

## Comparing Linear Approximations to Calculator Computations

In lecture, we explored linear approximations to common functions at the point  $x = 0$ . In this worked example, we use the approximations to calculate values of the sine function near  $x = 0$  and compare the answers to those on a scientific calculator.

Find the linear approximation to  $\sin(x)$  at the point  $x = 0$  and use your answer to approximate the values of  $\sin(.01)$ ,  $\sin(.1)$  and  $\sin(1)$ . Check your answer on a calculator.

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