Precalculus Honors

Fall 2022

Ashley Speak
ashley.speak@hpstigers.org

Google Classroom Code(s):

Class Syllabus
Class Website

Other teachers who can help me with this class:
Mr. Ortegren - Room #216
Mrs. Kreutzer - Room #212

Aug 22 | Aug 29 | Sept 5 | Sept 12 | Sept 19 | Sept 26 | Oct 3
Oct 10 | Oct 17 | Oct 24 | Oct 31 | Nov 7 | Nov 14 | Nov 21
Nov 28 | Dec 5 | Dec 12 | Dec 19

Power Essentials and Learning Targets:

Date	Power Essential	Learning Target	In-Class	Assignments	Activities for Success
Wednesday August 17 **Thursday**	**Analyze, model, graph and solve real-world problems**	-I can find the slope-intercept form of an equation -I can write linear equations in different	-Seating Chart-Teacher Introduction -PBIS: Establish Classroom Expectations -Buy your own calculator	A0: Information Google Form	Pre-calculus Webpage Learning Target Notes: Linear Functions

Date	Power Essential	Learning Target	In-Class Activities	Assignments	Activities for Success
August 18	**involving linear functions and inequalities**	forms. -I can write the equation of a line that is parallel or perpendicular to a given line through a given point. -I can write a linear equation from a verbal description and use it to predict values	-Syllabus/Planner/Website -Khan Academy Sign Up -Unit #1a Learning Targets -Exploration Activity -Linear Functions and Equations -Notes/Exploration/Examples GP 1		
Friday August 19 **Monday August 22**	**Analyze, model, graph and solve real-world problems involving linear functions and inequalities**	-I can find the slope-intercept form of an equation -I can write linear equations in different forms. -I can write the equation of a line that is parallel or perpendicular to a given line through a given point. -I can write a linear equation from a verbal description and use it to predict values	PBIS: Establish Classroom Expectations -Finish notes if necessary -Linear Equations Stations -Exit Ticket: Linear Equations -Taxpayer Activity	A1: Linear Equations/Functions Due: 8/23-8/24	Pre-calculus Webpage Learning Target Notes: Linear Functions
Tuesday August 23 **Wednesday August 24**	**Solve quadratic equations involving real coefficients and real or imaginary roots.**	-I can solve a quadratic equation.	PBIS: Standard Response Protocol (SRP) Procedures (All Classes) -BR 1 -Collect A1 -Solving Quadratics Notes -Around the room	A2: Solving Quadratic Equations Due 8/29-8/30 Quiz #1: Linear Equations next class period	Pre-calculus Webpage Answer Key for Around the room
Thursday August 25 **Friday August 26**	**Solve quadratic equations involving real coefficients and real or imaginary roots.**	-I can solve a quadratic equation.	BR 2 -Card Draw review -Quiz #1: Linear Equations and Functions (20 minutes)	A2: Solving Quadratic Equations Due 8/29-8/30	Pre-calculus Webpage Learning Target Notes: Solving Quadratics

Date	Power Essential	Learning Target	In-Class Activities	Assignments	Activities for Success
Monday August 29 **Tuesday August 30**	**Analyze, model, graph and solve real world problems involving quadratic functions.**	-I can write a quadratic equation given a graph.	PBIS -Entry Ticket: Solving Quadratics-Grade as class -Collect A2 -Exploring Shifts of Quadratics -Examples Graphs -In class Practice - Partners Create on Desmos -Exit Ticket: Writing a quadratic equation given a graph -Quiz #1 Correction and Reflection	A3(a)-Writing Quadratic Equations from a Graph Due 8/31-9/1	Pre-calculus Webpage Learning Target Notes: Writing Quadratic Equations Given a Graph
Wednesday August 31 **Thursday September 1**	**Analyze, model, graph and solve real world problems involving quadratic functions.**	-I can graph a quadratic function. -I can change forms of quadratic equations. -I can determine the vertex given any quadratic function. -I can determine the x and y intercepts given any quadratic function.	BR 2a -Review Writing Quadratics -Front Row Students -Collect A3a -Graphing Quadratics Notes -Different Methods -Practice 3 Problems -Key	A3(b)-Graphing Quadratics Due 9/7-9/8	Pre-calculus Webpage Learning Target Notes: Graphing Quadratics
Friday September 2	**Analyze, model, graph and solve real world problems involving quadratic functions.**	-I can graph a quadratic function. -I can change forms of quadratic equations. -I can determine the vertex given any quadratic function.	Solving Equations Practice-Markerboards GP 2 Exit Ticket: Graphing Quadratic Functions -Key Desmos Class Code: 6QR9Q8 -Match My Parabola (Desmos)	A3(b)-Graphing Quadratics Due 9/7-9/8	Pre-calculus Webpage

