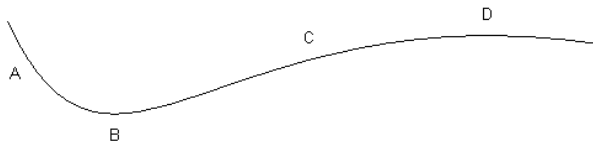Name: _____   Date: _____

QUIZ – DEFINITION OF THE DERIVATIVE

1. (10%) The derivative is: _____

1. (10%) The derivative is (mathematical definition):

2. (12%) Sketch the tangent at the points A, B, C and D.

At point A the derivative is: _____ At point B the derivative is: _____

At point C the derivative is: _____ At point D the derivative is: _____

3. (24%) Given the function, answer with positive, negative, zero or D.E.:

$f(-1) =$
$f'(-1) =$
$f(0) =$
$f'(0) =$
$f(1) =$
$f'(1) =$

$f(b) =$
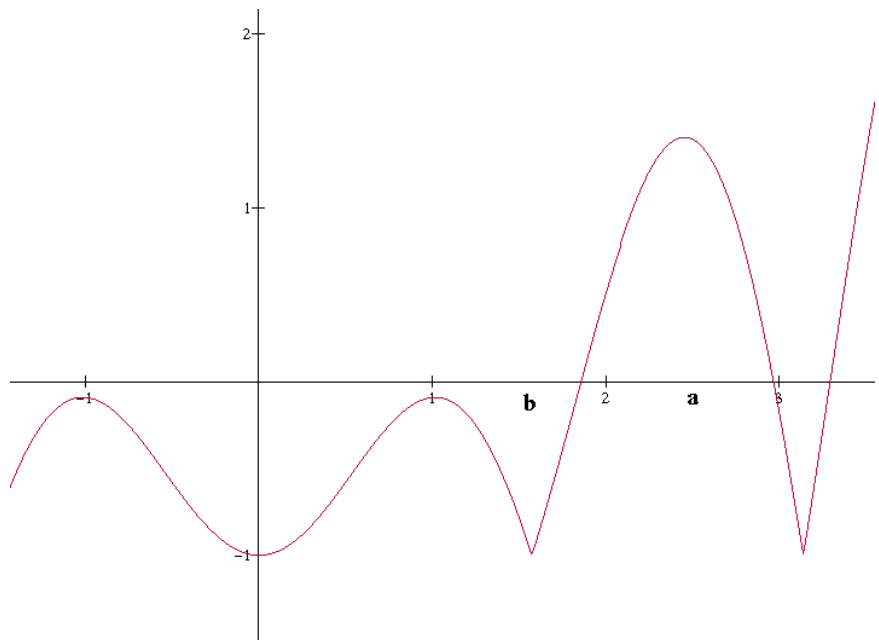$f'(b) =$
$f(2) =$
$f'(2) =$
$f(a) =$
$f'(a) =$

4. (20%) Use the definition of the derivative to find the derivative of $f(x) = 3x^2 + x$

5. (24%) Use the definition of the derivative to find the derivative of $f(x) = \dfrac{3}{1-2x}$