prime quadratic factors in the denominator. | - Teacher led examples <br> - Student practice | - Per homework guide |
| Tuesday | 6.4 Partial Fractions | $\bullet$ | - Teacher led examples <br> - Student practice | - Per homework guide |
| Wednesday | 6.5 Linear Optimization | - Use linear programming to solve applications. <br> - Recognize situations in which there are no solutions or more than one solution of a linear programming application. | - Teacher led examples <br> - Student practice | - Per homework guide |
| Thursday | 6.5 Linear Optimization | $\bullet$ | - Teacher led examples <br> - Student practice | - Per homework guide |
| Friday | No School | $\bullet$ | - | - |


| Week of: February 27 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | Quiz 6.1-6.2 | $\bullet$ | - Review homework 6.1 and 6.2 <br> - quiz | - |
| Tuesday | 6.3 Solving Linear Systems Using Inverses and Cramer's Rule | - Solve systems of linear equations using inverse matrices. <br> - Solve systems of linear equations using Cramer's Rule. | - Teacher led examples <br> - Student practice | - Per homework guide |
| Wednesday | 6.3 Solving Linear Systems Using Inverses and Cramer's Rule | $\bullet$ | - Teacher led examples <br> - Student practice | - Per homework guide |
| Thursday | 6.4 partial Fractions | - Write partial fraction decompositions of rational expressions with linear factors in the denominator. <br> - Write partial fraction decompositions of rational expressions with prime quadratic factors in the denominator. | - Teacher led examples <br> - Student practice | - Per homework guide |
| Friday | 6.4 Partial Fractions | $\bullet$ | - Teacher led examples <br> - Student practice | - Per homework guide |


| Week of: <br> February 20 | Lesson | Objective | Activities, Methods, or <br> Procedures | Homework |
| :--- | :--- | :--- | :--- | :--- |
| Monday | No School - President's Day |  | $\bullet$ | $\bullet$ |


| Tuesday | 6.2 Matrix Multiplication, Inverses, and Determinants | - Multiply matrices. <br> - Find determinants and inverses of $2 \times$ 2 and $3 \times 3$ matrices. | - Teacher led examples <br> - Student practice | - Per homework guide |
| :---: | :---: | :---: | :---: | :---: |
| Wednesday | 6.2 Matrix Multiplication, Inverses, and Determinants |  | - Teacher led examples <br> - Student practice | - Per homework guide |
| Thursday | 6.3 Solving Linear Systems <br> Using Inverses and Cramer's Rule | - Solve systems of linear equations using inverse matrices. <br> - Solve systems of linear equations using Cramer's Rule. | - Teacher led examples <br> - Student practice | - Per homework guide |
| Friday | 6.3 Solving Linear Systems Using Inverses and Cramer's Rule | - | - Teacher led examples <br> - Student practice <br> - Quiz next class | - Per homework guide |


| Week of: <br> February 13 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | Blog Project Workday | $\bullet$ | - | - Find an example of sine, cosine, or tangent function in your life and use do a trig regression to determine its equation. Use your knowledge of trig functions to explain how the different components of the equation affect its position on the graph. |
| Tuesday | 6.1 Multivariable Linear Systems and row operations | - Solve systems of linear equations using matrices and Gaussian elimination <br> - Solve systems of linear equations using matrices and Gauss-Jordan elimination | - Teacher led examples <br> - Student practice | - Per homework guide |
| Wednesday | 6.1 Multivariable Linear Systems and row operations |  | - Teacher led examples <br> - Student practice | - Per homework guide |
| Thursday | 6.1 Multivariable Linear Systems and row operations | $\bullet$ | - Teacher led examples <br> - Student practice | - Per homework guide |
| Friday | No School | $\bullet$ | - | - |


