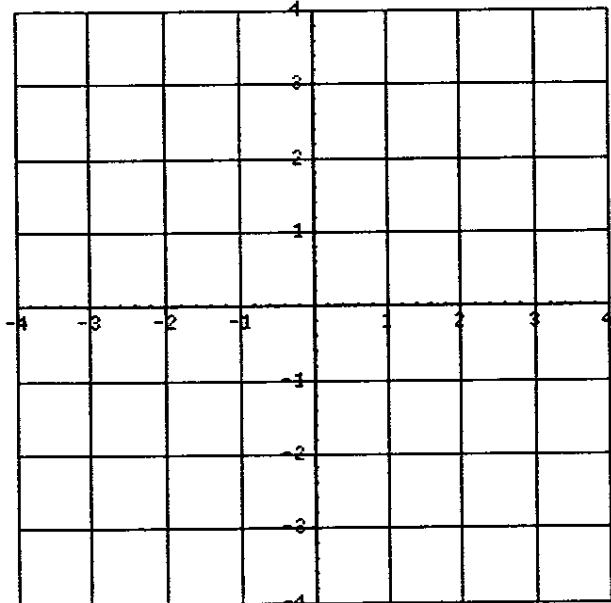
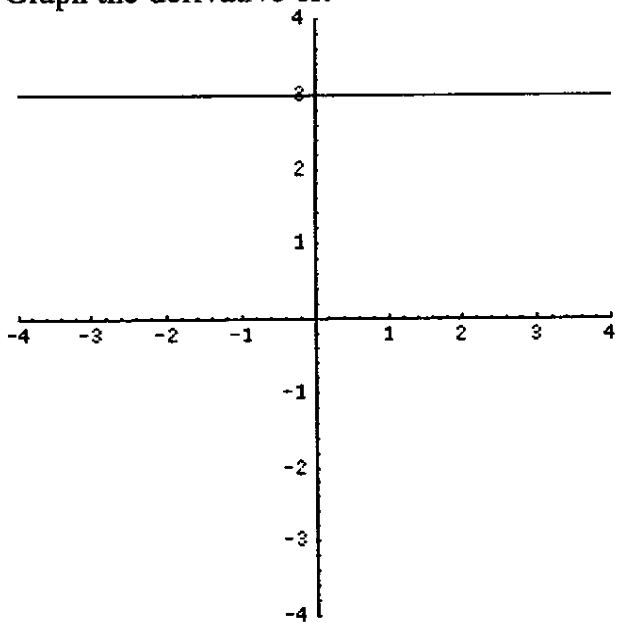
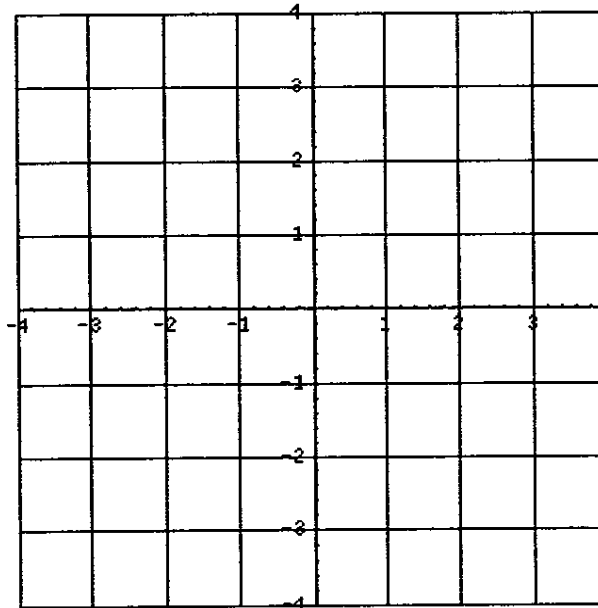
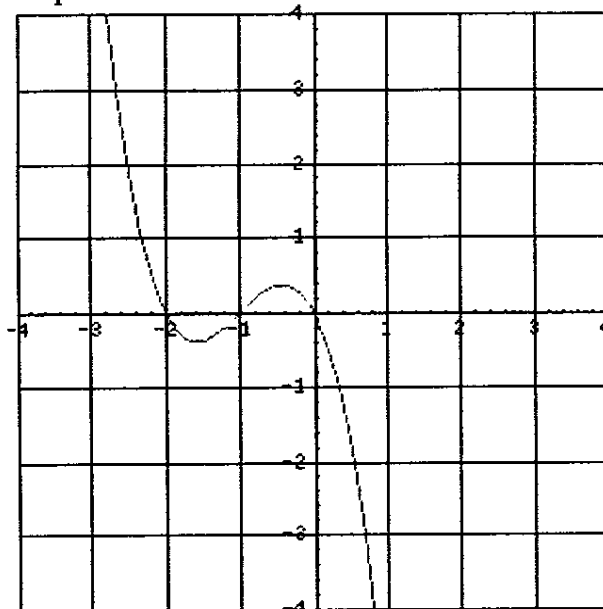