Date	Power Essential	Learning Target	In-Class Activities	Assignments	Activities for Success
		-I can determine the x and y intercepts given any quadratic function.	-6QR9Q8 -Marble Slides -6583M6		
Monday September 5	**No School - Labor Day**				
Tuesday September 6	**Analyze, model, graph and solve real world problems involving quadratic functions.**	-I can graph a quadratic function. -I can change forms of quadratic equations. -I can determine the vertex given any quadratic function. -I can determine the x and y intercepts given any quadratic function.	Solving Equations Practice-Markerboards GP 2 Exit Ticket: Graphing Quadratic Functions -Key Desmos Class Code: 6QR9Q8 -Match My Parabola (Desmos) -6QR9Q8 -Marble Slides -6583M6	A3(b)-Graphing Quadratics Due 9/7-9/8	Pre-calculus Webpage
Wednesday September 7 **Thursday September 8**	**Analyze, model, graph and solve real world problems involving quadratic functions.**	-I can write a quadratic equation given a verbal description.	-Challenge Problems on Stations -Notes: Verbal Descriptions -GP 3 Exit Ticket: Verbal Descriptions of Quadratic Functions Group Activity: Solving Quadratics	A3(c)-Verbal Descriptions (Quadratics) Due 9/9-9/12	Pre-calculus Webpage Learning Target Notes
Friday September 9 **Monday September 12**	**Analyze, model, graph and solve real world problems involving non-linear functions (higher-order polynomials.)**	-I can sketch the graph of a higher-order polynomial. -I can determine the end behavior of a higher-order polynomial. -I can determine the x and y intercepts of a	PBIS: Digital Citizenship/Organization (All Classes) BR 3 -Collect A3(c) -Higher Order Polynomials Notes -Polynomial Builder or Desmos -Exploration -End Behavior	-A4: Higher order polynomials Due 9/13-9/14 Quiz #2 Next Class Period (Quadratics)	Pre-calculus Webpage Learning Target Notes

Date	Power Essential	Learning Target	In-Class Activities	Assignments	Activities for Success
		higher-order polynomial. -I can find the zeros of a higher order polynomial.	-Bounces/Straight Through -Intercepts (Try to get through Graphing easy ones)		
Tuesday September 13 **Wednesday September 14**	**Analyze, model, graph and solve real world problems involving non-linear functions (higher-order polynomials.)**	-I can sketch the graph of a higher-order polynomial. -I can determine the end behavior of a higher-order polynomial. -I can determine the x and y intercepts of a higher-order polynomial. -I can find the zeros of a higher order polynomial if in standard form.	PBIS Finish Notes: Higher Order Polynomials GP 4 Quiz #2 Quadratics	-A4: Higher order polynomials Due 9/15-9/16	Pre-calculus Webpage
Thursday September 15 **Friday September 16**	**Analyze, model, graph and solve real world problems involving nonlinear functions (higher-order polynomials.)**	-I can write an equation of a higher order polynomial given the zeros. -I can write an equation of a higher order polynomial given a graph.	Entry Ticket: Graphing Higher Order Polynomials Collect A4 Notes -Given Zeros -From a graph GP 4a Exit Ticket: Higher Order Polynomials -Return Quiz #2 -Corrections and Reflections	A4.5: Writing Higher Order Polynomials Due 9/19-9/20 Quiz #3 Next Class Period (HOP)	Pre-calculus Webpage Learning Target Notes

