1. 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. $\{4.0000, 4.1000, 4.0100, 4.0010\}$

B. $\{3.9000, 3.9900, 4.0100, 4.1000\}$

C. $\{4.0000, 3.9000, 3.9900, 3.9990\}$

D. $\{4.1000, 4.0100, 4.0010, 4.0001\}$

E. $\{3.9000, 3.9900, 3.9990, 3.9999\}$

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

$$As$$

x*approaches*4,f(x)*approaches*4.913.

A. $f(x) = 4$ when x is close to 4.913

B. $f(x)$ is close to or exactly 4.913 when x is close to 4

C. $f(x) = 4.913$ when x is close to 4

D. $f(x)$ is close to or exactly 4 when x is close to 4.913

E. None of the above are always true.

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3. Evaluate the limit below, if possible.

$$\lim_{x \to 9} \frac{\sqrt{4x-20}-4}{2x-18}$$

A. 1.000

B. 0.062

C. 0.125

D. ∞

E. None of the above

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

$$\lim_{x \to 5^+} \frac{9}{(x+5)^8} + 9$$

A. ∞

B. $-\infty$

C. $f(5)$

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 right, which of the following sets of numbers should you use?

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

A. $\{4.9000, 4.9900, 5.0100, 5.1000\}$

B. $\{5.0000, 4.9000, 4.9900, 4.9990\}$

C. $\{4.9000, 4.9900, 4.9990, 4.9999\}$

D. $\{5.1000, 5.0100, 5.0010, 5.0001\}$

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.

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

A. $-\infty$

B. ∞

C. $f(3)$

D. The limit does not exist

E. None of the above

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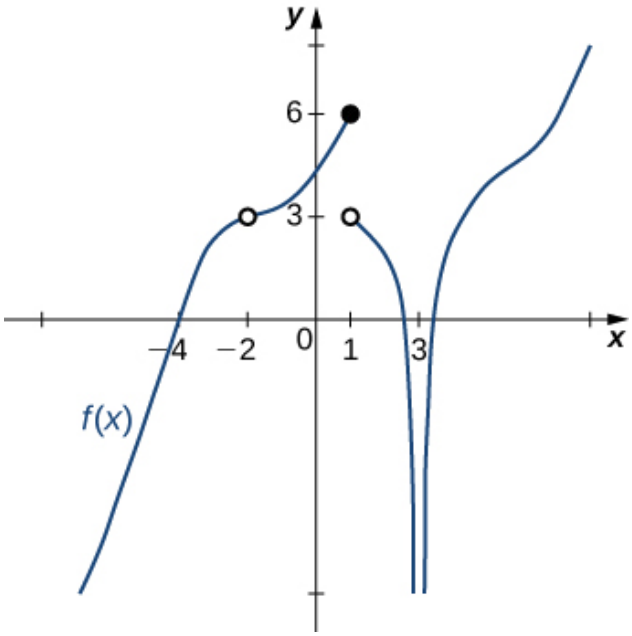
7. For the graph below, find the value(s) a that makes the statement true: $\lim_{x \to a} f(x)$ does not exist.



A. 1

B. -2

C. 3

D. Multiple a make the statement true.

E. No a make the statement true.

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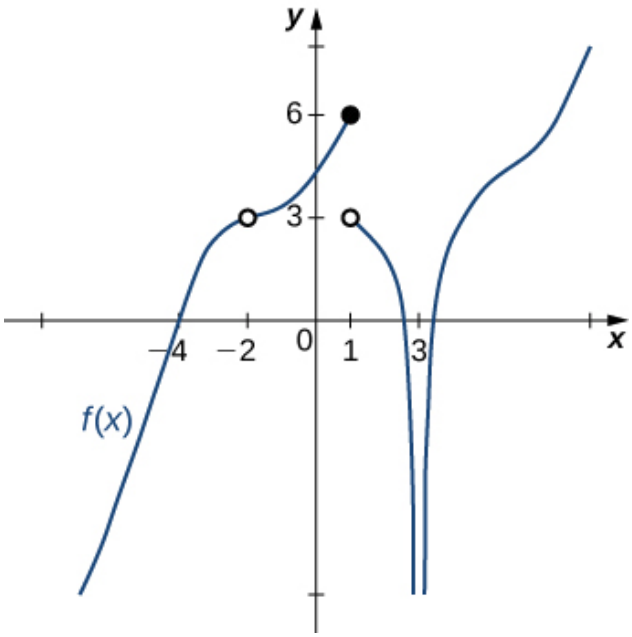
8. For the graph below, find the value(s) a that makes the statement true: $\lim_{x \to a} f(x)$ does not exist.



A. 3

B. -2

C. 1

D. Multiple a make the statement true.

E. No a make the statement true.

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9. Evaluate the limit below, if possible.

$$\lim_{x \to 8} \frac{\sqrt{3x-8}-4}{2x-16}$$

A. 0.125

B. 0.866

C. ∞

D. 0.062

E. None of the above

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

f(x)$approaches$14.169asx$approaches$$\infty$.

A. $f(x)$ is undefined when x is large enough.

B. $f(x)$ is undefined when $f(x)$ is large enough.

C. $f(x)$ is close to or exactly 14.169 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.