Practice quiz on Tangent Lines to Functions

TOTAL POINTS 2

1. Suppose that $f: \mathbb{R} \to \mathbb{R}$ 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 point

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

$$\bigcirc \ f'(2)=2$$

$$\bigcirc f'(2) = mx + b$$

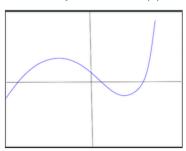
$$f'(2) = \lim_{h \to 0} \frac{f(a+h) - f(a)}{h}$$



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

2. Suppose that $h:\mathbb{R}\to\mathbb{R}$ 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 point



- \bigcirc 3
- O Never
- Always
- 2

/ Corre

 $h^{\prime}(a)$ 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.