Date	Power Essential	Learning Target	In-Class Activities	Assignments	Activities for Success
Monday September 19 **Tuesday September 20**	Unit #1a Essentials	Unit 1a Review	PBIS -ACT 1 (Move next year) BR 4 Collect A4.5 Quiz #3: Higher Order Polynomials	-A4a: Unit 1 Review Part 1 Due 9/21-9/22	Pre-calculus Webpage
Wednesday September 21 **Thursday September 22**	Unit #1a Essentials	Unit 1a Review	Collect A4a Quiz #3: Corrections and Reflections -Review: Quadratics & Higher Order Polynomials -Break out Sessions/Small Groups -Complete A4b	A4b: Unit 1 Review Part 2 Due 9/26-9/27	
Friday September 23	**No School - Professional Development**				
Monday September 26 **Tuesday September 27**	Unit #1a Essentials	Unit 1a Test	PBIS Collect A4b **Unit 1 Test (Parts A and B)** -Khan Academy Sign Up		-Practice ACT-Shortened Version
Wednesday September 28 **Thursday September 29**	Add, Subtract, Multiply, and Divide Rational Expressions	I can add and subtract rational expressions by creating a common denominator	-Unit 1b Learning Targets -Notes on add/subtract -GP 4a -Exit Ticket: Add/Subtract Rational	A4c: Adding and Subtracting Rational Expressions -Key Due 9/30-10/3	Pre-calculus Webpage Learning Target Notes

Date	Power Essential	Learning Target	In-Class Activities	Assignments	Activities for Success
			Expressions Finish Tests		
Friday September 30 **Monday October 3**	Add, Subtract, Multiply, and Divide Rational Expressions	I can multiply and divide rational expressions, which include factoring and canceling out common factors	Hand back tests BR 4a -Notes on multiply and divide GP 4b -Key Exit Ticket: Multiply/Divide Rational Expressions -Mini Lesson: -Venn Diagram Shading GP 7a, Key	A4d: Multiplying and Dividing Rational Expressions Due 10/4-10/5	Pre-calculus Weppage Learning Target Notes Mini Lesson Supplements Exit Ticket-Shading Venn Diagrams A8a: Venn Diagram Shading PDF Version
Tuesday October 4 **Wednesday October 5**	Solve rational equations	I can solve rational equations	PBIS Expectations BR 4b -Collect A4d -Notes: Solving rational equations -GP 4c Exit Ticket: Solve rational equations Mini Lesson -Venn Diagram Word Problems -Notes; Key -GP 7b; Key	A4e: Solve rational equations Due 10/6-10/7	Pre-calculus Webpage Learning Target Notes Mini Lesson Supplements Exit Ticket-Venn Diagram Word Problems A8: Venn Diagrams PDF Version

Date	Power Essential	Learning Target	In-Class Activities	Assignments	Activities for Success
Thursday October 6 **Friday October 7**	**Analyze and graph nonlinear functions (rational).**	-I can find the domain of a rational function. -I can find the x and y intercepts of a rational function. -I can find the holes of a rational function. -I can find the asymptotes of a rational function. -I can graph a rational function.	-Questions on A4e -Collect A4e Rational Function Notes (Start) -Exploration/Notes Page -Notes Page Key -Domain, Asymptotes, Holes, Intercepts -Graph	A5: Rational Functions Due 10/10-10/11 -Quiz #4a (Rational Expressions/Equations) next class period	Pre-calculus Webpage Learning Target Notes Supplemental Notes
Monday October 10 **Tuesday October 11**	**Analyze and graph nonlinear functions (rational).**	-I can find the domain of a rational function. -I can find the x and y intercepts of a rational function. -I can find the holes of a rational function. -I can find the asymptotes of a rational function. -I can graph a rational function.	PBIS - -BR 4c -Answer Key -Quiz #4a (Rational Expressions/Equations) -GP 5 Mini Lesson (Fit in when time allows) -Counting Principle Notes -GP 8	A5: Rational Functions Due 10/12-10/17	Pre-calculus Webpage Supplemental Activities A9: Counting Principles -PDF A9a: Counting Principles 2.0 Exit Ticket-Counting Principles
Wednesday October 12	**Analyze and graph nonlinear functions**	-I can find the domain of a rational function.	A5 Questions -Collect -Quiz #4a Handed back	A5a: Rational Functions/Review Due 10/18 - 10/19	Pre-calculus Webpage

