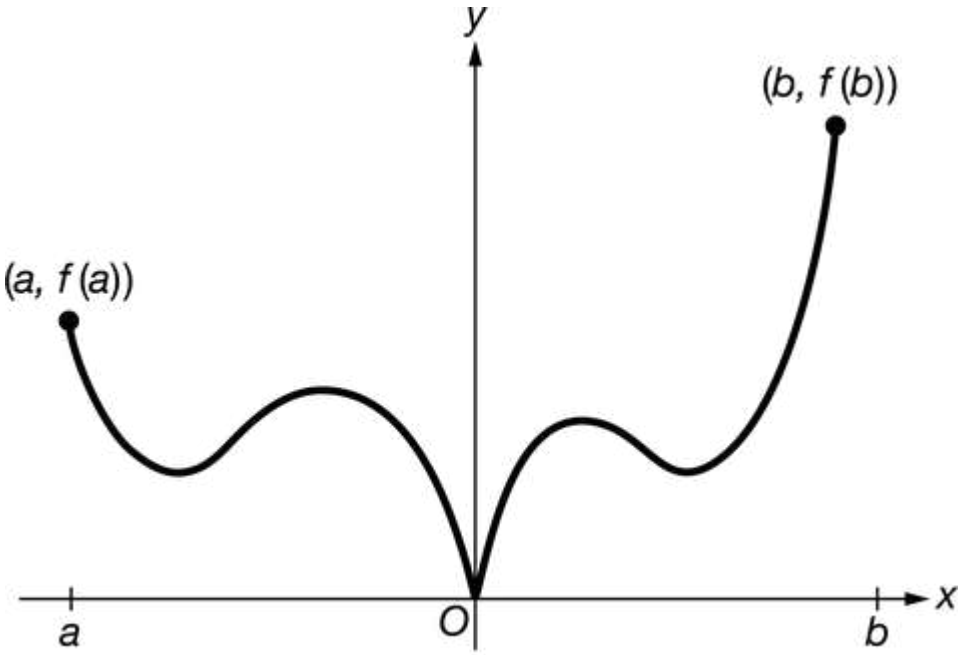
Quiz 2.3

Name

1.



Graph of f

The graph of a function f with $f(b) > f(a)$ is shown above for $a \le x \le b$. The derivative of f exists for all x in the interval $a < x < b$ except $x = 0$. For how many values of c, for $a < c < b$, does $\lim_{x \to c} \frac{f(x)-f(c)}{x-c} = \frac{f(b)-f(a)}{b-a}$?

(A) Zero

(B) Two

(C) Three

(D) Four

2. Let f be the function given by $f(x) = x^4 + \frac{1}{2}x^3 - 5x^2 + \tan\left(\frac{x}{2}\right)$. Of the following values of x, at which does the line tangent to the graph of f have the greatest slope?

Quiz 2.3

A $x = -2$

B $x = -1$

C $x = 0$

D $x = 1$

3. Let f be the function given by $f(x) = \cos x - \csc x$. What is the value of $f'(1)$?

A $f'(1)$ is undefined.

B –0.648

C –0.078

D 0