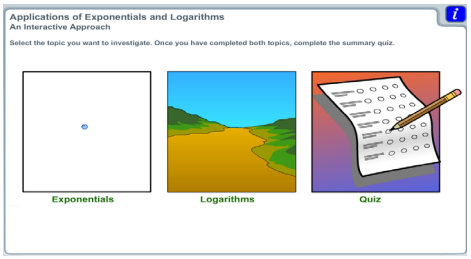
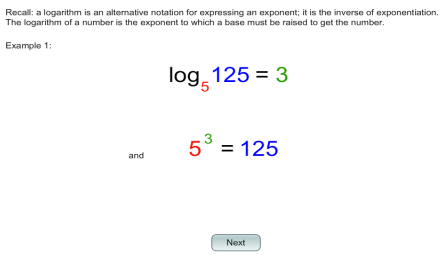
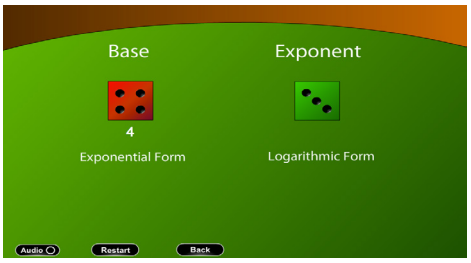
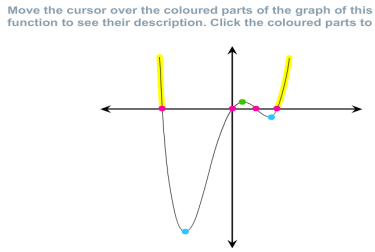
MHF4U
Ontario Educational Resources Bank (OERB) Activities

Exponential and Logarithmic Functions	
Activity	**Description**
Applications of Exponential and Logarithmic Functions  **Resource ID: ELO1090780**	Build understanding of exponential and logarithmic functions by investigating real-world situations involving exponential growth or decay as well as situations involving logarithmic formulae. Practise applying this knowledge by completing a quiz.
Log Laws  **Resource ID: ELO1087840**	Build understanding of the product, quotient and power laws for logarithms by investigating a variety of equations after reviewing the definition of a logarithm.
Log Rolling (Can be Dicey)  **Resource ID: ELO1178270**	Practise converting between logarithmic and exponential forms and evaluating logarithms by answering questions in a challenge activity.
Polynomial and Rational Functions	
Activity	**Description**
Characteristics of Polynomials  **Resource ID: ELO1090650**	Build understanding of polynomial functions by reviewing the key characteristics of polynomial functions through interactive descriptions.

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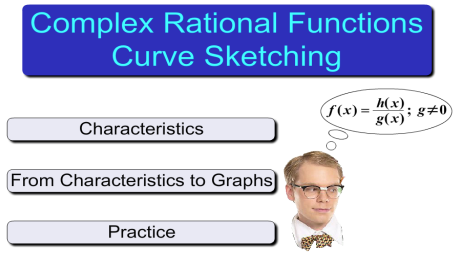
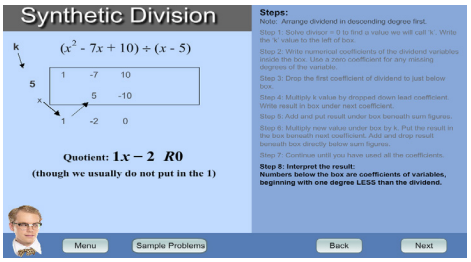
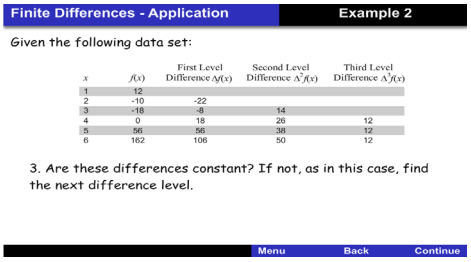
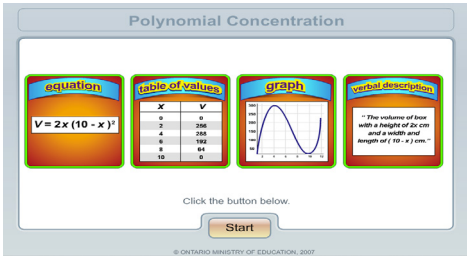
Polynomial and Rational Functions (continued)	
Activity	**Description**
Complex Rational Functions Curve Sketching  **Resource ID: ELO1090760**	Build understanding of complex rational functions by viewing a tutorial analysis of the critical characteristics of their equations leading to sketches of their graphs. Practise applying this knowledge by completing analyses of several rational functions and matching each equation to an appropriate graph.
Division of Polynomials  **Resource ID: ELO1093610**	Practise long division and synthetic division of a polynomial by a binomial by following the illustrated step-by-step procedures provided.
Finite Differences  **Resource ID: ELO1098290**	Build understanding of finite differences by investigating the finite differences for linear, quadratic, cubic and quartic functions and how they can predict the leading coefficient of the function. Practise applying this knowledge by determining the finite differences, identifying the type of polynomial and the value of the leading coefficient from given tables of values.
Polynomial Concentration  **Resource ID: ELO1178280**	Build understanding of characteristics of polynomial functions by matching different representations of a variety of polynomial functions.

