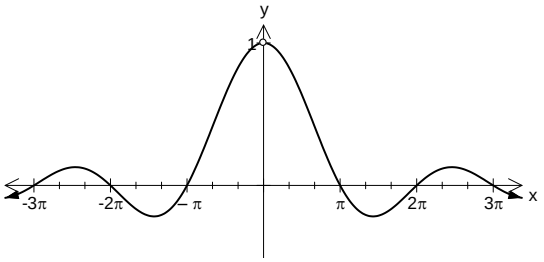
AP Calculus AB
1.2 – Limits: Evaluating Numerically & Graphically

Example 1

Equation: $f(x)=\dfrac{\sin x}{x}$

Graph:



Numerically calculate: _____

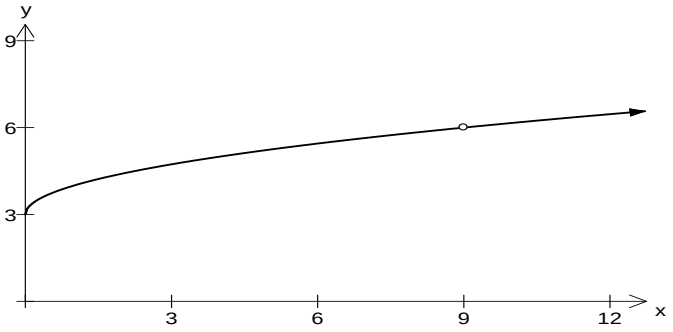
Try:

x	-0.1	-0.01	-0.001	0	+0.001	+0.01	+0.1
$f(x)$							

Example 2

Equation: $f(x)=\dfrac{x-9}{\sqrt{x}-3}$

Graph:



Numerically calculate: _____

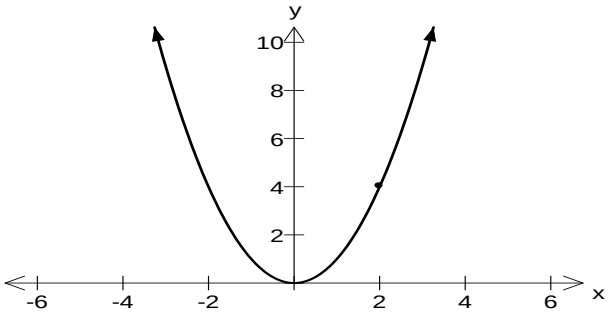
Try:

x	8.9	8.99	8.999	9	9.001	9.01	9.1
$f(x)$							

Example 3

Equation: $f(x) = x^2$

Graph:



Numerically calculate: _____

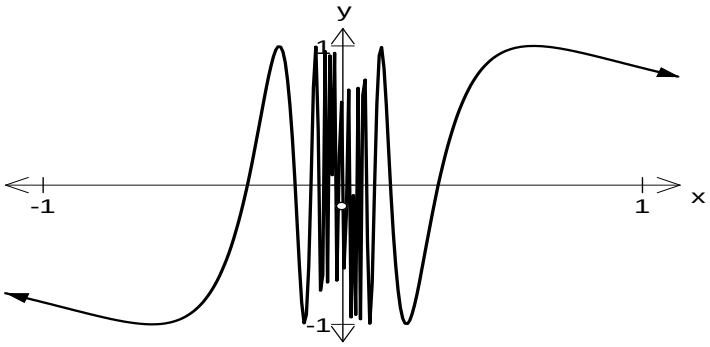
Try:

x	1.9	1.99	1.999	2	2.001	2.01	2.1
$f(x)$							

Example 4

Equation: $f(x) = \sin\left(\frac{1}{x}\right)$

Graph:



Numerically calculate: _____

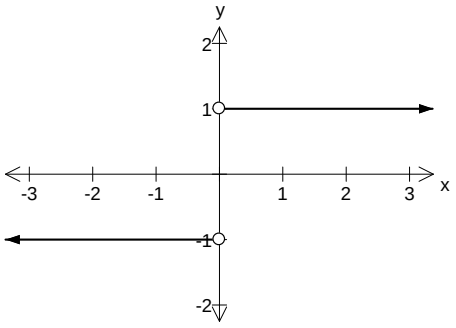
Try:

x	-0.1	-0.01	-0.001	0	+0.001	+0.01	+0.1
$f(x)$							

Example 5

Equation: $f(x) = \frac{x}{|x|}$

Graph:



Numerically calculate:_____

Try:

From the graph: