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

$$\sqrt{16x^2 - 56} - \sqrt{4x} = 0$$

A. $x \in [1.82, 2.2]$

B. $x \in [-1.84, -1.3]$

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

D. $x_1 \in [-1.84, -1.3]$ and $x_2 \in [-1, 4]$

E. $x_1 \in [1.56, 1.83]$ and $x_2 \in [-1, 4]$

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

$$\sqrt{5x + 6} - \sqrt{6x + 6} = 0$$

A. $x \in [-1, 3]$

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

C. $x_1 \in [-2.2, -0.2]$ and $x_2 \in [-0.53, 1.74]$

D. $x_1 \in [-2.2, -0.2]$ and $x_2 \in [-1.1, -0.2]$

E. $x \in [7, 15]$

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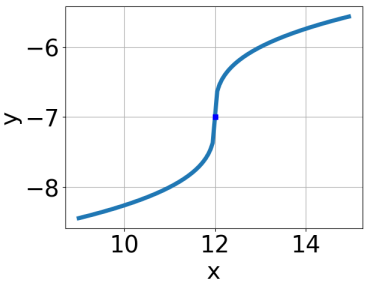
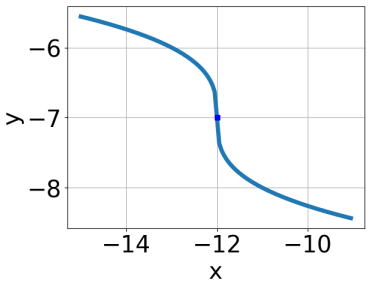
3. Choose the graph of the equation below.

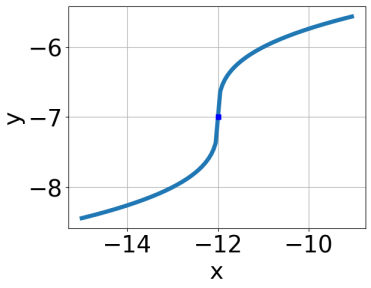
$$f(x) = -\sqrt[3]{x + 12} - 7$$

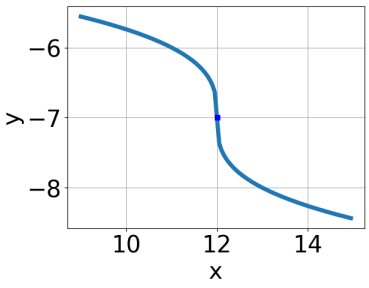
A.



B.



C. 

D. 

E. None of the above.

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4. What is the domain of the function below?

$$f(x) = \sqrt[5]{4x - 9}$$

A. The domain is $[a, \infty)$, where $a \in [-1.7, 1.3]$

B. The domain is $(-\infty, a]$, where $a \in [-2.8, 2.2]$

C. The domain is $(-\infty, a]$, where $a \in [1.1, 5.1]$

D. The domain is $[a, \infty)$, where $a \in [0.6, 3.6]$

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

---

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

$$\sqrt{-18x^2 - 14} - \sqrt{48x} = 0$$

A. $x \in [-0.9, 0.4]$

B. $x_1 \in [-4.8, -1.2]$ and $x_2 \in [-0.52, -0.21]$

C. $x_1 \in [1.4, 2.6]$ and $x_2 \in [0.33, 0.41]$

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

E. $x \in [-4.8, -1.2]$

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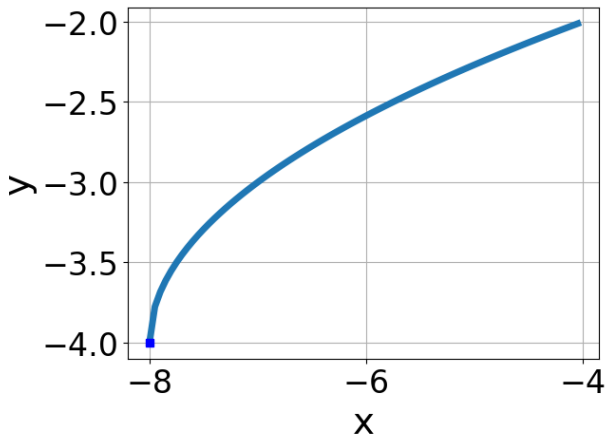
6. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt[3]{x+8} - 4$