Solve:

1) Graph the derivative of:



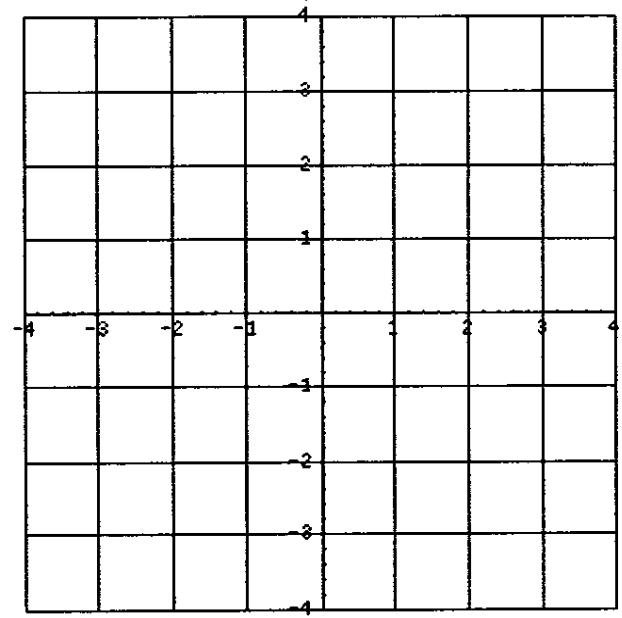
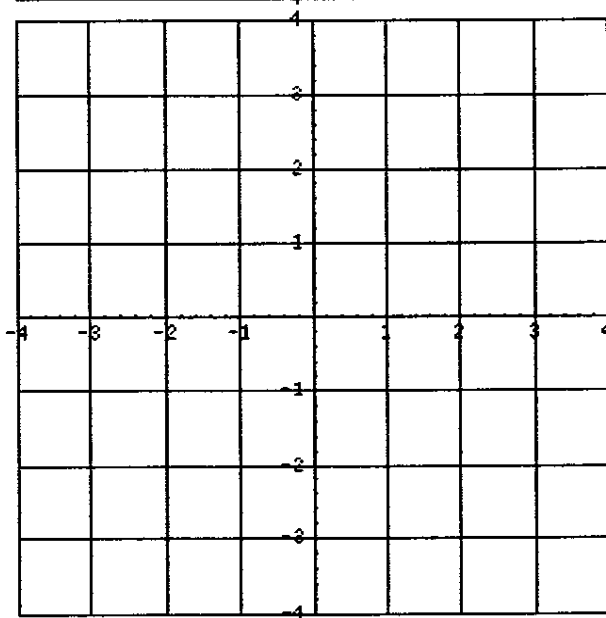
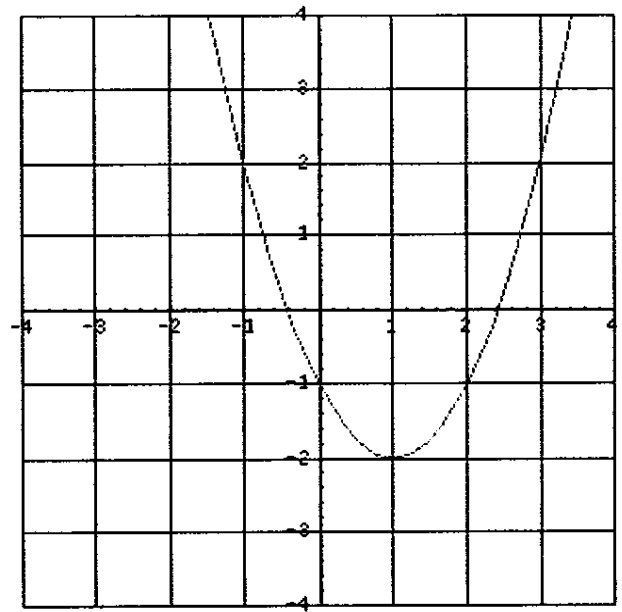
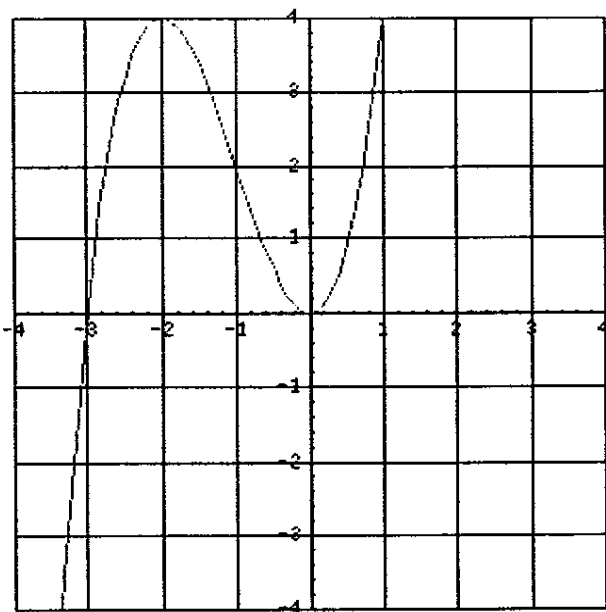
2) Graph the derivative of:



