Name: _____   Date: _____

Learning Goal 3.6	Linear Approximations.

Linear Approximation
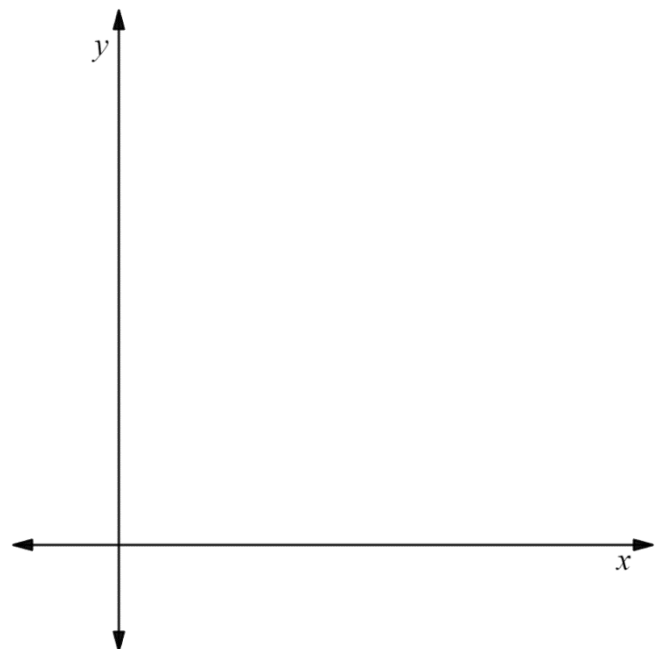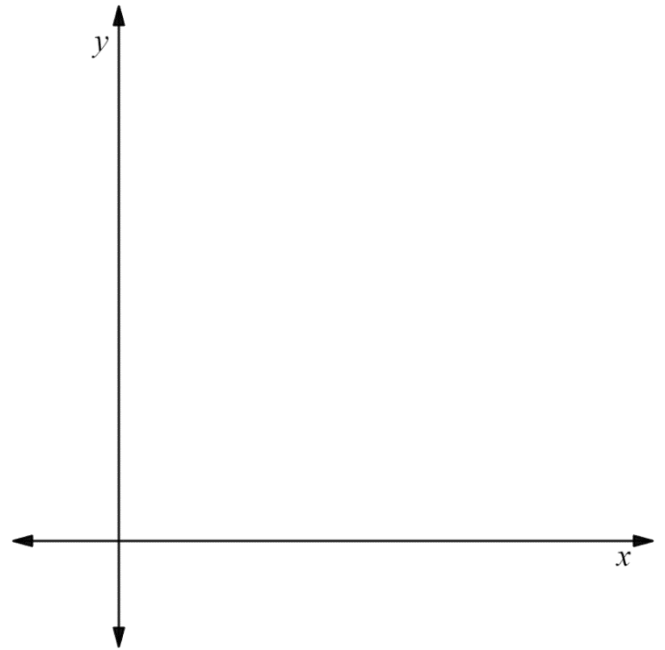
Example Find the linearization of $f(x) = \sqrt{x}$ at $x_0 = 4$ and use it to approximate the value of $\sqrt{3.8}$ without a calculator.

Example Approximate the value of $\cos 32°$.

Example Find the linearization of the function $f(x) = \sqrt{x+1}$ at $x_0 = 1$. Determine the values for x for which the linear approximation is accurate to within 0.1.