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# Practice quiz onTangent Lines to Functions

PUNTOS TOTALES DE 2

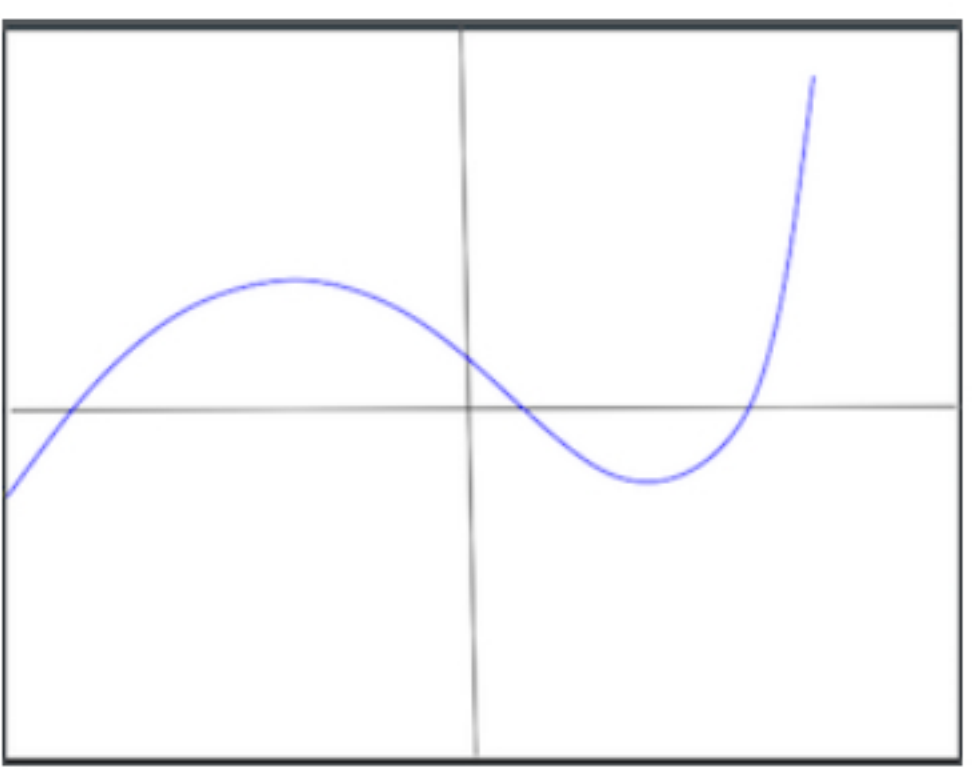
1. Suppose that  $f : \mathbb{R} \rightarrow \mathbb{R}$  is a function. Which of the following expressions corresponds to  $f'(2)$ , the slope of the tangent line to the graph of  $f(x)$  at  $x = 2$ ?


1 / 1 puntos
- ☐  $f'(2) = 2$
- ☐  $f'(2) = \lim_{h \rightarrow 0} \frac{f(a+h)-f(a)}{h}$
- ☐  $f'(2) = mx + b$
- ☒  $f'(2) = \lim_{h \rightarrow 0} \frac{f(2+h)-f(2)}{h}$

Correct

This expression can be obtained from the first screen of our video by plugging in 2 for  $a$ .

2. Suppose that  $h : \mathbb{R} \rightarrow \mathbb{R}$  is a function whose graph is shown as the blue curve in the figure. For how many values of  $a$  is  $h'(a) = 0$ ?

1 / 1 puntos
- 
- ☐ 3
- ☐ Never
- ☐ Always
- ☒ 2

Correct

$h'(a)$  gives the slope of the tangent line to the graph of  $h$  at the point  $x = a$ .

When  $h'(a) = 0$ , this means that the tangent line is horizontal.

There are two places (one on each side of the  $y$ -axis) where this tangent line is horizontal, so this answer is correct.