

1. To estimate the one-sided limit of the function below as x approaches 4 from the left, which of the following sets of numbers should you use?

$$\frac{\frac{4}{x} - 1}{x - 4}$$

- A. {4.1000, 4.0100, 4.0010, 4.0001}
- B. {4.0000, 4.1000, 4.0100, 4.0010}
- C. {3.9000, 3.9900, 3.9990, 3.9999}
- D. {3.9000, 3.9900, 4.0100, 4.1000}
- E. {4.0000, 3.9000, 3.9900, 3.9990}

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

As

$x \text{ approaches } 6, f(x) \text{ approaches } \infty.$

- A. x is undefined when $f(x)$ is close to or exactly ∞ .
- B. $f(x)$ is close to or exactly 6 when x is large enough.
- C. $f(x)$ is undefined when x is close to or exactly 6.
- D. $f(x)$ is close to or exactly ∞ when x is large enough.
- E. None of the above are always true.

3. Evaluate the limit below, if possible.

$$\lim_{x \rightarrow 9} \frac{\sqrt{6x - 29} - 5}{2x - 18}$$

- A. 0.300
- B. 0.050
- C. 0.100

- D. ∞
 - E. None of the above
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4. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \rightarrow -7^+} \frac{-6}{(x+7)^7} + 1$$

- A. $f(-7)$
 - B. ∞
 - C. $-\infty$
 - D. The limit does not exist
 - E. None of the above
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5. To estimate the one-sided limit of the function below as x approaches 5 from the left, which of the following sets of numbers should you use?

$$\frac{\frac{5}{x} - 1}{x - 5}$$

- A. $\{5.0000, 4.9000, 4.9900, 4.9990\}$
 - B. $\{5.1000, 5.0100, 5.0010, 5.0001\}$
 - C. $\{4.9000, 4.9900, 5.0100, 5.1000\}$
 - D. $\{4.9000, 4.9900, 4.9990, 4.9999\}$
 - E. $\{5.0000, 5.1000, 5.0100, 5.0010\}$
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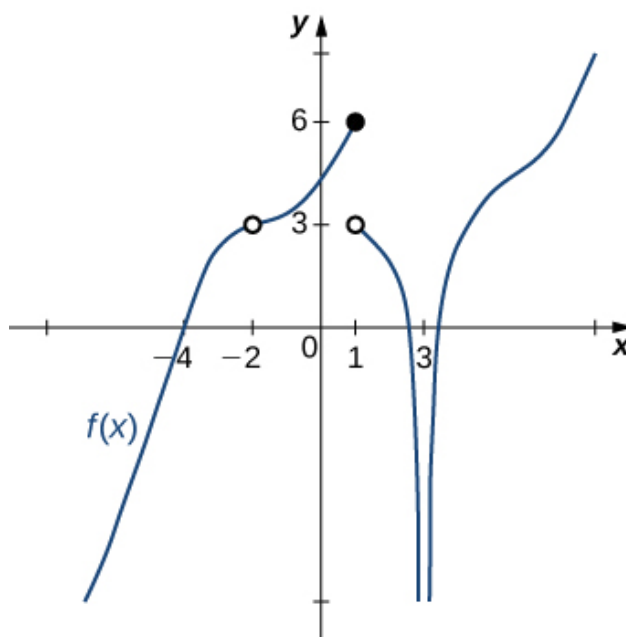
6. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \rightarrow 8^+} \frac{5}{(x+8)^7} + 6$$

- A. $f(8)$

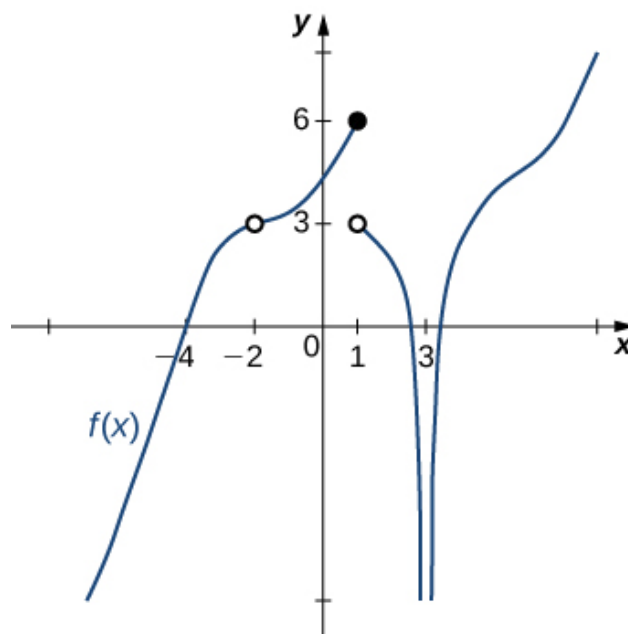
- B. ∞
- C. $-\infty$
- D. The limit does not exist
- E. None of the above

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

9. Evaluate the limit below, if possible.

$$\lim_{x \rightarrow 3} \frac{\sqrt{8x - 8} - 4}{2x - 6}$$

- A. 0.125
- B. 0.500
- C. ∞
- D. 1.414
- E. None of the above

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

As

x approaches 0, f(x) approaches 1.932.

- A. $f(1)$ is close to or exactly 0
- B. $f(1) = 0$
- C. $f(0)$ is close to or exactly 1
- D. $f(0) = 1$
- E. None of the above are always true.