| Week of: February 6 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | 4.7 Laws of Sine and Cosine | - Understand and apply the Law of sine <br> - Understand and apply the Law of cosine | - Examples and student practice | - Book practice |
| Tuesday | 4.7 Laws of Sine and Cosine | - | - | - |
| Wednesday | review |  |  | - |
| Thursday | Test 4.5-4.7 | - | - | $\bullet$ |
| Friday | Blog project |  |  | - Find an example of sine, cosine, or tangent function in your life and use do a trig regression to determine it's equation. Use your knowledge of trig functions to explain how the different components of the equation affect its position on the graph. |


| Week of: January 30 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | 4.5 Graphing other trig functions | - Graph tangent and reciprocal trigonometric functions. <br> - Graph damped trigonometric functions. | - PPT with examples <br> - Student solved problems | - Per homework guide |
| Tuesday | 4.5 Graphing other trig functions | - | - | - |
| Wednesday | 4.6 Inverse Trig functions | - Evaluate and graph inverse trigonometric functions. <br> - Find compositions of trigonometric functions. | - PPT with examples Student solved problems | - Per homework guide |
| Thursday | 4.6 Inverse Trig functions | - | $\bullet$ | $\bullet$ |
| Friday | Homework/question day |  |  | - |


| Week of: January 23 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | Homework Day/Review | $\bullet$ | - Go over 4.3 \& 4.4 homework <br> - Answer concept questions for 4.14.4 | $\bullet$ |
| Tuesday | Test 4.1-4.4 | $\bullet$ | $\bullet$ | $\bullet$ |
| Wednesday | 4.5 Graphing other trig functions | - Graph tangent and reciprocal trigonometric functions. <br> - Graph damped trigonometric functions. | - PPT with examples <br> - Student solved problems | - Per homework guide |
| Thursday | 4.5 Graphing other trig functions | - Graph tangent and reciprocal trigonometric functions. <br> - Graph damped trigonometric functions. | - PPT with examples <br> - Student solved problems | - Per homework guide |
| Friday | 4.6 Inverse Trig functions | - Evaluate and graph inverse trigonometric functions. <br> - Find compositions of trigonometric functions. | - PPT with examples Student solved problems | - Per homework guide |


| Week of: January 16 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | No school | $\bullet$ | - | - |
| Tuesday | 4.3 Trigonometric functions on the unit circle | - Find values of trigonometric functions for any angles <br> - Find values of trigonometric functions using the unit circle | - Ppt <br> - Teacher led examples <br> - Student work | - Per homework guide |
| Wednesday | 4.4 Graphing Sine and Cosine Functions | - Graph <br> transformations of the sine and cosine functions. <br> - Use sinusoidal functions to solve problems. | - Ppt <br> - Teacher led examples <br> - Student work | - Per homework guide |
| Thursday | 4.4 Graphng Sine and Cosine Functions | - Graph transformations of the sine and cosine functions. <br> - Use sinusoidal functions to solve problems. | - Ppt <br> - Teacher led examples <br> - Student work | - Per homework guide |
| Friday | Graphing the sine function parametrically | - Use a graphing calculator and parametric equations to graph the sine function and its inverse | - Graphing lab | - Per homework guide |


| Week of: January 9 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | 4.2 Degrees and Radians | - Convert degree measures of angles to radian measures and vice versa <br> - Use angle measures to solve real-world problems | - Ppt <br> - Teacher led examples <br> - Student work | - Per homework guide |
| Tuesday | 4.3 Trigonometric functions on the unit circle | - Find values of trigonometric functions for any angles <br> - Find values of trigonometric functions using the unit circle | - Ppt <br> - Teacher led examples <br> - Student work | - Per homework guide |
| Wednesday | 4.3 Trigonometric functions on the unit circle | - Find values of trigonometric functions for any angles <br> - Find values of trigonometric functions using the unit circle | - Ppt <br> - Teacher led examples <br> - Student work | - Per homework guide |
| Thursday | Graphing the sine function parametrically | - Use a graphing calculator and parametric equations to graph the sine function and its inverse | - Graphing lab <br> - Friday homework questions | - Per homework guide |
| Friday | No School | - | - | $\bullet$ |


