

Dowagiac Union Schools Curriculum Guide

Subject: Precalculus

Grade: 11-12

Term: Quarter 2

Vocabulary		Assessments	
		Formative	Summative (Common)
<p>Chapter 3</p> <p>quadratic function standard form (vertex form) polynomial function leading term leading coefficient degree local maximum local minimum turning points dividend divisor quotient remainder synthetic division remainder theorem factor theorem rational function vertical asymptote horizontal asymptote oblique asymptote directly proportional constant of variation</p>	<p>Chapter 4</p> <p>Exponential function Growth factor Interest Principle Simple interest Compound interest Euler number e Continuous compound interest Exponential growth Exponential decay Logarithmic functions Logarithmic form Exponential form Common log Natural log Product rule Quotient rule Power rule Half life Exponential equation Logarithmic equation</p>	<p>Classroom discussion Board Work Worksheets Book Assignments</p>	<p>Chapter Test Section Quizzes</p>

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inversely proportional

Recommended Texts and Materials

Precalculus A Right Triangle Approach :Ratti - McWaters

Resources

TI-84 Graphing Calculators

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OBJECTIVES

Chapter 3 - Polynomial and Rational Functions

P1.7

I CAN understand the concept of limit of a function as x approaches a number or infinity. Use the idea of limit to analyze a graph as it approaches an asymptote. Compute limits of simple functions (e.g., find the limit as x approaches 0 of $f(x) = 1/x$) informally.

P4.1

I CAN given a polynomial function whose roots are known or can be calculated, find the intervals on which the function's values are positive and those where it is negative.

P4.2

I CAN solve polynomial equations and inequalities of degree greater than or equal to three. Graph polynomial functions given in factored form using zeros and their multiplicities, testing the sign-on intervals and analyzing the function's large-scale behavior.

P4.3

I CAN know and apply fundamental facts about polynomials: the Remainder Theorem, the Factor Theorem, and the Fundamental Theorem of Algebra.

Chapter 4 - Exponential and Logarithmic Functions

P2.1

Use the inverse relationship between exponential and logarithmic functions to solve equations and problems.

P2.2

I CAN graph logarithmic functions. Graph translations and reflections of these functions.

P2.3

I CAN compare the large-scale behavior of exponential and logarithmic functions with different bases and recognize that different growth rates are visible in the graphs of the functions

P2.4

I CAN solve exponential and logarithmic equations when possible, (e.g. $5x=3(x+1)$). For those that cannot be solved analytically, use graphical methods to find approximate solutions.

P2.5

I CAN explain how the parameters of an exponential or logarithmic model relate to the data set or situation being modeled. Find an exponential or logarithmic function to model a given data set or situation. Solve problems involving exponential growth and decay.

P3.1

I CAN solve quadratic-type equations (e.g. $e^{2x} - 4e^x + 4 = 0$) by substitution.