



## TangentLines.vi Readme

This VI graphs a function,  $y = f(x)$ , and the line tangent to the graph of the function for the  $x$ -value selected. The tangent line is determined using  $y = m(x - a) + c$  where  $m$  is the value of  $f'(a)$ ,  $a$  is the  $x$ -value selected by the knob, and  $c$  is the value of  $f(a)$ .

Many common functions can be used for  $f(x)$ . For example,  $x$ ,  $x^2$ ,  $x^3$ ,  $\text{abs}(x)$ ,  $\text{sqrt}(x)$ ,  $\text{sin}(x)$ ,  $\text{cos}(x)$ ,  $2^x$ ,  $1/x$ ,  $\text{exp}(x)$ ,  $\text{ln}(x)$  can be used.

This VI was built using LabVIEW 8.5 on a Mac running OS X. The VI will run in Windows with LabVIEW 8.5 or later installed.

Please direct all comments and questions regarding the contents of this document to:

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Warm regards,

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