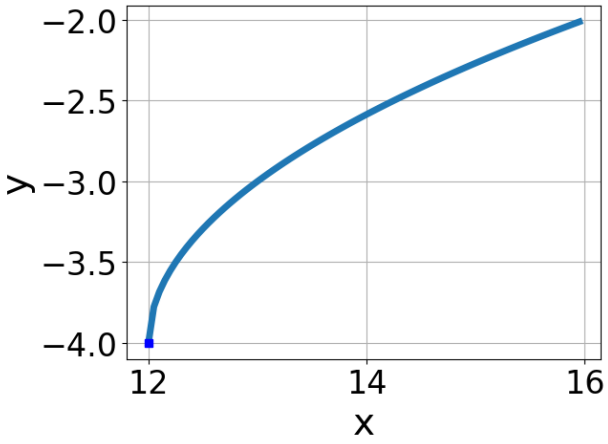
1. Choose the equation of the function graphed below.



A. $f(x) = \sqrt{x+12} - 4$

B. $f(x) = -\sqrt{x+12} - 4$

C. $f(x) = \sqrt{x-12} - 4$

D. $f(x) = -\sqrt{x-12} - 4$

E. None of the above

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2. What is the domain of the function below?

$$f(x) = \sqrt[4]{5x-7}$$

A. $(-\infty, \infty)$

B. $(-\infty, a]$, where $a \in [1.16, 1.84]$

C. $[a, \infty)$, where $a \in [1.27, 1.56]$

D. $(-\infty, a]$, where $a \in [-0.5, 0.82]$

E. $[a, \infty)$, where $a \in [-0.14, 1.01]$

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3. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{8x-2} - \sqrt{3x-3} = 0$$

A. $x_1 \in [-0.4, 0.02]$ and $x_2 \in [-1.12, 0.42]$

B. $x \in [0.76, 1.43]$

C. $x \in [-0.4, 0.02]$

D. $x_1 \in [0.24, 0.59]$ and $x_2 \in [0.9, 1.31]$

E. All solutions lead to invalid or complex values in the equation.

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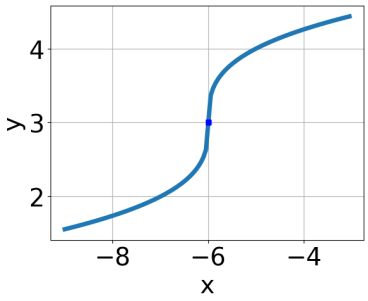
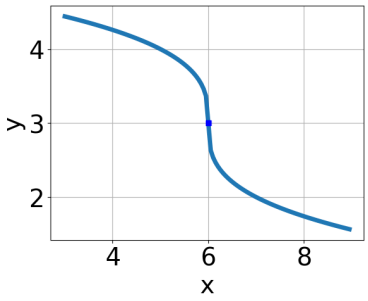
4. Choose the graph of the equation below.

$$f(x) = \sqrt[3]{x+6} + 3$$

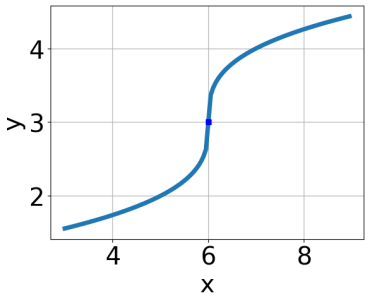
A.



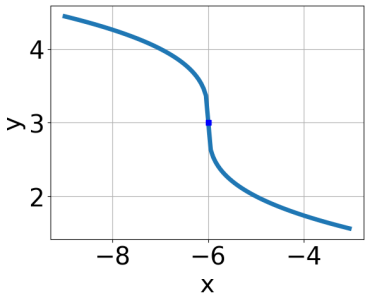
C.



B.



D.



