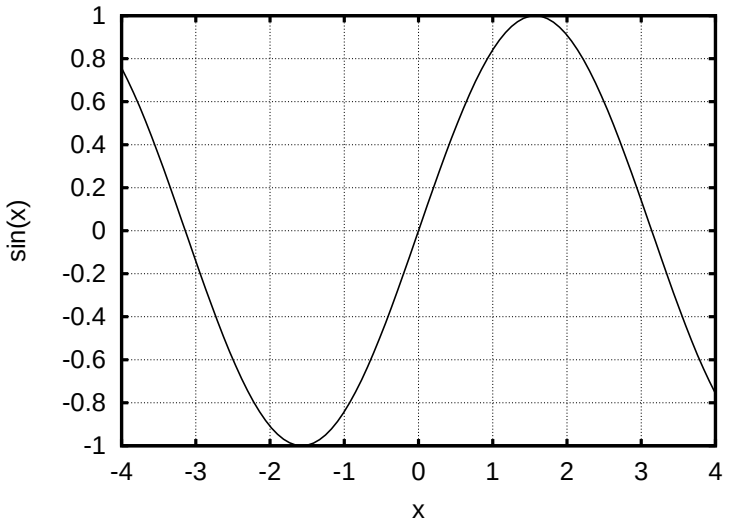
# The Derivative at a Point:

## Determining the Deriviative Graphically and Numerically

1. Consider $h(x) = \sin(x)$. Using the graph below, estimate $h'(0)$.




2. Numerically estimate $h'(0)$. As always, use radians. Do your answers for $h'(0)$ agree?

3. Graphically estimate the derivative of $h(x)$ at the $x$-values below and fill in the following table:

| $x$ | $h'(x)$ |
|---|---|
| $-\pi/2$ | |
| $-\pi/4$ | |
| $0$ | |
| $\pi/4$ | |
| $\pi/2$ | |
| $3\pi/4$ | |
| $\pi$ | |