| Week of: January 2 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | No School Winter break | - | - | - |
| Tuesday | 4.1Right Triangle Trigonometry | - Find values of trigonometric functions for acute angles of right triangles. <br> - Solve right triangles | - Ppt <br> - Teacherled examples <br> - Student work | - Per homework guide |
| Wednesday | 4.1Right Triangle Trigonometry | - | - Ppt <br> - Teacher led examples <br> - Student work | - Per homework guide |
| Thursday | 4.1Right Triangle Trigonometry | - | - Ppt <br> - Teacher led examples <br> - Student work | - Per homework guide |
| Friday | 4.2 Degrees and Radians | - Convert degree measures of angles to radian measures and vice versa <br> - Use angle measures to solve real-world problems | - Ppt <br> - Teacher led examples <br> - Student work | - Per homework guide |


| Week of: <br> December 19 | Lesson | Objective | Activities, Methods, or <br> Procedures | Homework |
| :--- | :--- | :---: | :--- | :---: |
| Monday | Semester Exam Review | $\bullet$ | $\bullet$ | $\bullet$ |
| Tuesday | Semester Exam Review | $\bullet$ | $\bullet$ | $\bullet$ |
| Wednesday | Semester Exams | $\bullet$ | $\bullet$ | $\bullet$ |
| Thursday | Semester Exams | $\bullet$ | $\bullet$ | $\bullet$ |
| Friday | Winter Break | $\bullet$ | $\bullet$ | $\bullet$ |


| Week of: December 12 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | Review | $\bullet$ | - Clarify homework <br> - Review/clarify topics | - 3.4 and 3.5 homework due today <br> - study |
| Tuesday | Test 3.4-3.5 | $\bullet$ | $\bullet$ | - |
| Wednesday | Blog Project Research Day | - Apply exponential growth and decay to create models for real world situations. | $\bullet$ | $\bullet$ |
| Thursday | Blog Project | $\bullet$ | $\bullet$ | $\bullet$ |
| Friday | Blog Project (If needed) | $\bullet$ | $\bullet$ | - |


| Week of: December 5 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | 3.4 Exponential and Logarithmic Equations | - Apply the One-toOne Property of Exponential Functions to solve equations. <br> - Apply the One-toOne Property of Logarithmic Functions to solve equations. | - Ppt <br> - Teacher led examples <br> - In class student practice | Homework per chapter 3 assignments |
| Tuesday | 3.4 Exponential and Logarithmic Equations | - Apply the One-toOne Property of Exponential Functions to solve equations. <br> - Apply the One-toOne Property of Logarithmic Functions to solve equations. | - Ppt <br> - Teacher led examples <br> - In class student practice | Homework per chapter 3 assignments |
| Wednesday | 3.4 Solve exponential and logarithmic inequalities | - Use tables and graphs to solve inequalities | - Graphing calculator activity | worksheet |
| Thursday | 3.5 Model with Nonlinear Regression | - Model data using exponential, logarithmic, and logistic functions. <br> - Linearize and analyze data. | - Ppt <br> - Teacher led examples <br> - In class student practice | Homework per chapter 3 assignments |
| Friday | 3.5 Model with Nonlinear Regression | $\bullet$ | - Ppt <br> - Teacher led examples <br> - In class student practice | Homework per chapter 3 assignments |


| Week of: November 28 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | 3.3 Properties of Logarithms | - Apply properties of logarithms <br> - Apply the Change of Base Formula | - Ppt <br> - Teacher led examples <br> - In class student practice |  |
| Tuesday | 3.3 Properties of Logarithms | $\bullet$ |  | $\begin{aligned} & 3.3 \text { pg } 183 \# 3,18,21,26, \\ & 37,43,54,60,112 \end{aligned}$ |
| Wednesday | Review 3.1-3.3 | $\bullet$ |  |  |
| Thursday | Test 3.1-3.3 | $\bullet$ |  | Homework due for 3.1-3.3 |
| Friday | 3.4 Exponential and Logarithmic Equations | - Apply the One-toOne Property of Exponential Functions to solve equations. <br> - Apply the One-toOne Property of Logarithmic Functions to solve equations. | - Ppt <br> - Teacher led examples <br> - In class student practice | Homework per chapter 3 assignments |


