1. To estimate the one-sided limit of the function below as x approaches 7 from the right, which of the following sets of numbers should you use?

$$\frac{\frac{7}{x} - 1}{x - 7}$$

  A. $\{7.0000, 7.1000, 7.0100, 7.0010\}$

  B. $\{6.9000, 6.9900, 6.9990, 6.9999\}$

  C. $\{6.9000, 6.9900, 7.0100, 7.1000\}$

  D. $\{7.0000, 6.9000, 6.9900, 6.9990\}$

  E. $\{7.1000, 7.0100, 7.0010, 7.0001\}$

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

$$As$$

$x approaches \infty$, $f(x)$ approaches 12.948.

  A. $f(x)$ is close to or exactly 12.948 when x is large enough.

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

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

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

  E. None of the above are always true.

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3. Evaluate the limit below, if possible.

$$\lim_{x \to 3} \frac{\sqrt{9x - 11} - 4}{8x - 24}$$

  A. 0.016

  B. 0.125

  C. ∞

D. 0.141

E. None of the above

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

$$\lim_{x \to -8^+} \frac{-2}{(x-8)^7} + 1$$

A. $f(-8)$

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

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

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

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

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

D. $\{3.9000, 3.9900, 3.9990, 3.9999\}$
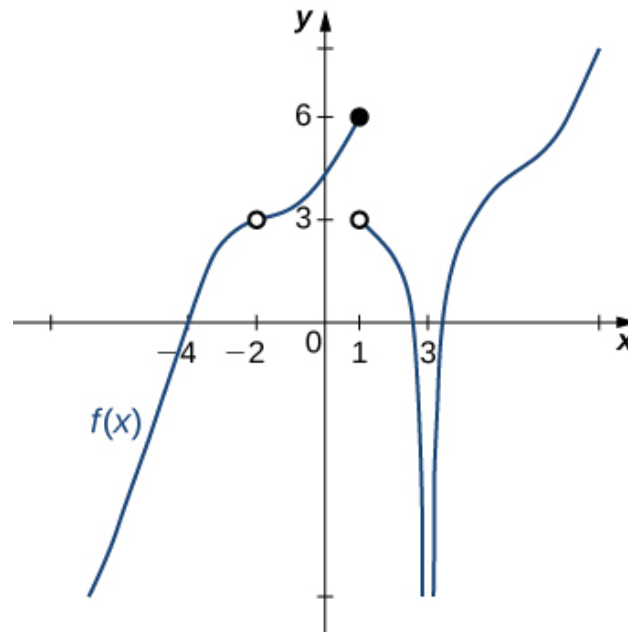
E. $\{4.0000, 4.1000, 4.0100, 4.0010\}$

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6. Evaluate the one-sided limit of the function $f(x)$ below, if possible.
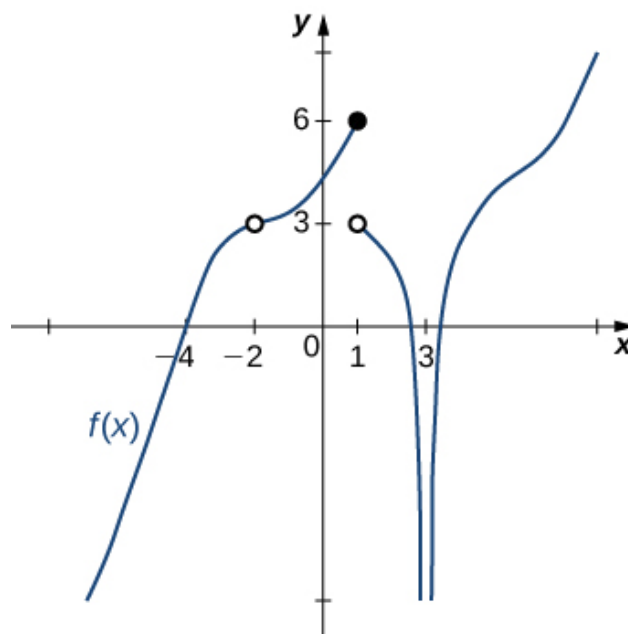
$$\lim_{x \to 5^+} \frac{-5}{(x-5)^7} + 6$$

A. $f(5)$

B. ∞

C. $-\infty$

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:
$\lim\limits_{x \to a} f(x) = -\infty$.

A. -2

B. 3

C. $-\infty$

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:
$\lim\limits_{x \to a} f(x) = 0$.

A. 0

B. −4

C. 3

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.

$$\lim_{x \to 9} \frac{\sqrt{6x - 18} - 6}{7x - 63}$$

A. 0.083

B. 0.012

C. ∞

D. 0.350

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* 4.772 *as* x *approaches* 9.

    A. $f(9) = 4$

    B. $f(4)$ is close to or exactly 9

    C. $f(4) = 9$

    D. $f(9)$ is close to or exactly 4

    E. None of the above are always true.