

Lesson Outline

Big Picture			
<p>Students will:</p> <ul style="list-style-type: none"> • identify and use key features of rational functions; • solve problems using a variety of tools and strategies related to rational functions; • determine and interpret average and instantaneous rates of change for rational functions. 			
Day	Lesson Title	Math Learning Goals	Expectations
1–3	<i>(lessons not included)</i>	<ul style="list-style-type: none"> • Investigate and summarize the key features (e.g. zeros, end behaviour, horizontal and vertical asymptotes, domain and range, increasing/decreasing behaviour) of rational functions, and make connection between the graphical and algebraic representations. • Demonstrate an understanding of the relationship between the degrees of numerator and the denominator and the asymptotes. • Sketch the graph of rational functions using its key features. 	C2.1, 2.2, 2.3
4	<i>(lesson not included)</i>	<ul style="list-style-type: none"> • Solve problems graphically and algebraically involving applications of polynomial and simple rational functions and equations. • Solve simple rational equations algebraically and verify using technology. • Use properties of simple rational functions to fit a rational function to a graph or a given set of conditions. • Make connections between the x-intercepts of a simple rational function and the real roots of the corresponding function. 	C3.5, 3.6, 3.7
5	<i>(lesson not included)</i>	<ul style="list-style-type: none"> • Solve problems involving average and instantaneous rates of change at a point using numerical and graphical methods. • Investigate average rates of change near horizontal and vertical asymptotes. 	D1.1–1.8
6	Jazz Day		
7	Summative Assessment		