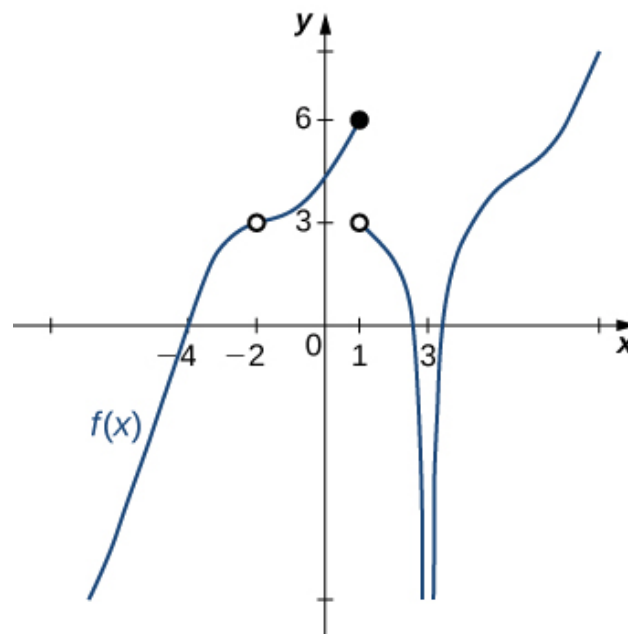


1. Based on the information below, which of the following statements is always true?

$f(x)$ approaches 13.098 as x approaches ∞ .

- A. $f(x)$ is undefined when x is large enough.
- B. x is undefined when $f(x)$ is large enough.
- C. $f(x)$ is close to or exactly ∞ when x is large enough.
- D. $f(x)$ is close to or exactly 13.098 when x is large enough.
- E. None of the above are always true.

2. For the graph below, find the value(s) a that makes the statement true:
 $\lim_{x \rightarrow a} f(x)$ does not exist.



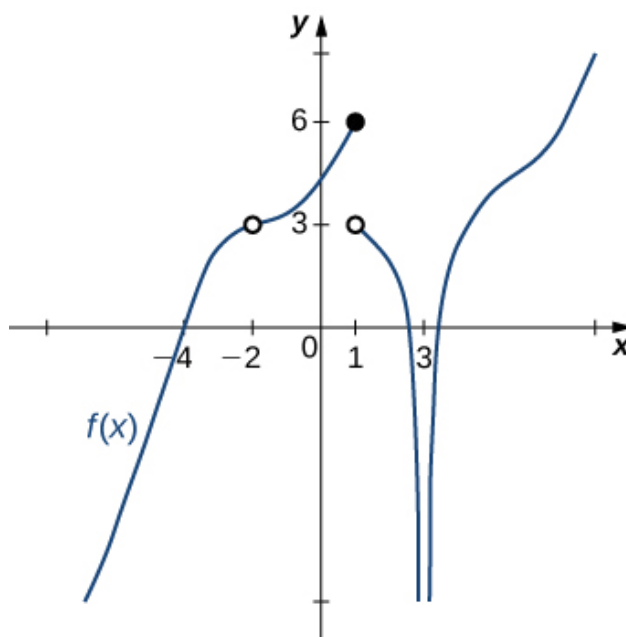
- A. 3
- B. 1
- C. -2
- D. Multiple a make the statement true.
- E. No a make the statement true.

3. Evaluate the limit below, if possible.

$$\lim_{x \rightarrow 5} \frac{\sqrt{9x - 9} - 6}{7x - 35}$$

- A. 0.083
- B. ∞
- C. 0.429
- D. 0.012
- E. None of the above

4. For the graph below, find the value(s) a that makes the statement true:
 $\lim_{x \rightarrow a} f(x) = 0$.



- A. 3
- B. -4
- C. 0
- D. Multiple a make the statement true.

E. No a make the statement true.

5. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \rightarrow -6^-} \frac{9}{(x-6)^3} + 2$$

- A. $-\infty$
 - B. $f(-6)$
 - C. ∞
 - D. The limit does not exist
 - E. None of the above
-

6. To estimate the one-sided limit of the function below as x approaches 8 from the right, which of the following sets of numbers should you use?

$$\frac{\frac{8}{x} - 1}{x - 8}$$

- A. $\{8.1000, 8.0100, 8.0010, 8.0001\}$
 - B. $\{7.9000, 7.9900, 8.0100, 8.1000\}$
 - C. $\{8.0000, 8.1000, 8.0100, 8.0010\}$
 - D. $\{7.9000, 7.9900, 7.9990, 7.9999\}$
 - E. $\{8.0000, 7.9000, 7.9900, 7.9990\}$
-

7. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \rightarrow 4^-} \frac{-7}{(x-4)^4} + 5$$

- A. $f(4)$
- B. ∞

- C. $-\infty$
- D. The limit does not exist
- E. None of the above

8. Based on the information below, which of the following statements is always true?

As x approaches 8, $f(x)$ approaches ∞ .

- A. $f(x)$ is close to or exactly 8 when x is large enough.
- B. $f(x)$ is close to or exactly ∞ when x is large enough.
- C. $f(x)$ is undefined when x is close to or exactly 8.
- D. x is undefined when $f(x)$ is close to or exactly ∞ .
- E. None of the above are always true.

9. To estimate the one-sided limit of the function below as x approaches 3 from the right, which of the following sets of numbers should you use?

$$\frac{\frac{3}{x} - 1}{x - 3}$$

- A. $\{2.9000, 2.9900, 3.0100, 3.1000\}$
- B. $\{3.0000, 2.9000, 2.9900, 2.9990\}$
- C. $\{3.1000, 3.0100, 3.0010, 3.0001\}$
- D. $\{2.9000, 2.9900, 2.9990, 2.9999\}$
- E. $\{3.0000, 3.1000, 3.0100, 3.0010\}$

10. Evaluate the limit below, if possible.

$$\lim_{x \rightarrow 8} \frac{\sqrt{7x - 40} - 4}{9x - 72}$$

- A. 0.125

- B. ∞
 - C. 0.294
 - D. 0.097
 - E. None of the above
-