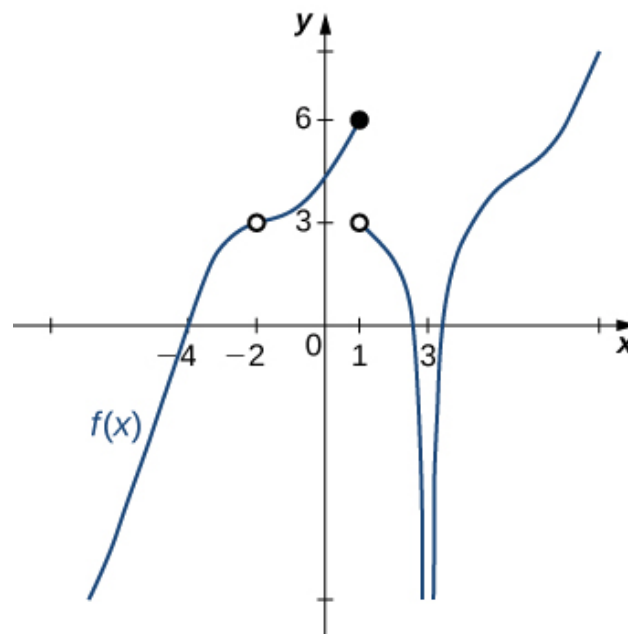


1. Based on the information below, which of the following statements is always true?

As x approaches ∞ , $f(x)$ approaches 4.082.

- A. $f(x)$ is close to or exactly ∞ when x is large enough.
- B. x is undefined when $f(x)$ is large enough.
- C. $f(x)$ is undefined when x is large enough.
- D. $f(x)$ is close to or exactly 4.082 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.



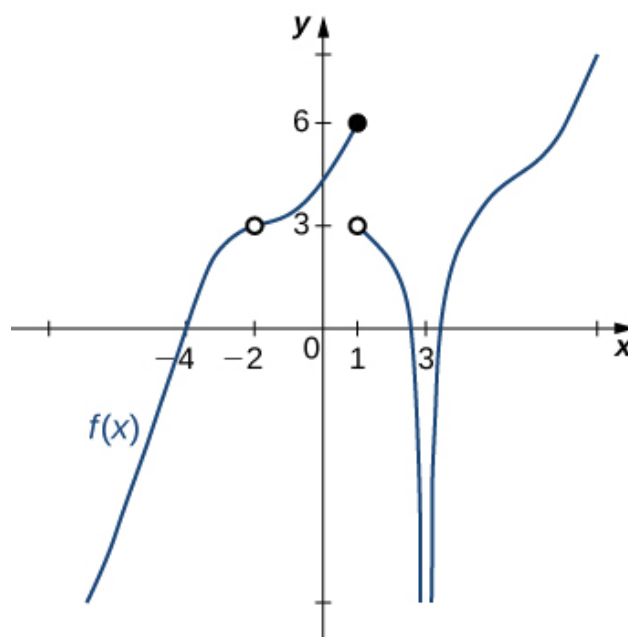
- A. 3
- B. -2
- C. 1
- D. Multiple a make the statement true.
- E. No a make the statement true.

3. Evaluate the limit below, if possible.

$$\lim_{x \rightarrow 8} \frac{\sqrt{8x - 15} - 7}{6x - 48}$$

- A. 0.071
- B. ∞
- C. 0.012
- D. 0.095
- E. None of the above

4. For the graph below, evaluate the limit: $\lim_{x \rightarrow -2} f(x)$.



- A. -2
- B. $-\infty$
- C. 3
- D. The limit does not exist
- E. None of the above

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

$$\lim_{x \rightarrow -2^+} \frac{-4}{(x-2)^3} + 5$$

- A. ∞
 - B. $f(-2)$
 - C. $-\infty$
 - 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. $\{7.9000, 7.9900, 7.9990, 7.9999\}$
 - B. $\{8.0000, 7.9000, 7.9900, 7.9990\}$
 - C. $\{8.0000, 8.1000, 8.0100, 8.0010\}$
 - D. $\{8.1000, 8.0100, 8.0010, 8.0001\}$
 - E. $\{7.9000, 7.9900, 8.0100, 8.1000\}$
-

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

$$\lim_{x \rightarrow 2^-} \frac{-9}{(x+2)^8} + 8$$

- A. $f(2)$
- 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 5, $f(x)$ approaches 18.028.

- A. $f(x) = 18.028$ when x is close to 5
- B. $f(x)$ is close to or exactly 5 when x is close to 18.028
- C. $f(x) = 5$ when x is close to 18.028
- D. $f(x)$ is close to or exactly 18.028 when x is close to 5
- 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 left, which of the following sets of numbers should you use?

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

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

10. Evaluate the limit below, if possible.

$$\lim_{x \rightarrow 5} \frac{\sqrt{8x - 15} - 5}{2x - 10}$$

- A. ∞
- B. 0.050

- C. 0.100
 - D. 1.414
 - E. None of the above
-