

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

$$\sqrt{2x - 5} - \sqrt{-4x + 5} = 0$$

- A. $x \in [-0.07, 0.45]$
 - B. $x \in [1.34, 2.09]$
 - C. All solutions lead to invalid or complex values in the equation.
 - D. $x_1 \in [1.34, 2.09]$ and $x_2 \in [0.5, 3.5]$
 - E. $x_1 \in [0.99, 1.39]$ and $x_2 \in [0.5, 3.5]$
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2. What is the domain of the function below?

$$f(x) = \sqrt[8]{9x + 4}$$

- A. $[a, \infty)$, where $a \in [-3.25, -1.25]$
 - B. $(-\infty, \infty)$
 - C. $(-\infty, a]$, where $a \in [-2.6, -1]$
 - D. $(-\infty, a]$, where $a \in [-0.5, 0.2]$
 - E. $[a, \infty)$, where $a \in [-1.44, 0.56]$
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3. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{6x^2 + 54} - \sqrt{39x} = 0$$

- A. $x_1 \in [-6, -2.5]$ and $x_2 \in [-5, 0]$
- B. All solutions lead to invalid or complex values in the equation.
- C. $x_1 \in [-1, 3.9]$ and $x_2 \in [4.5, 7.5]$
- D. $x \in [-1, 3.9]$
- E. $x \in [3.7, 6.6]$

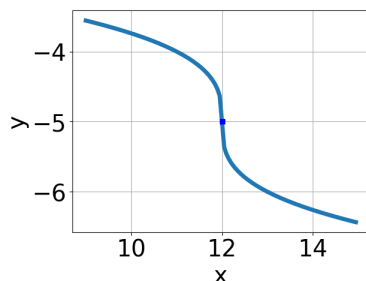
4. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-40x^2 - 56} - \sqrt{96x} = 0$$

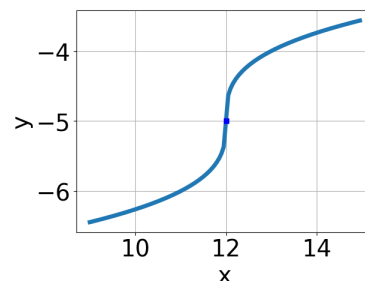
- A. $x_1 \in [0.48, 2.13]$ and $x_2 \in [-0.6, 1.8]$
 B. All solutions lead to invalid or complex values in the equation.
 C. $x_1 \in [-1.95, -1.21]$ and $x_2 \in [-1.8, 0.6]$
 D. $x \in [-1.15, -0.88]$
 E. $x \in [-1.95, -1.21]$

5. Choose the graph of the equation below.

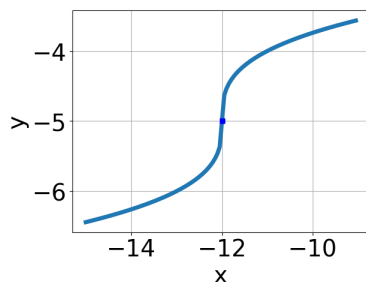
$$f(x) = -\sqrt[3]{x - 12} - 5$$



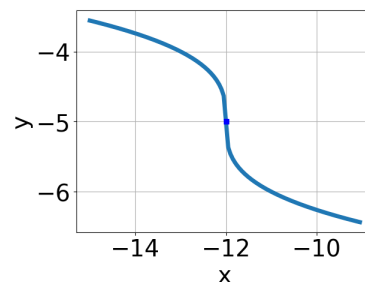
A.



C.



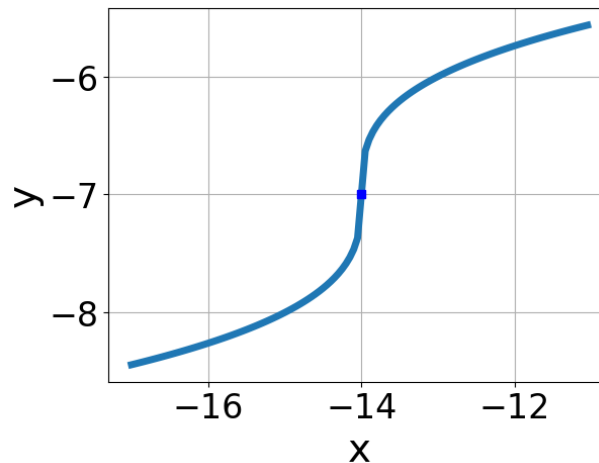
B.