3) Graph the derivative of:

(next page)

4) Graph the derivative of:



5) Is $u(x) = |x + 4| + 4$ differentiable at $x = -4$?

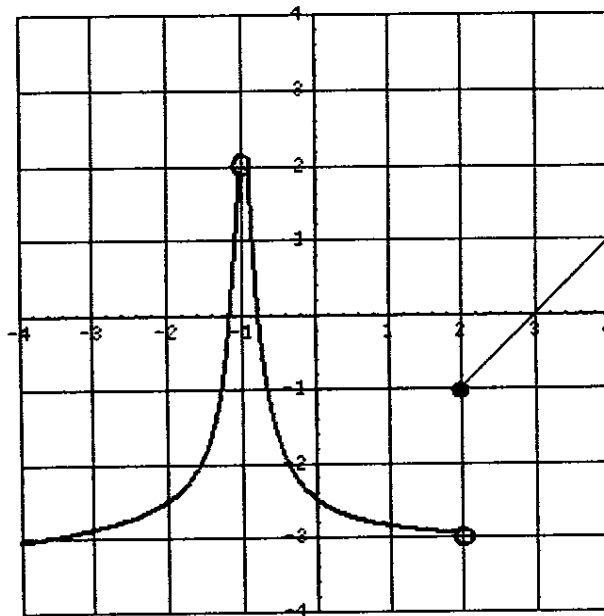
6) $a(x)$ is pictured below. Is $a(x)$ differentiable at $x = 2$?

(next page)

Is $a(x)$ differentiable at $x=2$?

What about $x = -1$?

$x=0$?



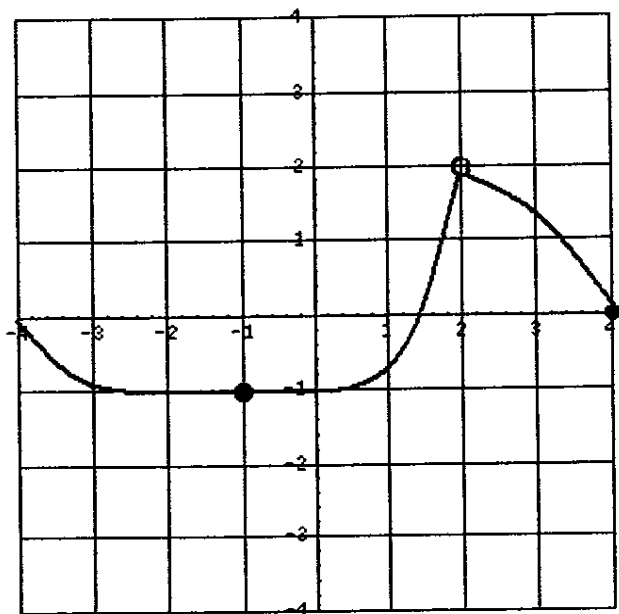
7)
$$m(x) = \begin{cases} 2x - 5; & x \geq -3 \\ -1 & ; x < -3 \end{cases}$$

Is $m(x)$ differentiable at $x = -3$?

8)
$$u(x) = \begin{cases} x + 5; & x \neq 6 \\ 3 & ; x = 6 \end{cases}$$

Is $u(x)$ continuous, differentiable, both, or neither at $x = 6$?

9) $a(x)$ is pictured below. Where is $a(x)$ differentiable?



Where does $a(x)$ have a horizontal tangent line?

10) Is $a(x) = -2|x + 1| + 2$ continuous, differentiable, both, or neither at $x = -1$?

