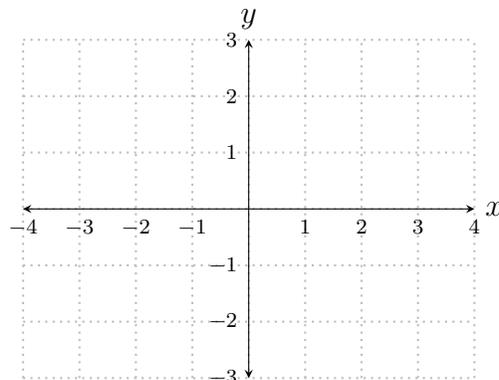


Name: \_\_\_\_\_

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

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