

NC Math 3 Course Overview E – Rational Functions

January 24 – February 19, 2019

This section of Math 3 will cover the following standards...

NC.M3.A-SSE.1 Interpret expressions that represent a quantity in terms of its context.

- Identify and interpret parts of a piecewise, absolute value, polynomial, exponential and rational expressions including terms, factors, coefficients, and exponents.
- Interpret expressions composed of multiple parts by viewing one or more of their parts as a single entity to give meaning in terms of a context.

NC.M3.A-APR.6 Rewrite simple rational expressions in different forms; write $\frac{a(x)}{b(x)}$ in the form $q(x) + \frac{r(x)}{b(x)}$, where $a(x)$, $b(x)$, $q(x)$, and $r(x)$ are polynomials with the degree of $r(x)$ less than the degree of $b(x)$.

NC.M3.A-APR.7 Understand the similarities between arithmetic with rational expressions and arithmetic with rational numbers.

- Add and subtract two rational expressions, $\frac{a(x)}{b(x)}$ and $\frac{c(x)}{d(x)}$, where the denominators of both $\frac{a(x)}{b(x)}$ and $\frac{c(x)}{d(x)}$ are linear expressions.
- Multiply and divide two rational expressions.

NC.M3.A-REI.2 Solve and interpret one variable rational equations arising from a context, and explain how extraneous solutions may be produced.

NC.M3.A-CED.1 Create equations that describe numbers or relationships. Create equations and inequalities in one variable that represent absolute value, polynomial, exponential, and **rational** relationships and use them to solve problems algebraically and graphically.

NC.M3.A-CED.2 Create equations that describe numbers or relationships. Create and graph equations in two variables to represent absolute value, polynomial, exponential and **rational** relationships between quantities.

NC.M3.F-IF.4 Interpret functions that arise in applications in terms of the context. Interpret key features of graphs, tables, and verbal descriptions in context to describe functions that arise in applications relating two quantities to include periodicity and discontinuities.

NC.M3.F-IF.7 Analyze functions using different representations. Analyze piecewise, absolute value, polynomials, exponential, **rational**, and trigonometric functions (sine and cosine) using different representations to show key features of the graph, by hand in simple cases and using technology for more complicated cases, including: domain and range; intercepts; intervals where the function is increasing, decreasing, positive, or negative; rate of change; relative maximums and minimums; symmetries; end behavior; period; and **discontinuities**.

NC.M3.F-IF.9 Compare key features of two functions using different representations by comparing properties of two different functions, each with a different representation (symbolically, graphically, numerically in tables, or by verbal descriptions.)

Tentative Date for Test E: Tuesday, February 19, 2019

Date	I can...	A#	Assignment	Follow-Up?
1/24/19				
1/25/19				
1/28/19				
1/29/19				

Date	I can...	A#	Assignment	Follow-Up?
1/30/19				
1/31/19				
2/1/19				
2/4/19				
2/5/19				
2/6/19				
2/7/19				
2/8/19				
2/11/19				
2/12/19				
2/13/19				
	Review for Unit E Test			

