

1. Evaluate the limit below, if possible.

$$\lim_{x \rightarrow 3} \frac{\sqrt{8x - 8} - 4}{9x - 27}$$

- A. ∞
 - B. 0.014
 - C. 0.111
 - D. 0.125
 - E. None of the above
-

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

$$\lim_{x \rightarrow -4^+} \frac{6}{(x - 4)^7} + 8$$

- A. $-\infty$
 - B. ∞
 - C. $f(-4)$
 - D. The limit does not exist
 - E. None of the above
-

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

$f(x)$ approaches 19.147 as x approaches ∞ .

- A. $f(x)$ is close to or exactly ∞ when x is large enough.
- B. $f(x)$ is close to or exactly 19.147 when x is large enough.
- C. x is undefined when $f(x)$ is large enough.
- D. $f(x)$ is undefined when x is large enough.
- E. None of the above are always true.

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

$f(x)$ approaches 2.934 as x approaches 2.

- A. $f(2) = 2$
 - B. $f(2)$ is close to or exactly 2
 - C. $f(2) = 2$
 - D. $f(2)$ is close to or exactly 2
 - E. None of the above are always true.
-

5. 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. $\{3.0000, 2.9000, 2.9900, 2.9990\}$
 - B. $\{3.0000, 3.1000, 3.0100, 3.0010\}$
 - C. $\{2.9000, 2.9900, 3.0100, 3.1000\}$
 - D. $\{2.9000, 2.9900, 2.9990, 2.9999\}$
 - E. $\{3.1000, 3.0100, 3.0010, 3.0001\}$
-

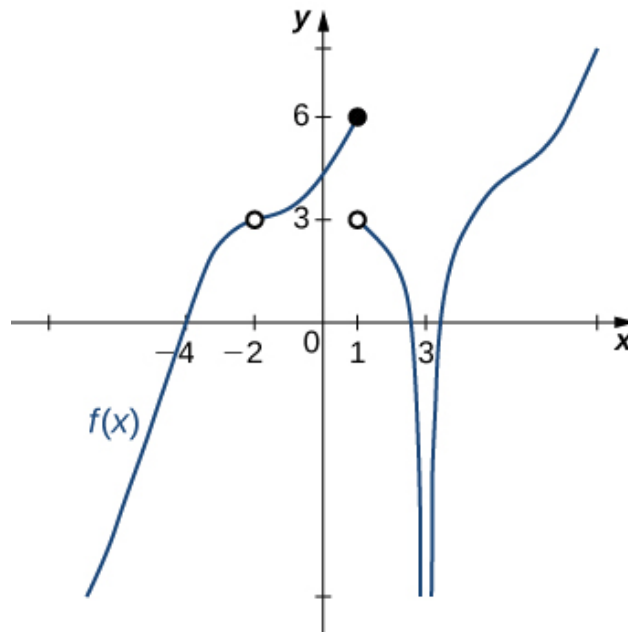
6. Evaluate the limit below, if possible.

$$\lim_{x \rightarrow 4} \frac{\sqrt{7x - 12} - 4}{9x - 36}$$

- A. 0.097
- B. 0.014
- C. ∞
- D. 0.125

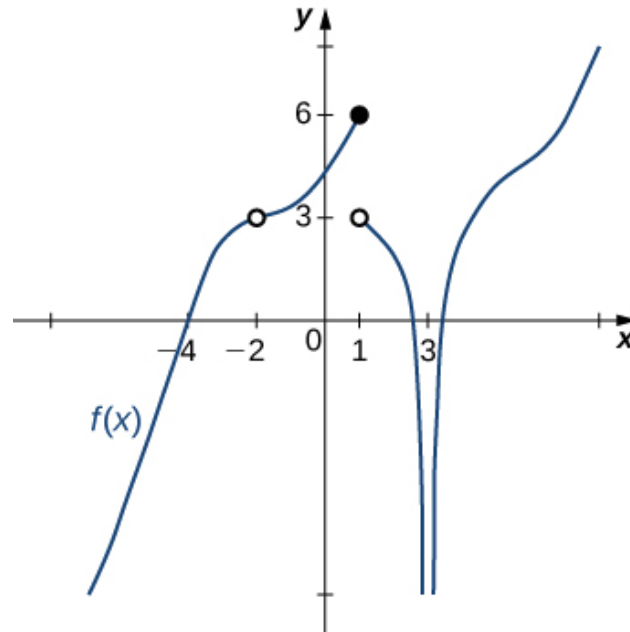
E. None of the above

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



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

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



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

9. To estimate the one-sided limit of the function below as x approaches 2 from the left, which of the following sets of numbers should you use?

$$\frac{\frac{2}{x} - 1}{x - 2}$$

- A. $\{2.0000, 2.1000, 2.0100, 2.0010\}$
- B. $\{2.0000, 1.9000, 1.9900, 1.9990\}$
- C. $\{1.9000, 1.9900, 1.9990, 1.9999\}$
- D. $\{2.1000, 2.0100, 2.0010, 2.0001\}$
- E. $\{1.9000, 1.9900, 2.0100, 2.1000\}$

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

$$\lim_{x \rightarrow 5^-} \frac{-5}{(x-5)^8} + 8$$

- A. $f(5)$
 - B. ∞
 - C. $-\infty$
 - D. The limit does not exist
 - E. None of the above
-