| Week of: November 21 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | 3.2 Logarithmic Functions | - Evaluate expressions involving logarithms <br> - Sketch and analyze graphs of logarithmic functions | - Powerpoint <br> - Teacher lead examples | - As assigned |
| Tuesday | Quiz 3.1-3.2 | - | - | - |
| Wednesday |  | - |  |  |
| Thursday |  | - |  |  |
| Friday |  | - | - | - |


| Week of: November 14 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | 3.1 Exponential Functions | - Evaluate, analyze, and graph exponential functions. <br> - Solve problems involving exponential growth and decay. | - Powerpoint <br> - Teacher lead examples <br> - Graphing activity | - As assigned |
| Tuesday | 3.1 Exponential Functions | - | - Powerpoint <br> - Teacher lead examples <br> - Graphing activity | - As assigned |
| Wednesday | 3.2 Logarithmic Functions | - Evaluate <br> expressions involving logarithms <br> - Sketch and analyze graphs of logarithmic functions | - Powerpoint <br> - Teacher lead examples | - As assigned |
| Thursday | 3.2 Logarithmic Functions | $\bullet$ | - Powerpoint <br> - Teacher lead examples | - As assigned |
| Friday | review Quiz 3.1-3.2 | $\bullet$ | $\bullet$ | $\bullet$ |


| Week of: <br> November 7 | Lesson | Objective | Activities, Methods, or <br> Procedures | Homework |
| :--- | :--- | :--- | :--- | :--- |
| Monday | Math of the Presidential <br> Election | Understand how <br> polynomial <br> equations are used <br> to predict election <br> outcomes | Research data on past <br> elections to predict how <br> swing states will vote in <br> this election | $\bullet$ |
| Tuesday | Math of the Presidential <br> Election | Understand how <br> polynomial <br> equations are used <br> to predict election <br> outcomes | $\bullet$ <br> Research data on <br> past elections to <br> predict how swing <br> states will vote in <br> this election | • |


| Week of: October 31 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | 2.6 Nonlinear inequities | - solve polynomial inequalities <br> - solve rational inequalities | - Ppt <br> - Examples | - problems from online book |
| Tuesday | Homework questions | $\bullet$ - | $\bullet$ | $\bullet$ |
| Wednesday | review | $\bullet$ | $\bullet$ | - Study guide |
| Thursday | Chapter 2 test | $\bullet$ | $\bullet$ | $\bullet$ - |
| Friday | Area under a curve | - Approximate the area between a curve and the x-axis | - Exploration/connection | - |


| Week of: October 24 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | 2.4 Zeros of Polynomial Functions | - Find real zeros of polynomial functions. <br> - Find complex zeros of polynomial functions. | - Ppt <br> - examples | - problems from online book |
| Tuesday | 2.4 Zeros of Polynomial Functions | - Find real zeros of polynomial functions. <br> - Find complex zeros of polynomial functions. | - Ppt <br> - Examples <br> - Next blog post | - problems from online book |
| Wednesday | 2.5 Rational Functions | - analyze and graph rational functions <br> - solve rational functions | - Ppt <br> - Examples <br> - exploration | - problems from online book |
| Thursday | 2.5 Rational Functions | - analyze and graph rational functions <br> - solve rational functions | - Ppt <br> - Examples <br> - exploration | - problems from online book |
| Friday | 2.6 Nonlinear inequities | - solve polynomial inequalities <br> - solve rational inequalities | - Ppt <br> - Examples <br> - Graphing activity | - problems from online book |


