1. What is the domain of the function below?

$$f(x) = \sqrt[8]{-4x + 6}$$

A. $(-\infty, a]$, where $a \in [0.28, 1.23]$

B. $[a, \infty)$, where $a \in [0.35, 1.16]$

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

D. $(-\infty, a]$, where $a \in [0.93, 1.55]$

E. $[a, \infty)$, where $a \in [1.4, 1.66]$

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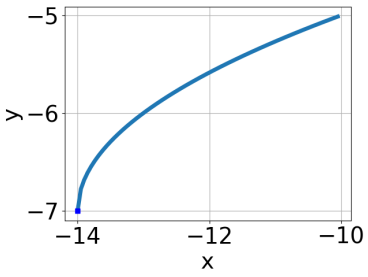
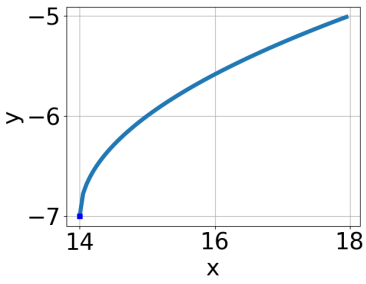
2. Choose the graph of the equation below.

$$f(x) = -\sqrt{x - 14} - 7$$

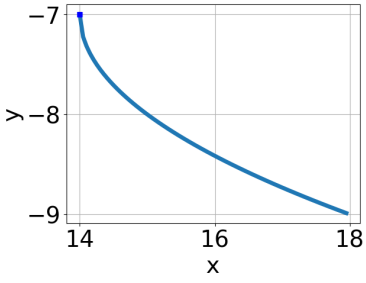
A.



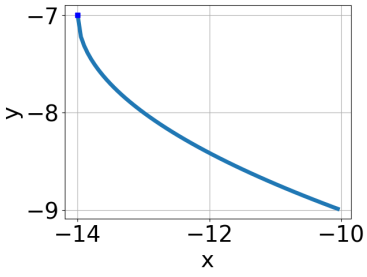
C.



B.



D.