Date	Power Essential	Learning Target	In-Class Activities	Assignments	Activities for Success
	(rational).	-I can find the x and y intercepts of a rational function. -I can find the holes of a rational function. -I can find the asymptotes of a rational function. -I can graph a rational function.	-Corrections and Reflections -Khan: Graphing Rational Functions -Table Hop: Rational Functions -Exit Ticket: Rational Functions		
Thursday October 13	**No School - Teacher Work Day**				
Friday October 14	**No School - Parent Teacher Conference Payback Day**				
Monday October 17	**Analyze and graph nonlinear functions (rational).**	-I can find the domain of a rational function. -I can find the x and y intercepts of a rational function. -I can find the holes of a rational function. -I can find the asymptotes of a rational function. -I can graph a rational function.	A5 Questions -Collect -Quiz #4a Handed back -Corrections and Reflections -Khan: Graphing Rational Functions -Group Practice: Rational Functions -Exit Ticket: Rational Functions	A5a: Rational Functions/Review Due 10/19 - 10/20	Pre-calculus Webpage
Tuesday October 18	**ITBS/Pre-ACT Testing for 9th and 10th grade only**				
Wednesday October 19	**Analyze and graph nonlinear**	-I can evaluate a piecewise function	BR_5 -Finding Solutions Notes	A6: Piecewise Functions Due 10/22 - 10/25	Pre-calculus Webpage

Date	Power Essential	Learning Target	In-Class Activities	Assignments	Activities for Success
Thursday October 20	**functions (rational).**	given a specific value. -I can graph a piecewise function.	-GP 6a -GP 6a Key -Graphing -GP 6b -GP 6b Key Exit Ticket: Piecewise Functions	Quiz #4 Rationals (Next Class Period)	Learning Target Notes
Friday October 21 **Monday October 24**	Unit 1b Essentials	Review Unit #1b	ACT 2 -Markerboard Practice: Rational and Piecewise Functions Quiz #4: Rational Functions	A7a: Unit 1b Test Review Due 10/26 - 10/27 Quiz #5 Next Class Period (Piecewise functions)	
Tuesday October 25 **Wednesday October 26**	Unit 1b Essentials	Review Unit #1b	PBIS BR 6 -Hand back Quizzes -Reflect Quiz #5: Piecewise Functions -Jeopardy (1v1 or 2v2)	A7b: Unit 1b Test Review Part 2 Due 10/28-10/29	
Thursday October 27 **Friday October 28**	Unit 1b Essentials	Review Unit #1b	Quiz Corrections and Reflections for Quiz #5 **Unit #1b Test (Parts A and B)**		
Monday October 31	**No School - Teacher Work Day**				

