1. Evaluate the limit below, if possible.

$$\lim_{x\to 8} \frac{\sqrt{6x-12}-6}{3x-24}$$

A. 0.083

B. ∞

C. 0.167

D. 0.028

E. None of the above

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2. 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. $\{4.9000, 4.9900, 4.9990, 4.9999\}$

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

C. $\{5.0000, 5.1000, 5.0100, 5.0010\}$

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

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

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

$$\lim_{x\to 3^+} \frac{6}{(x-3)^3} + 8$$

A. $-\infty$

B. ∞

C. $f(3)$

D. The limit does not exist

E. None of the above

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

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

A. $-\infty$

B. $f(-7)$

C. ∞

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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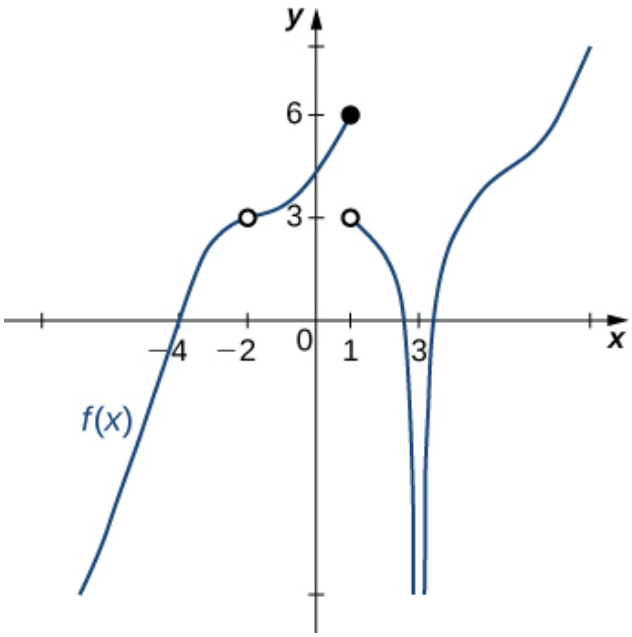
6. For the graph below, evaluate the limit: $\lim_{x \to 3} f(x)$.



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*∞, $f(x)$ approaches 13.506.

A. $f(x)$ is close to or exactly 13.506 when x is large enough.

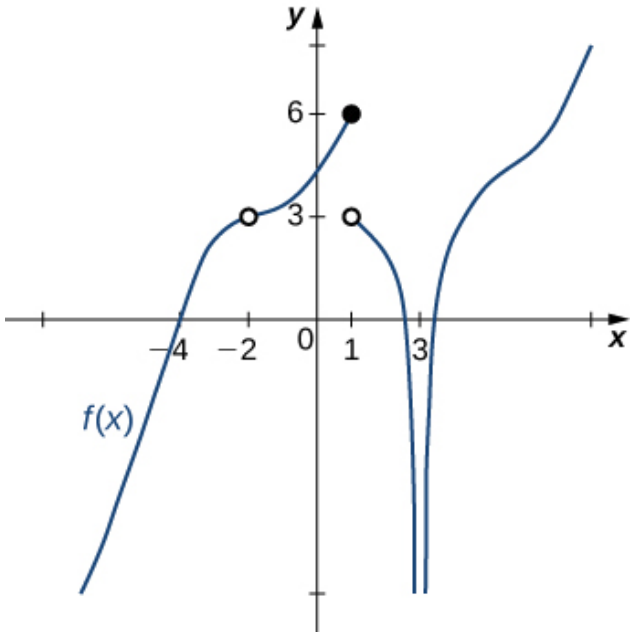
B. $f(x)$ is close to or exactly ∞ when x is large enough.

C. $f(x)$ 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.

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. 1

B. 3

C. -2

D. Multiple a make the statement true.

E. No a make the statement true.

9. Evaluate the limit below, if possible.

$$\lim_{x \to 9} \frac{\sqrt{3x-2}-5}{9x-81}$$

A. 0.011

B. ∞

C. 0.192

D. 0.100

E. None of the above

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

$$As$$

x*approaches*1,f(x)*approaches*7.878.

A. $f(x) = 7.878$ when x is close to 1

B. $f(x)$ is close to or exactly 1 when x is close to 7.878

C. $f(x) = 1$ when x is close to 7.878

D. $f(x)$ is close to or exactly 7.878 when x is close to 1

E. None of the above are always true.
