1. 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. $\{2.1000, 2.0100, 2.0010, 2.0001\}$

B. $\{2.0000, 2.1000, 2.0100, 2.0010\}$

C. $\{1.9000, 1.9900, 1.9990, 1.9999\}$

D. $\{1.9000, 1.9900, 2.0100, 2.1000\}$

E. $\{2.0000, 1.9000, 1.9900, 1.9990\}$

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

$$\lim_{x\to 7^-} \frac{4}{(x-7)^3} + 8$$

A. $f(7)$

B. $-\infty$

C. ∞

D. The limit does not exist

E. None of the above

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

$$\lim_{x\to 6^+} \frac{-7}{(x+6)^5} + 2$$

A. $-\infty$

B. ∞

C. $f(6)$

D. The limit does not exist

E. None of the above

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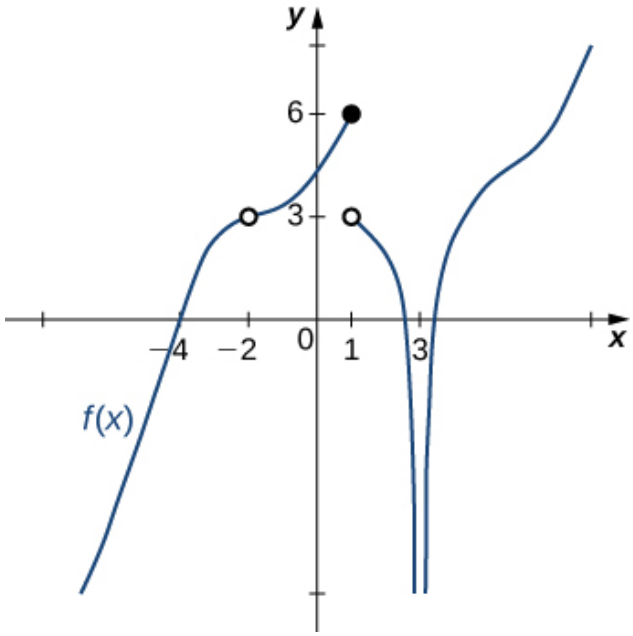
4. For the graph below, find the value(s) a that makes the statement true: $\lim_{x \to a} f(x) = -\infty$.



A. 3

B. $-\infty$

C. -2

D. Multiple a make the statement true.

E. No a make the statement true.

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5. Evaluate the limit below, if possible.

$$\lim_{x \to 6} \frac{\sqrt{8x - 23} - 5}{6x - 36}$$

A. 0.100

B. 0.017

C. ∞

D. 0.133

E. None of the above

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6. Evaluate the limit below, if possible.

$$\lim_{x \to 9} \frac{\sqrt{2x-2}-4}{3x-27}$$

A. 0.125

B. 0.042

C. 0.471

D. ∞

E. None of the above

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7. 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. $\{8.0000, 7.9000, 7.9900, 7.9990\}$

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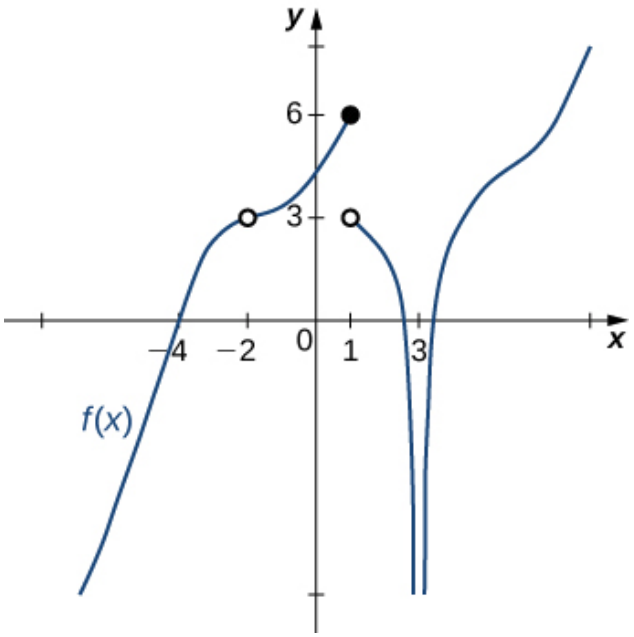
8. For the graph below, evaluate the limit: $\lim_{x \to -2} f(x)$.



A. $-\infty$

B. 3

C. -2

D. The limit does not exist

E. None of the above

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

$$As\ x\ approaches\ 1,\ f(x)\ approaches\ \infty.$$

A. $f(x)$ is undefined when x is close to or exactly 1.

B. $f(x)$ is close to or exactly ∞ when x is large enough.

C. $f(x)$ is close to or exactly 1 when x is large enough.

D. x is undefined when $f(x)$ is close to or exactly ∞.

E. None of the above are always true.

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

$$f(x) \textit{ approaches } 0.603 \textit{ as } x \textit{ approaches } \infty.$$

A. $f(x)$ is close to or exactly 0.603 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 ∞ when x is large enough.

E. None of the above are always true.