Date	Power Essential	Learning Target	In-Class Activities	Assignments	Activities for Success
Tuesday November 1 **Wednesday November 2**	**Convert between radian and degree measures of an angle.**	-I can convert between radians, degrees, and decimal degrees. -I can find coterminal angles.	PBIS - -New Seats Factoring Practice #1 (Quadratics) -Learning Targets for Unit 3 -Exploration: Radians and Degrees -Conversions -GP11 -Exit Ticket Notes-Coterminal -Co-Terminal -GP 12 -Exit Ticket Mini Lesson Permutation -Notes -GP 9	A14: Conversions and Coterminal Due 11/3 -11/4	Pre-calculus Webpage Learning Target Notes
Thursday November 3 **Friday November 4**	**Find arc length and area of sectors of a circle.**	-I can find the arc length of a sector of a circle. -I can find the area of a sector of a circle.	BR 11 Factoring Practice #2 -Collect A14 Sectors of Circles -Notes -In Class Practice -Worked Out Solutions Mini Lesson Combinations -Notes -GP 10	-GP 13/Exit Ticket -I will answer questions in class on Tuesday Next Class: Quiz #10-Conversions and Coterminal	Pre-calculus Webpage Learning Target Notes
Monday November 7 **Tuesday**	**Find arc length and area of sectors of a circle.**	-I can find the arc length of a sector of a circle. -I can find the area of a	PBIS Factoring Practice #3 -Sectors of Circles Review Stations Quiz #10-Conversions and	A16: Sectors of Circles Due 11/9- 11/10	Pre-calculus Webpage Learning Target Notes

Date	Power Essential	Learning Target	In-Class Activities	Assignments	Activities for Success
November 8		sector of a circle.	Coterminal		
Wednesday November 9 **Thursday November 10**	**Use the unit circle to define the trigonometric functions on all real numbers.**	-I can find all 6 trigonometric functions given an ordered pair or sides of a triangle.	BR 12 Hand back quiz 10 Questions/Collect A16 Basic Trig Function Notes - GP 14/Exit Ticket Proability Notes -Key	A17: Basic Trig Functions Due 11/11- 11/14 Quiz #12 Next Class Period	Pre-calculus Webpage
Friday November 11 **Monday November 14**	**Use the unit circle to define the trigonometric functions on all real numbers.**	-I can find reference angles to find the values of all 6 trigonometric functions.	PBIS - Digital Citizenship/Organization BR 13 Collect A17 Quiz #12: Sectors of Circles Unit #1 Level Up (Semester Review)	A18: Basic Trig and Sectors Review Due 11/15 - 11/16 Quiz #13 Next Class Period	Pre-calculus Wiki Mad Minute #2 (Did not get to) -Key -GP 10.5
Tuesday November 15 **Wednesday November 16**	**Evaluate sine cosine and tangent functions at positive and negative multiples of 30 and 45 degrees.**	-I can use the ratios of a 30-60-90 triangle to find the values of all 6 trigonometric functions. -I can use the ratios of a 45-45-90 triangle to find the values of all 6 trigonometric functions.	PBIS Quizzes back Questions/Collect A18 Quiz #13: Basic Trig Functions Special Right Triangles Notes GP 16 Exit Ticket: Special Right Triangles ACT 3	A19: Special Right Triangles Due 11/17-11/18	Precalculus Wiki

Date	Power Essential	Learning Target	In-Class Activities	Assignments	Activities for Success
Thursday November 17 **Friday November 18**	**Use the unit circle to define the trigonometric functions on all real numbers.**	-I can find values of the inv if erse trigonometric functions.	Hand back Quiz #13 Collect A19 Special Right Triangles Bingo -Card/Call Card Inverse Notes GP 17 Exit Ticket: Inverse Trig Functions	A20: Inverses Due 11/21-11/22	Pre-calculus Wiki Kahoot -Khan Academy Practice -IXL Practice
Monday November 21 **Tuesday November 22**	**Use the unit circle to define the trigonometric functions on all real numbers.**	-I can use the ratios of a 30-60-90 triangle to find the values of all 6 trigonometric functions. -I can use the ratios of a 45-45-90 triangle to find the values of all 6 trigonometric functions. -I can find values of the inverse trigonometric functions.	PBIS Partner Check (SRT and Inverses) Unit #1 Level Up (Semester Review)-Finish Unit # 3 Jeopardy Collect A20	A21: Test Review Due 11/30-12/1 Quiz #14: Special Right Triangles and Inverses, next class period	Pre-calculus Wiki Kahoot -Khan Academy Practice -IXL Practice Unit #1 Power Essentials Review
Wednesday November 23	**No School - Thanksgiving Break**				
Thursday November 24	**No School - Thanksgiving Break**				
Friday November 25	**No School - Thanksgiving Break**				
Monday November 28 **Tuesday**	All Unit 3 Essentials	All Unit 3 Essentials	Spot Check Unit # 3 Jeopardy	A21: Test Review Due 11/30-12/1	

