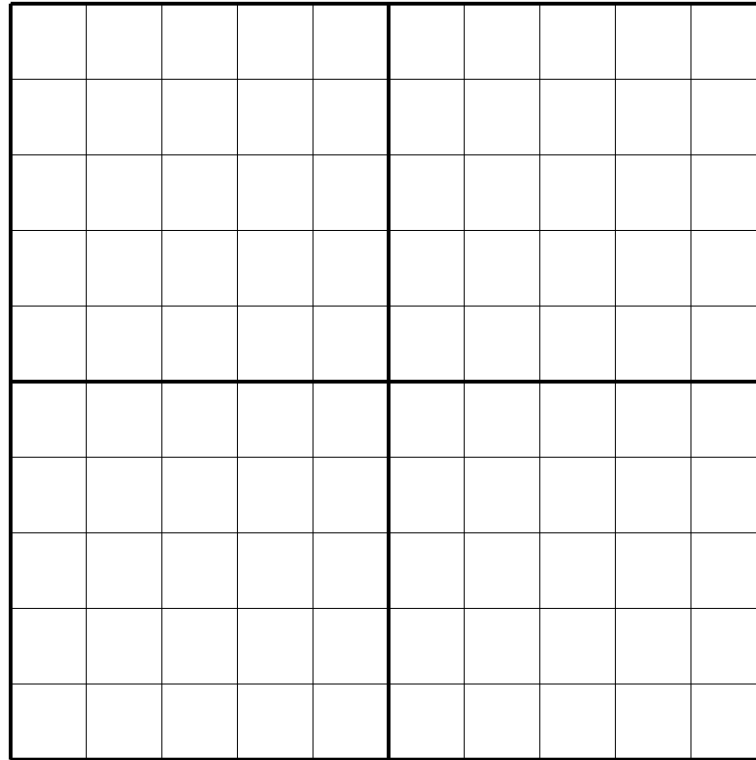


Answer each of the following questions.



1. Sketch the graph of a function $f(x)$ that satisfies the following criteria. (You do not need to define the function algebraically.)

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- Defined and continuous on the interval $[-10, 10]$.
- $\lim_{h \rightarrow 0} \frac{f(-2+h) - f(-2)}{h}$ does not exist
- The rate of change of $f(x)$ when $x = 8$ is negative
- The slope tangent to the graph of $f(x)$ at $x = 5$ is zero $f'(x) > 0$ at $x = 4$

1. Sketch the graph of a function $f(x)$ that satisfies the following criteria. (You do not need to define the function algebraically.)

- Defined and continuous on the interval $[-10, 10]$.
- $f'(x)$ does not exist at $x = 0$
- $\lim_{h \rightarrow 0} \frac{f(3+h) - f(3)}{h} < 0$
- The slope tangent to the graph of $f(x)$ at $x = 2$ is zero
- The rate of change of $f(x)$ when $x = 6$ is positive