| Week of: October 17 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | No School | $\bullet$ | - | $\bullet$ |
| Tuesday | 2.3 The Remainder and Factor Theorems | - Divide polynomials using long division and synthetic division. <br> - Use the Remainder and Factor Theorems. | - Ppt <br> - examples | - problems from online book |
| Wednesday | 2.3 The Remainder and Factor Theorems | - Divide polynomials using long division and synthetic division. <br> - Use the Remainder and Factor Theorems. | - Ppt <br> - examples | - problems from online book |
| Thursday | 2.1-2.3 Quiz | $\bullet$ | $\bullet$ | $\bullet$ |
| Friday | 2.4 Zeros of Polynomial Functions | - Find real zeros of polynomial functions. <br> - Find complex zeros of polynomial functions. | - Ppt <br> - examples | - problems from online book |


| Week of: October 10 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | Native American Day - No School | $\bullet$ | - | $\bullet$ |
| Tuesday | 2.1 Power and Radical Functions | - Graph and analyze power functions. <br> - Graph and analyze radical functions, and solve radical equations. | - Ppt with examples | - Online book |
| Wednesday | 2.1 Power and Radical Functions | - Graph and analyze power functions. <br> - Graph and analyze radical functions, and solve radical equations. | - Ppt with examples | - Online book |
| Thursday | 2.2 Polynomial Functions | - Graph polynomial functions. <br> - Model real-world data with polynomial functions. | - Ppt with examples | - Online book |
| Friday | 2.2 Polynomial Functions | - Graph polynomial functions. <br> - Model real-world data with polynomial functions. | - Ppt with examples <br> - Time to go over homework | - Online book |


| Week of: October 3 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | 1.7 Inverse Relations and Functions | - Use the graphs of functions to determine if they have inverse functions. <br> - Find inverse functions algebraically and graphically. | - Investigation | - From online book |
| Tuesday | 1.7 Inverse Relations and Functions | - Use the graphs of functions to determine if they have inverse functions. <br> - Find inverse functions algebraically and graphically. | $\bullet$ | - From online book |
| Wednesday | 1.7 Inverse Relations and Functions | $\bullet$ | - practice | - from online book |
| Thursday | Overview of chapter 2 | $\bullet$ | - Look through chapter 2 <br> - Determine how chapter 2 will be assessed <br> - Project topic for chapter 2 | - From online book |
| Friday |  | $\bullet$ | - | - |


| Week of: September 26 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | Composite functions | - Perform operations with functions. <br> - Find compositions of functions. | - Finish packet | - From online book |
| Tuesday | Inverse Function Work Day: Photo Project | - Use the graphs of functions to determine if they have inverse functions. <br> - Find inverse functions algebraically and graphically. | - Exploration activity <br> - Upload photo to desmos | - From online book |
| Wednesday | Inverse Functions <br> Photo Project Due | - Use the graphs of functions to determine if they have inverse functions. <br> - Find inverse functions algebraically and graphically. | - Notes <br> - Practice activity | - From online book |
| Thursday | Review | $\bullet$ | - Chapter review student choice | - From online book |
| Friday | Chapter 1 test | $\bullet$ | $\bullet$ | - From online book |


| Week of: September 19 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | Complete 1.4 <br> 1.5 Parent Functions and <br> Transformations | - Identify, graph, and describe parent functions. <br> - Identify and graph transformations of parent functions | - Ppt with examples and practice <br> - desmos | - From online book |
| Tuesday | 1.5 Parent Functions and Transformations | - Identify, graph, and describe parent functions. <br> - Identify and graph transformations of parent functions | - Ppt with examples and practice | - From online book |
| Wednesday | 1.6 Function Operations and Compositions of functions | - Perform operations with functions. <br> - Find compositions of functions. | - Ppt with examples and practice | - From online book |
| Thursday | 1.6 Function Operations and Compositions of functions | - Perform operations with functions. <br> - Find compositions of functions. | - Ppt with examples and practice | - From online book |
| Friday | 1.7 Inverse Relations and Functions | - Use the graphs of functions to determine if they have inverse functions. <br> - Find inverse functions algebraically and graphically | - Ppt with examples and practice <br> - desmos | - From online book |