Date	Power Essential	Learning Target	In-Class Activities	Assignments	Activities for Success
November 29			Level Up Unit #3 Quiz #14: Special Right Triangles and Inverses		
Wednesday November 30 **Thursday December 1**	All Unit 3 Essentials	All Unit 3 Essentials	**Unit 3 Test (Parts A and B)**		
Friday December 2 **Monday December 5**	**Find the period amplitude and midline of a trigonometric function of the form y = A + Bsin(Cx) where A B and C are parameters and identify these properties on a graph of the function.**	-I can graph sine, cosine, and tangent waves given different periods and amplitudes.	PBIS - Parking Lot and Hallway Expectations ACT 4 Unit #4 Essentials Sheet Introduction to Graphs Notes -Animation - 5 spots -Basic Shape -Period and Amplitude Shifts -GP 18 -Key Exit Ticket: Period and Amplitude -Key (Moved to Entry Ticket) Unit #1 Semester Test Review	A22: Period and Amp Shifts -Key Due 12/6-12/7	Additional Material Khan: Amplitude IXL: Graphing Practice
Tuesday December 6 **Wednesday December 7**	**Find the period amplitude and midline of a trigonometric function of the form y = A + Bsin(Cx) where A B and C are parameters and identify these properties on a**	-I can graph sine, cosine and tangent waves that are shifted horizontally and vertically.	-Vertical and Horizontal Shifts -5 spot review -GP 19 -Key -Exit Ticket: Vertical/Horizontal Shifts (Moved to entry ticket)	A23: Vertical and Horizontal Shifts -Key Due 12/9-12/12	Additional Material Khan Practice

Date	Power Essential	Learning Target	In-Class Activities	Assignments	Activities for Success
	graph of the function.				
Thursday December 8	**SNOW DAY**	**SNOW DAY**	**SNOW DAY**	**SNOW DAY**	**SNOW DAY**
Friday December 9 **Monday December 12**	**Find the period amplitude and midline of a trigonometric function of the form y = A + Bsin(Cx) where A B and C are parameters and identify these properties on a graph of the function.**	I can graph sine, cosine and tangent waves that are not in standard form.	Unit #3 Semester Test Review -Factoring Out First -GP 20 (Key is on pages 3-4) ***Practice Quiz (Not for a Grade) -Key Extra Review: Semester Test Review	A24: Not in Standard Form -Key Due 12/13-12/14	Factor Out First
Tuesday December 13 **Wednesday December 14**	Unit 4 Essentials	Review Unit 4	Unit 4 Test Parts A and B Unit #4 Semester Test Review		
Thursday December 15	FINAL EXAM	FINAL EXAM	**Final Exams: Periods 4 & 10** Period 2 & 6: STUDY/MAKE UP If you are all caught up, bring items for another class to work on.	FINAL EXAM	FINAL EXAM
Friday December 16	FINAL EXAM	FINAL EXAM	**Final Exams: Periods 5 & 11** Period 3 & 7: STUDY/MAKE UP If you are all caught up, bring items for another class to work on.	FINAL EXAM	FINAL EXAM
Monday December 19	FINAL EXAM	FINAL EXAM	**Final Exams: Periods 2 & 6** Period 4 & 10: STUDY/MAKE UP If you are all caught up, bring items	FINAL EXAM	FINAL EXAM

Date	Power Essential	Learning Target	In-Class Activities	Assignments	Activities for Success
			for another class to work on.		
Tuesday December 20 ***Last day of 1st Semester***	FINAL EXAM	FINAL EXAM	**Final Exams: Periods 3 & 7 (1:15 Dismissal)** Period 5: STUDY/MAKE UP If you are all caught up, bring items for another class to work on.	FINAL EXAM	FINAL EXAM