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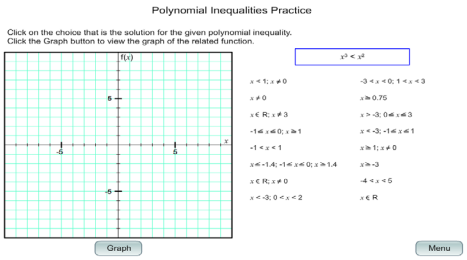
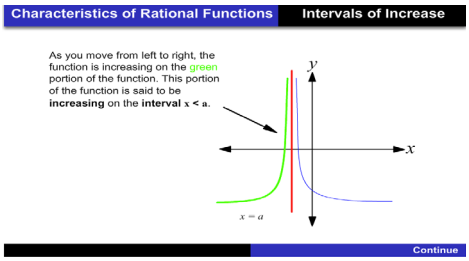
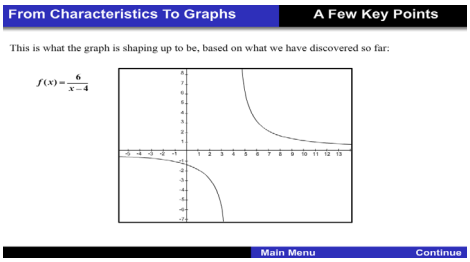
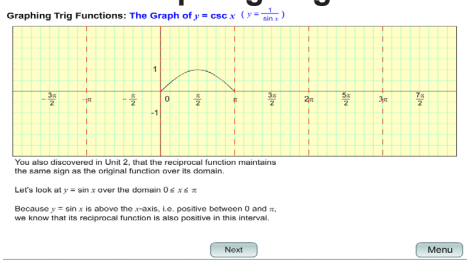
Polynomial and Rational Functions (continued)

Activity	Description
Polynomial Inequalities  **Resource ID: ELO1088050**	Build understanding of polynomial inequalities by viewing an illustrated tutorial. Practise applying this knowledge by viewing graphs of related polynomial functions and then selecting the appropriate solution for the inequality given.
Rational Function Characteristics  **Resource ID: ELO1090710**	Build understanding of rational functions by reviewing the key characteristics of rational functions through interactive descriptions.
Rational Functions Curve Sketching  **Resource ID: ELO1090740**	Build understanding of simple rational functions by viewing a tutorial analysis of the critical characteristics of their equations leading to sketches of their graphs. Practise applying this knowledge by completing analyses of several rational functions and matching each equation to an appropriate graph.

Trigonometric Functions

Activity	Description
Graphing Trig  **Resource ID: ELO1098690**	Build understanding of graphing trigonometric functions by viewing interactive demonstrations of how to graph *y=sinx, y=cosx, y=tanx* and *y=cscx*.

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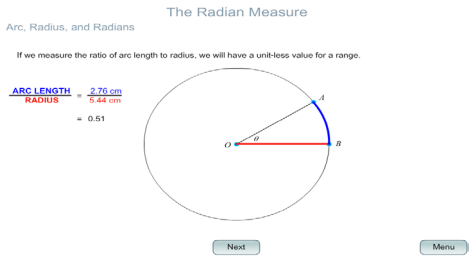
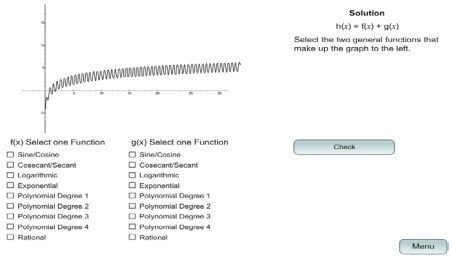
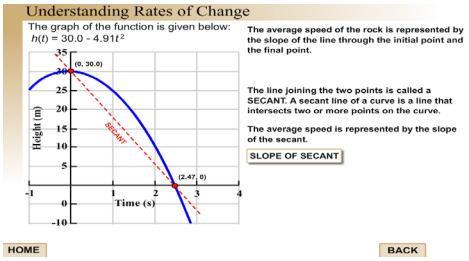
Trigonometric Functions (continued)	
Activity	**Description**
Radian Measure: An Interactive Approach  **Resource ID: ELO1079560**	Build understanding of radian measure by completing interactive exploration activities demonstrating the relationship between radian and degree measure. Practise applying this knowledge by completing a multiple choice quiz.

Characteristics of Functions	
Activity	**Description**
Investigating Compound Functions  **Resource ID: ELO1088080**	Build understanding of the effects of combining two functions by investigating graphs, identifying the components of a compound function and matching compound functions to their graph.
Investigating Instantaneous Rates of Change  **Resource ID: ELO1098990**	Build understanding of average and instantaneous rates of change by investigating how the slope of a secant between two points on a curve can be used to determine the slope of a tangent to a single point.