| Week of: September 12 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | 1.3 Continuity, end behavior, and limits | - Use limits to determine the continuity of a function, and apply the Intermediate Value thm to continuous functions <br> - Use limits to describe end behavior of functions | - Notes and examples | - From online book |
| Tuesday | 1.3 Continuity, end behavior, and limits | $\bullet$ | - Notes and examples | - From online book |
| Wednesday | Quiz <br> QFocus: Behavior of functions | $\bullet$ | - Quiz 1.1-1.3 <br> - reflection | - blog: How are functions present in your daily life? |
| Thursday | 1.4 Extreme and Rates of Change | - determine intervals on which functions are increasing, constant, or decreasing, and determine maxima and minima of functions <br> - determine the average rate of change of a function | - notes and examples | - from online book |
| Friday | 1.4 Extreme and Rates of Change | $\bullet$ | $\bullet$ | - From online book |


| Week of: September 5 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | Labor Day - no school |  | - | - |
| Tuesday | 1.1 Functions | - Describe subsets of real numbers <br> - Identify and evaluate functions and state their domains | - What do you know functions? <br> - Notes and examples | - From online book |
| Wednesday | 1.2 Analyzing graphs of functions and relations | - Use graphs of functions to estimate values an find their domains, ranges, $y$-intercepts, and zeros of functions <br> - Explore symmetries of graphs and identify even and odd functions | - Notes and examples | - From online book |
| Thursday | 1.3 Continuity, end behavior, and limits | - Use limits to determine the continuity of a function, and apply the Intermediate Value thm to continuous functions <br> - Use limits to describe end behavior of functions | - Notes and examples | - From online book |
| Friday | quiz | $\bullet$ | - Quiz 1.1-1.3 <br> - reflection | - blog: How are functions present in your daily life? |


| Week of: August 29 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday | Complex Number Review | - Review solving equations and expressions with complex numbers | - Teacher led examples <br> - puzzle | $\begin{aligned} & \quad \# 3,10,13,18,28 \\ & 33,34,38,45,51 \end{aligned}$ |
| Tuesday | Quadratic equation review | - Analyzing the properties of parabolas <br> - Factoring quadratic equations | - Teacher led examples <br> - Small group activity | - \# 4, 10, 14, 19, 26, $34,35,42,50,51$ |
| Wednesday | $n$th roots and real exponents | - Review the process and application roots and exponents | - Teacher led examples | $\begin{array}{r} \quad \# 3,16,17,18,22, \\ 24,26,27,29,34 \end{array}$ |
| Thursday | Unpack chapter 1 <br> Introduce photo project | - Determine skills needed to be successful in chapter <br> - Process/purpose and rubric for the photo project | - Small group discussion <br> - Class discussion <br> - Reflection <br> - Parent function flipchart | - blog: What do you know about functions, what do you hope to learn in this chapter, and how do you think this knowledge is helpful in the real world? (approx. 350 words) |
| Friday | No School | $\bullet$ | - | $\bullet$ |


| Week of: August 22 | Lesson | Objective | Activities, Methods, or Procedures | Homework |
| :---: | :---: | :---: | :---: | :---: |
| Monday |  |  |  |  |
| Tuesday | First Day of School | - Self Introduction <br> - Establish Class <br> Expectations <br> - Student Introductions | - Go over syllabus <br> - Students complete Get to Know Me form | - Complete Get to know me form <br> - Obtain needed school supplies |
| Wednesday | QFocus | - Students will be able to produce, manipulate, and prioritize questions to maximize information gained | - Powerpoint on the QFocus procedure <br> - QFocus practice in small groups |  |
| Thursday |  | - Determine the prior content knowledge of the students. | - Pre-test |  |
| Friday | - Goal Setting <br> - Set-up Blog <br> - Discuss On-going Photo Project | - Students will be able to set academic goals and plans to reach them. | - Powerpoint on Setting SMART Goals <br> - Small group discussion <br> - Independent goal setting <br> - Set-up student page on Weebly <br> - Introduce Photo Project | - Complete Student webpage |