B. $f(x) = \sqrt[3]{x+8} - 4$

C. $f(x) = \sqrt[3]{x-8} - 4$

D. $f(x) = -\sqrt[3]{x-8} - 4$

E. None of the above

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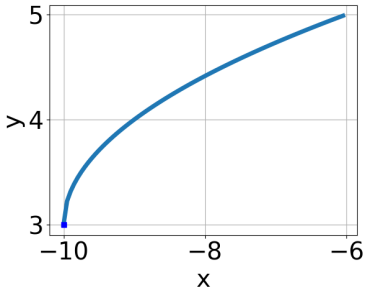
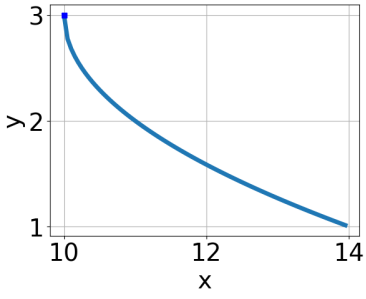
7. Choose the graph of the equation below.

$$f(x) = -\sqrt{x+10} + 3$$

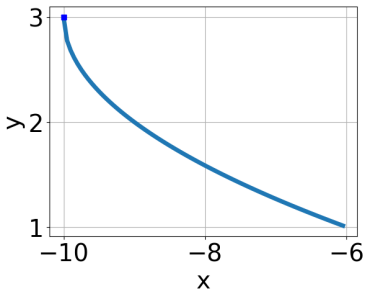
A.



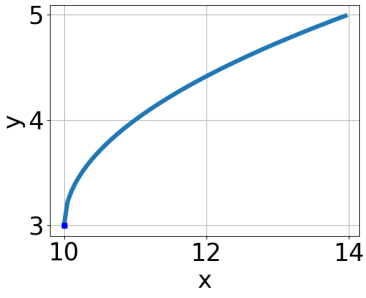
C.



B.



D.



E. None of the above.

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

$$\sqrt{-2x+8} - \sqrt{-9x+6} = 0$$

A. $x \in [-2.42, -0.67]$

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

C. $x_1 \in [0.59, 0.91]$ and $x_2 \in [3, 8]$

D. $x \in [-1.94, 0.35]$

E. $x_1 \in [-1.94, 0.35]$ and $x_2 \in [3, 8]$

---

9. What is the domain of the function below?

$$f(x) = \sqrt[5]{-3x-5}$$

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

B. The domain is $(-\infty, a]$, where $a \in [-1.24, -0.52]$

C. The domain is $(-\infty, a]$, where $a \in [-3.69, -1.1]$

D. The domain is $[a, \infty)$, where $a \in [-1.96, -0.66]$

E. The domain is $[a, \infty)$, where $a \in [-0.7, -0.17]$

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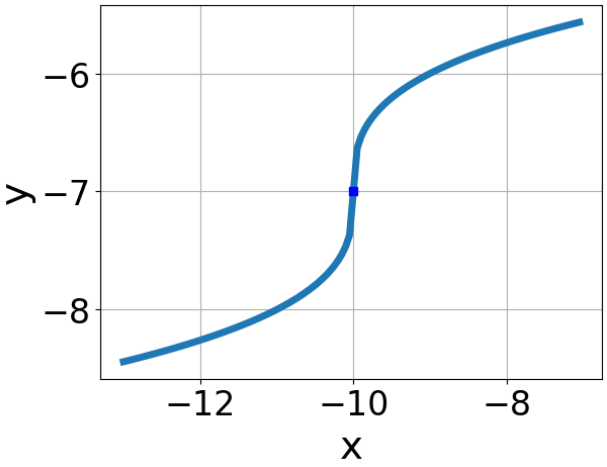
10. Choose the equation of the function graphed below.



A. $f(x) = \sqrt{x-10} - 7$

B. $f(x) = -\sqrt{x-10} - 7$

C. $f(x) = -\sqrt{x+10} - 7$

D. $f(x) = \sqrt{x+10} - 7$

E. None of the above
