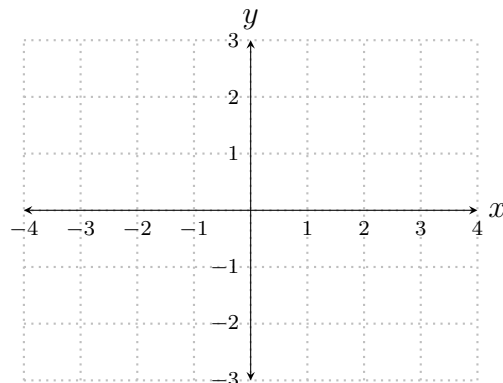


1. $\lim_{x \rightarrow 1} \frac{\sin(x-1)}{3x-3} =$

2. $\lim_{x \rightarrow 0} \cos\left(\frac{\pi x}{6x-6x^2}\right) =$

3. State the intervals on which the function $f(x) = \frac{1}{1 - \ln(x)}$ is continuous.4. Draw the graph of **one** function f , with domain $[-4, 4]$, meeting **all** of the following conditions.(a) f is continuous at all x except $x = -1$ and $x = 1$.(b) $f(3) = 2$ (c) $\lim_{x \rightarrow 1} f(x) = 2$ (d) $\lim_{x \rightarrow -1^-} f(x) = 1$ (e) $\lim_{x \rightarrow -1^+} f(x) = -1$ 

Name: _____

1. $\lim_{x \rightarrow 0} \frac{7 \sin(x)}{3x} =$

2. $\lim_{x \rightarrow 5} \log_3 \left(\frac{x^2 - x - 20}{x - 5} \right) =$

3. State the intervals on which the function $f(x) = \frac{\sqrt{x+2}}{e^x - e}$ is continuous.

4. Draw the graph of **one** function f , with domain $[-4, 4]$, meeting **all** of the following conditions.

(a) f is continuous at all x except $x = 1$ and $x = 2$.

(b) $f(3) = -2$

(c) $\lim_{x \rightarrow 2} f(x) = -1$

(d) $\lim_{x \rightarrow 1^-} f(x) = 1$

(e) $\lim_{x \rightarrow 1^+} f(x) = 2$