D.

- E. None of the above.

6. Choose the equation of the function graphed below.



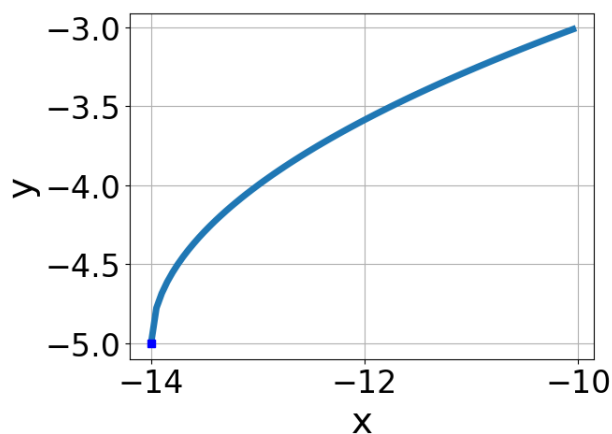
- A. $f(x) = -\sqrt[3]{x+14} - 7$
- B. $f(x) = \sqrt[3]{x-14} - 7$
- C. $f(x) = -\sqrt[3]{x-14} - 7$
- D. $f(x) = \sqrt[3]{x+14} - 7$
- E. None of the above

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

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

- A. $x \in [-2.15, -1.6]$
- B. $x_1 \in [-1.71, -1.42]$ and $x_2 \in [0, 6]$
- C. $x \in [-0.42, -0.07]$
- D. All solutions lead to invalid or complex values in the equation.
- E. $x_1 \in [-1.71, -1.42]$ and $x_2 \in [-2.38, 1.62]$

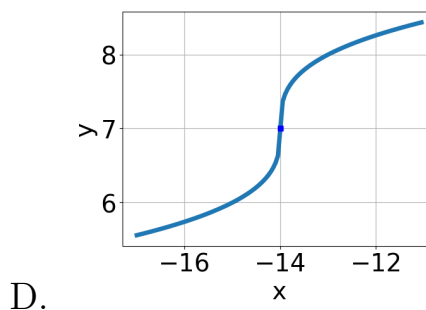
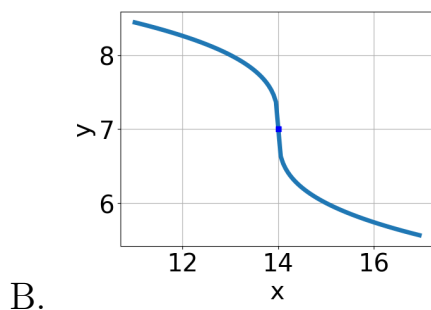
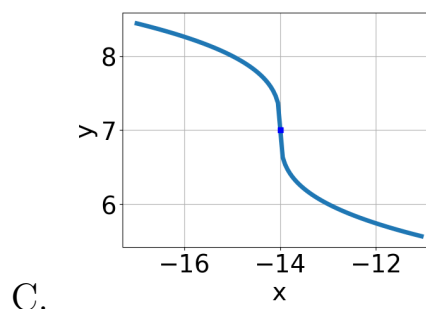
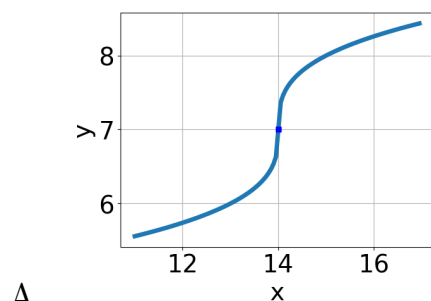
8. Choose the equation of the function graphed below.



- A. $f(x) = \sqrt[3]{x+14} - 5$
 B. $f(x) = -\sqrt[3]{x+14} - 5$
 C. $f(x) = -\sqrt[3]{x-14} - 5$
 D. $f(x) = \sqrt[3]{x-14} - 5$
 E. None of the above

9. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x-14} + 7$$



E. None of the above.

10. What is the domain of the function below?

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

- A. $[a, \infty)$, where $a \in [-1.4, 1.7]$
 - B. $[a, \infty)$, where $a \in [-2.4, -1.1]$
 - C. $(-\infty, a]$, where $a \in [-1.38, -0.14]$
 - D. $(-\infty, \infty)$
 - E. $(-\infty, a]$, where $a \in [-2.51, -1.82]$
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