

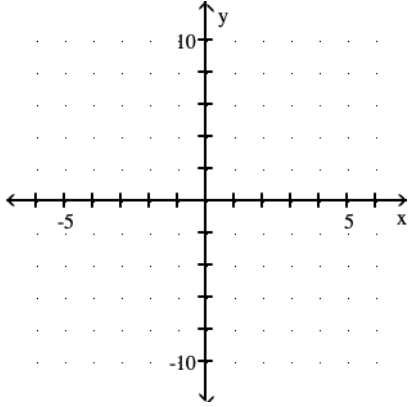
Tangent Line and the Derivative at a Point

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

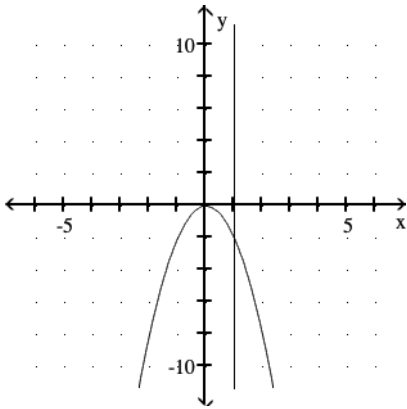
Graph the equation and its tangent.

1) Graph $y = -2x^2$ and the tangent to the curve at the point whose x-coordinate is 1.

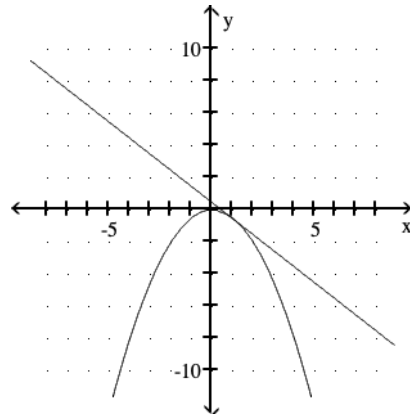
1) _____



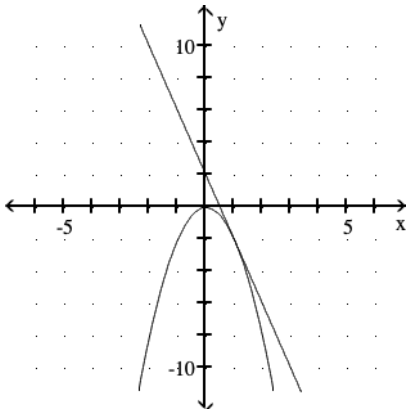
A)



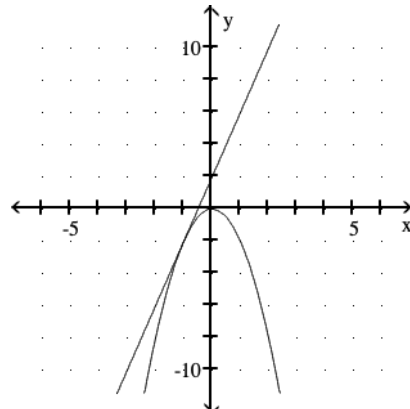
B)



C)



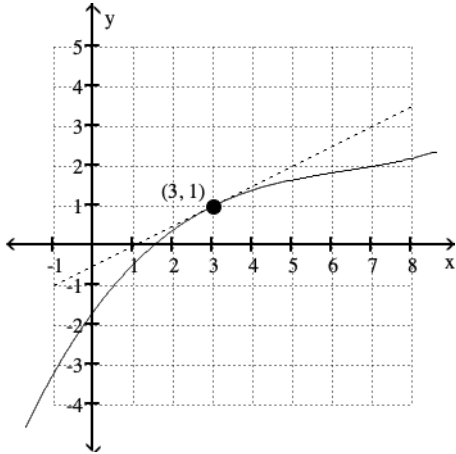
D)



Estimate the slope of the tangent line to the curve at the given point.

2)

2) _____



- A) -1 B) 1 C) 2 D) 1/2

Use the definition $f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$ to find the derivative at x .

3) $f(x) = 21x - 3$

3) _____

- A) 21 B) -21 C) 21x D) 18

4) $f(x) = x^2 + 5$

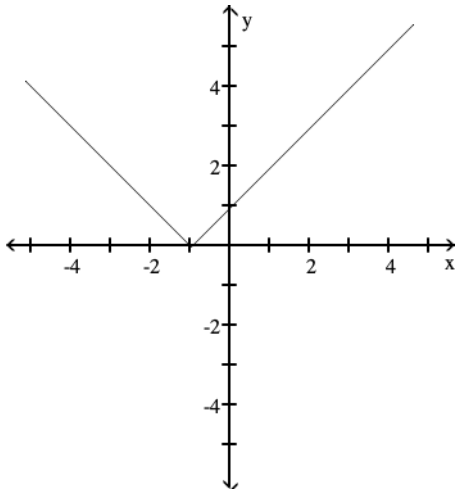
4) _____

- A) $x + 5$ B) $2x + 5$ C) $2x^2$ D) $2x$

The figure shows the graph of a function. At the given value of x , does the function appear to be differentiable, continuous but not differentiable, or neither continuous nor differentiable?

5) $x = -1$

5) _____



- A) Differentiable
 B) Continuous but not differentiable
 C) Neither continuous nor differentiable

Answer Key

Testname: TANGENT LINE AND THE DERIVATIVE AT A POINT

- 1) C
- 2) D
- 3) A
- 4) D
- 5) B