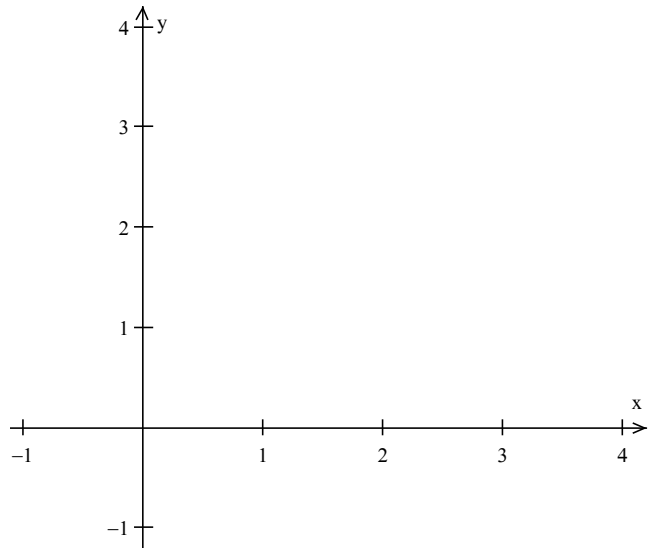


Complete the following questions by hand before you go to the computer lab. Show your work and write the final answer in the space provided.

1. Find the equation of the tangent line to the curve $y = \sin 2x + \cos x$ at $x = 0$.

2. Find the value of c guaranteed to exist by the Mean Value Theorem for $f(x) = \sqrt{x-1}$ on the interval $[1, 3]$. Sketch the graph of the function as well as the secant and tangent lines involved.



From the Math 100 index screen, click on “Curve Plotting.” You will learn how to plot basic graphs, including tangent lines, using the `plot` command in Maple.

1. Give the Maple commands to find the equation of the tangent line to the curve $y = \sin 2x + \cos x$ at $x = 0$ and to plot the curve and the tangent line on the same graph. Write the equation of the tangent line and sketch the graph below using an appropriate scale.

2. Give all the Maple commands required to find the value of c guaranteed by the Mean Value Theorem for $f(x) = \sqrt{x-1}$ on the interval $[1, 3]$ and to plot the graph of the function as well as the relevant secant and tangent lines. Sketch your graph below.