E. None of the above.

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5. What is the domain of the function below?

$$f(x) = \sqrt[4]{4x-6}$$

A. $[a, \infty)$, where $a \in [0.19, 1.17]$

B. $(-\infty, \infty)$

C. $[a, \infty)$, where $a \in [1.26, 2.09]$

D. $(-\infty, a]$, where $a \in [-0.9, 1.18]$

E. $(-\infty, a]$, where $a \in [1.38, 2.32]$

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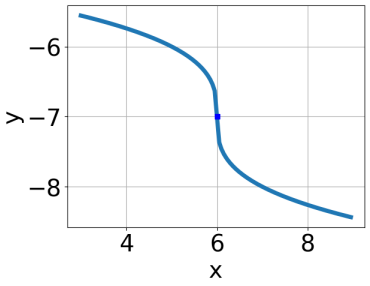
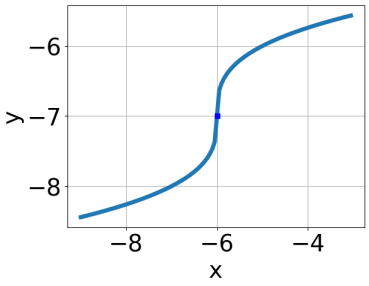
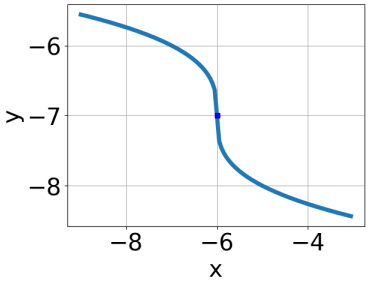
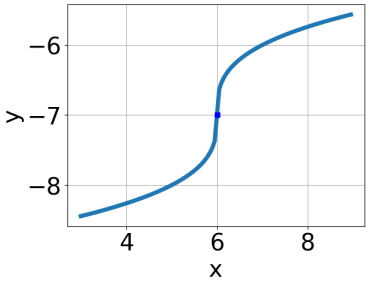
6. Choose the graph of the equation below.

$$f(x) = \sqrt[3]{x+6} - 7$$

A.


C.


B.


D.


E. None of the above.

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7. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{15x^2 - 8} - \sqrt{2x} = 0$$

A. $x_1 \in [-1.08, -0.65]$ and $x_2 \in [-0.2, 2.8]$

B. All solutions lead to invalid or complex values in the equation.

C. $x \in [-1.08, -0.65]$

D. $x_1 \in [0.3, 0.69]$ and $x_2 \in [-0.2, 2.8]$

E. $x \in [0.67, 1.17]$

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8. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-30x^2 + 16} - \sqrt{4x} = 0$$

A. $x_1 \in [-1.1, 0.5]$ and $x_2 \in [0.11, 0.74]$

B. All solutions lead to invalid or complex values in the equation.

C. $x \in [-0.2, 3.2]$

D. $x \in [-1.1, 0.5]$

E. $x_1 \in [-0.2, 3.2]$ and $x_2 \in [0.76, 1.16]$

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9. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-4x - 8} - \sqrt{-5x + 4} = 0$$

A. $x \in [12, 15]$

B. $x \in [1, 11]$

C. $x_1 \in [-2, 3]$ and $x_2 \in [0.8, 3.8]$

D. All solutions lead to invalid or complex values in the equation.

E. $x_1 \in [-2, 3]$ and $x_2 \in [10, 14]$

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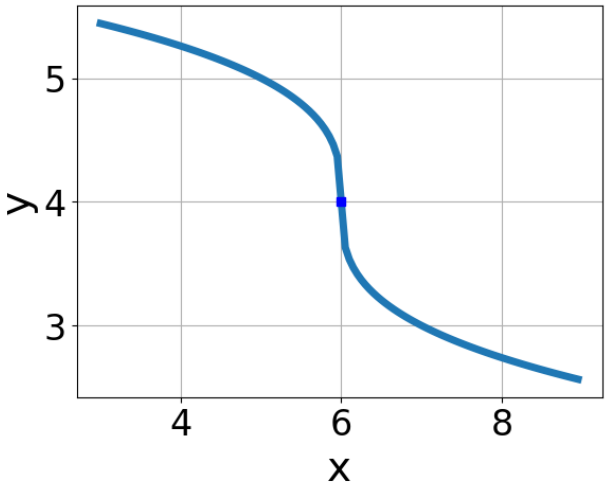
10. Choose the equation of the function graphed below.



A. $f(x) = \sqrt[3]{x-6}+4$

B. $f(x) = \sqrt[3]{x+6}+4$

C. $f(x) = -\sqrt[3]{x-6}+4$

D. $f(x) = -\sqrt[3]{x+6}+4$

E. None of the above
