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Practice quiz onTangent Lines to Functions

PUNTOS TOTALES DE 2

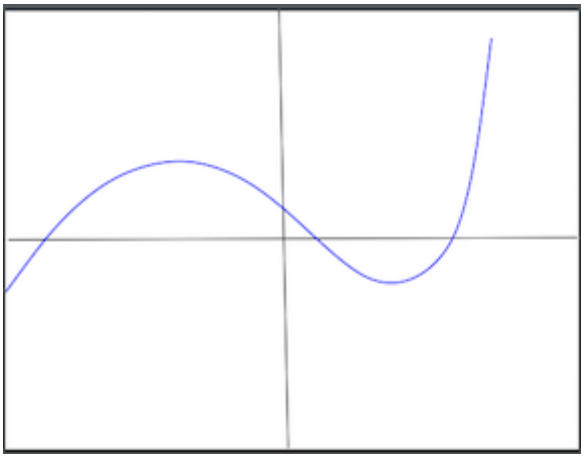
1. Suppose that $f : \mathrm{R} \to \mathrm{R}$ is a function. Which of the following expressions corresponds to $f'(2)$, the slope of the tangent line to the graph of $f(x)$ at $x = 2$? **1 / 1 puntos**

- (●) $f'(2) = \lim_{h \to 0} \frac{f(2+h) - f(2)}{h}$
- ( ) $f'(2) = mx + b$
- ( ) $f'(2) = 2$
- ( ) $f'(2) = \lim_{h \to 0} \frac{f(a+h) - f(a)}{h}$

✓ **Correct**

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

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



- ○ 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.