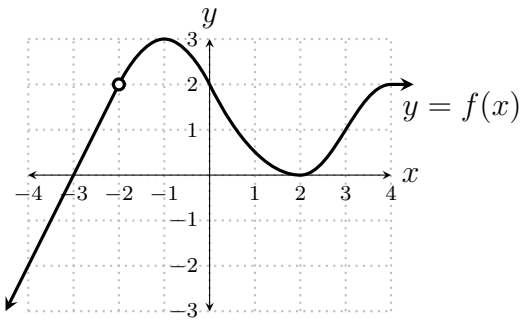
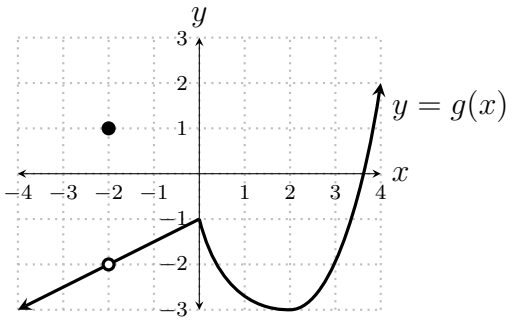
Name: _____

Quiz 1

MATH 200
August 24, 2023

1. Answer the questions about the functions graphed below.





   (a) $g\big(f(-4)\big) =$

   (b) $\lim\limits_{x\to 2} f(x) =$

   (c) $\lim\limits_{x\to -2} g(x) =$

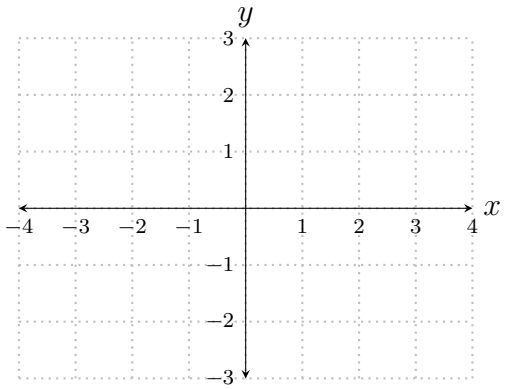
   (d) $\lim\limits_{x\to 3} \big(2f(x) - g(x)\big) =$

   (e) $\lim\limits_{x\to -2} \dfrac{3 + f(x)}{\sqrt{7 + g(x)}} =$

2. $\lim\limits_{x\to 3} \sqrt{\dfrac{x-1}{3} - \dfrac{5}{3x}} \;=$

3. $\lim\limits_{x\to 1/3} \dfrac{8^x}{6x+1} \;=$

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



   (a) $\lim\limits_{x\to 1} f(x) = 2$

   (b) $f(1) = 1$

   (c) $\lim\limits_{x\to 3^-} f(x) = 3$

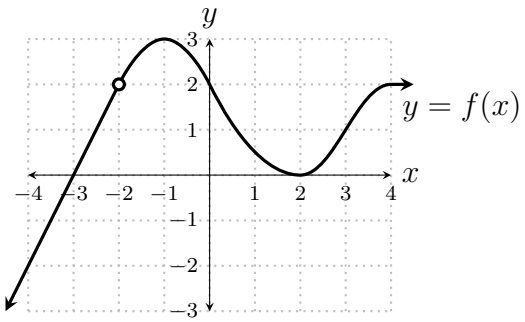
   (d) $\lim\limits_{x\to 3^+} f(x) = -1$

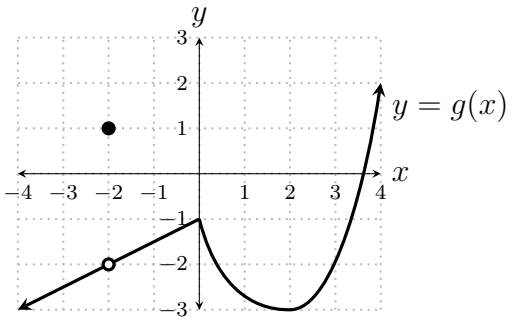
Name: _____

Quiz 1

MATH 200
August 24, 2023

1. Answer the questions about the functions graphed below.





   (a) $f\big(g(-4)\big) =$

   (b) $\lim_{x\to 2} g(x) =$

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

   (d) $\lim_{x\to 3} \big(2f(x) + 5g(x)\big) =$

   (e) $\lim_{x\to -2} \dfrac{\sqrt{7+g(x)}}{3+f(x)} =$

2. $\lim_{x\to 1/3} \dfrac{27^x}{1-x} =$

3. $\lim_{x\to 3} \sqrt{\dfrac{2}{3} - \dfrac{5}{3x}} =$

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

   (a) $\lim_{x\to -3} f(x) = 0$

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

   (c) $\lim_{x\to 1^-} f(x) = 3$

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