

Tracing Parabola

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Open the “Tracing-Parabola-Slope” file to trace the secant line and the tangent line of a parabola in the Cartesian plane. Click on “**X-Coordinate**”, “**h-Increment**” and “**Animation**” to enter the corresponding data from the table below. Find the value of “h” and use the equation and the graph to calculate the slope. Complete and turn in this table in lieu of the Work Assignment Form.

No.	Function $f(x) = d(x - a)^c + b$	Argument $A(x, y)$	Quotient $Q(x, h)$	Secant Slope $S(x, h) = Q(x, h) \odot$
1	$f(x) =$		$Q = \frac{f(x + h) - f(x)}{h}$	$m_s =$

Rate of Change of the Function					Rivera ©2010
Interval	Secant Slope		Tangent Slope		
	Equation $m_s = S(x_1, h) \odot$	Graph $m_s = \frac{y_2 - y_1}{x_2 - x_1}$	Equation $m_t = T(x_1)$	Graph $m_t = \frac{y_b - y_a}{x_b - x_a}$	
$-2 \rightarrow -1.5$					
$-2 \rightarrow -1$					
$-1.2 \rightarrow -1$					
$-1.2 \rightarrow 0$					
$-1 \rightarrow -1.5$					
$-1 \rightarrow -1$		Use “Animation”			
$-1 \rightarrow -.5$					
$-.5 \rightarrow -.5$		Use “Animation”			
$-.5 \rightarrow 1$					
$0 \rightarrow 0$		Use “Animation”			
$0 \rightarrow 1$					
$0 \rightarrow 2$					
$.4 \rightarrow .5$					
$.4 \rightarrow 1.6$					
$1 \rightarrow 1$		Use “Animation”			

Prepared by: _____ Date: _____

Calculus