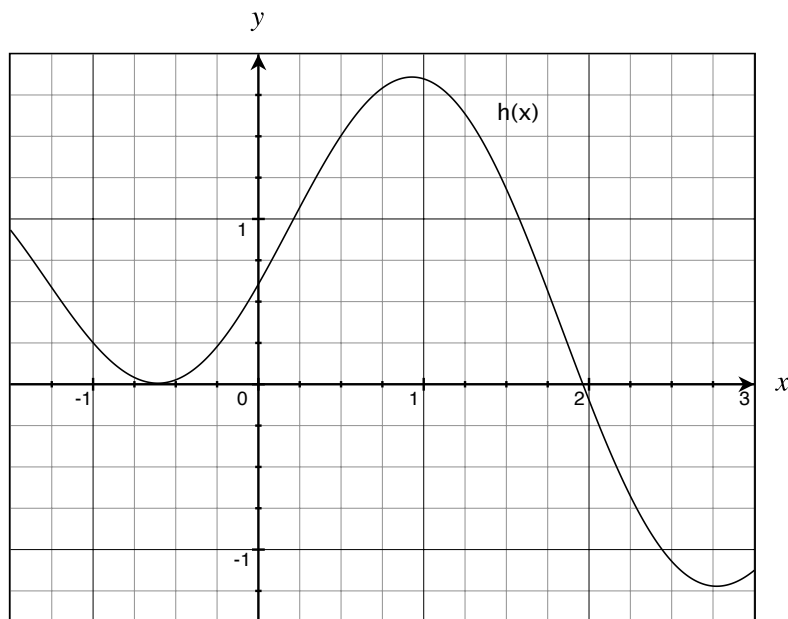


Name: _____

Math 105: Fall 2013
Quiz 3: September 27

Good Luck!

1. The graph of a function h is shown below. (Note: h has inflection points at $x = 0.2$ and $x = 1.8$. h has stationary points at $x = -0.6$, $x = 0.9$, and $x = 2.75$.)



For which values of x , if any, is $h''(x)$:

(a) positive? Justify your answer.

(b) zero? Justify your answer.

2. What does the difference quotient $\frac{f(a+h) - f(a)}{h}$ represent graphically?

3. Let $f(x) = e^{-x}$.

(a) Fill in the missing entries in the table. (Round your answers to 4 decimal places.)

x	0.97	0.98	0.99	1
$f(x) = e^{-x}$	0.3798			0.3679

(b) Use the table above to estimate the missing entries in the table below. Show your work. (Round your answers to 4 decimal places.)

x	0.98	1
$f'(x)$		

4. The graph of $g'(x)$ is shown below. Use it to evaluate $\lim_{h \rightarrow 0} \frac{g(1.75 + h) - g(1.75)}{h}$.

