

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

$$\lim_{x \rightarrow -9^+} \frac{-2}{(x-9)^9} + 1$$

- A. ∞
 - B. $-\infty$
 - C. $f(-9)$
 - D. The limit does not exist
 - E. None of the above
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2. To estimate the one-sided limit of the function below as x approaches 4 from the right, which of the following sets of numbers should you use?

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

- A. $\{3.9000, 3.9900, 3.9990, 3.9999\}$
 - B. $\{4.0000, 3.9000, 3.9900, 3.9990\}$
 - C. $\{4.0000, 4.1000, 4.0100, 4.0010\}$
 - D. $\{3.9000, 3.9900, 4.0100, 4.1000\}$
 - E. $\{4.1000, 4.0100, 4.0010, 4.0001\}$
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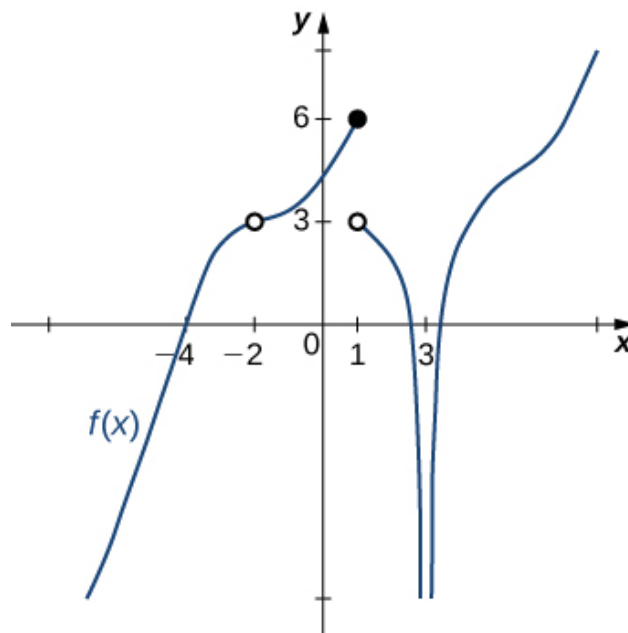
3. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \rightarrow 8^-} \frac{-2}{(x-8)^7} + 4$$

- A. ∞
- B. $-\infty$
- C. $f(8)$
- D. The limit does not exist

E. None of the above

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



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

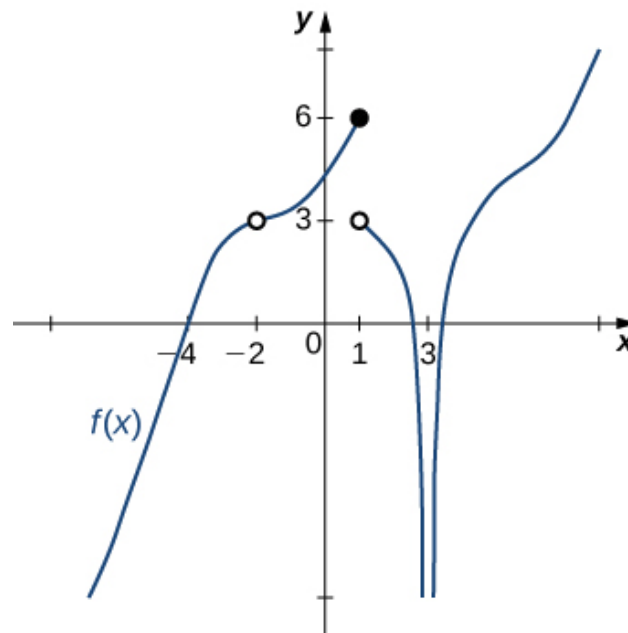
5. Evaluate the limit below, if possible.

$$\lim_{x \rightarrow 9} \frac{\sqrt{6x - 18} - 6}{5x - 45}$$

- A. 0.490
B. ∞
C. 0.083

- D. 0.100
E. None of the above
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6. For the graph below, evaluate the limit: $\lim_{x \rightarrow 3} f(x)$.



- A. 1
B. $-\infty$
C. -2
D. The limit does not exist
E. None of the above
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7. Based on the information below, which of the following statements is always true?

As x approaches 4, $f(x)$ approaches 11.333.

- A. $f(x) = 11.333$ when x is close to 4
B. $f(x) = 4$ when x is close to 11.333
C. $f(x)$ is close to or exactly 4 when x is close to 11.333

- D. $f(x)$ is close to or exactly 11.333 when x is close to 4
- E. None of the above are always true.
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8. Evaluate the limit below, if possible.

$$\lim_{x \rightarrow 8} \frac{\sqrt{8x - 48} - 4}{4x - 32}$$

- A. ∞
- B. 0.125
- C. 0.707
- D. 0.250
- E. None of the above
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9. Based on the information below, which of the following statements is always true?

$f(x)$ approaches ∞ as x approaches 3.

- A. x is undefined when $f(x)$ is close to or exactly ∞ .
- B. $f(x)$ is close to or exactly 3 when x is large enough.
- C. $f(x)$ is close to or exactly ∞ when x is large enough.
- D. $f(x)$ is undefined when x is close to or exactly 3.
- E. None of the above are always true.
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10. To estimate the one-sided limit of the function below as x approaches 9 from the right, which of the following sets of numbers should you use?

$$\frac{\frac{9}{x} - 1}{x - 9}$$

- A. $\{8.9000, 8.9900, 8.9990, 8.9999\}$
- B. $\{9.0000, 9.1000, 9.0100, 9.0010\}$

C. $\{9.0000, 8.9000, 8.9900, 8.9990\}$

D. $\{9.1000, 9.0100, 9.0010, 9.0001\}$

E. $\{8.9000, 8.9900, 9.0100, 9.1000\}$