E. None of the above.

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

$$\sqrt{-9x + 3} - \sqrt{-3x + 6} = 0$$

A. $x \in [-1.12, -0.34]$

B. $x \in [0.89, 2.99]$

C. $x_1 \in [-0.42, 1.02]$ and $x_2 \in [1, 6]$

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

E. $x_1 \in [-1.12, -0.34]$ and $x_2 \in [-0.67, 1.33]$

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

$$\sqrt{-16x^2 + 21} - \sqrt{-10x} = 0$$

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

B. $x_1 \in [-1.33, -0.03]$ and $x_2 \in [-1.5, 2.5]$

C. $x \in [1.37, 1.55]$

D. $x_1 \in [0.44, 0.95]$ and $x_2 \in [-1.5, 2.5]$

E. $x \in [-1.33, -0.03]$

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

$$\sqrt{6x - 2} - \sqrt{7x + 7} = 0$$

A. $x \in [-14, -5]$

B. $x \in [2, 9]$

C. $x_1 \in [-1, 0]$ and $x_2 \in [0.33, 3.33]$

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

E. $x_1 \in [-14, -5]$ and $x_2 \in [0.33, 3.33]$

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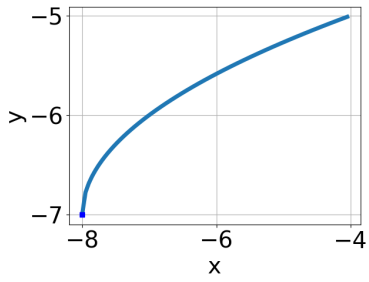
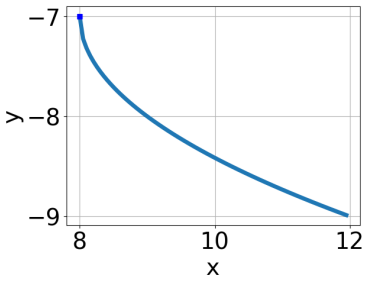
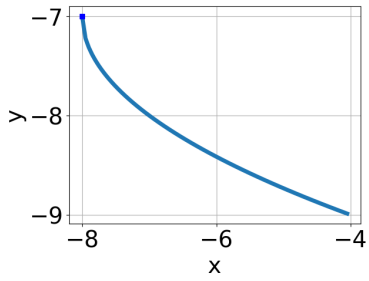
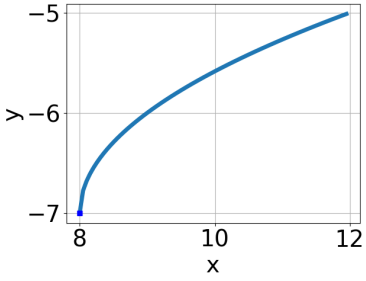
6. Choose the graph of the equation below.

$$f(x) = -\sqrt{x - 8} - 7$$

A.


C.


B.


D.


E. None of the above.

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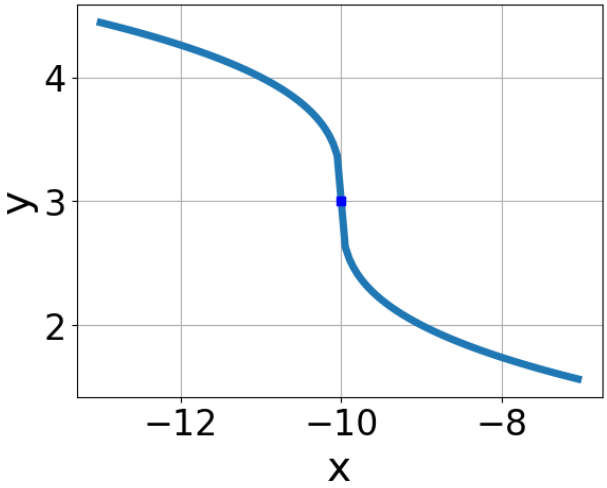
7. Choose the equation of the function graphed below.



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

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

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

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

E. None of the above

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

$$\sqrt{12x^2 + 32} - \sqrt{-40x} = 0$$

A. $x_1 \in [0.69, 1.49]$ and $x_2 \in [-1, 4]$

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

C. $x_1 \in [-2.98, -1.94]$ and $x_2 \in [-4.33, -0.33]$

D. $x \in [-1.34, -0.88]$

E. $x \in [-2.98, -1.94]$

9. What is the domain of the function below?

$$f(x) = \sqrt[8]{-4x - 7}$$

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

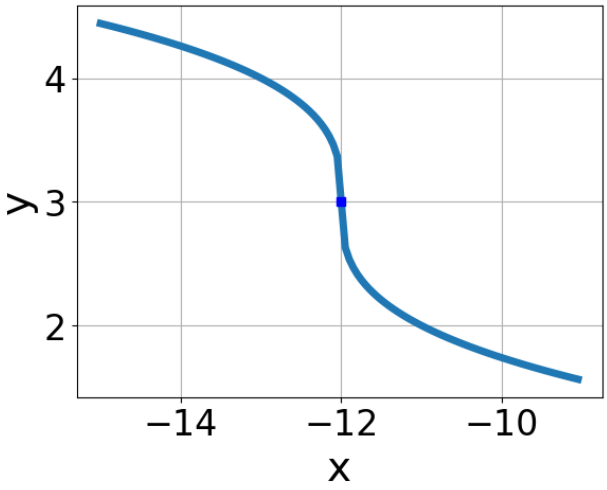
B. $(-\infty, a]$, where $a \in [-0.7, 1.7]$

C. $[a, \infty)$, where $a \in [-2.75, -0.75]$

D. $[a, \infty)$, where $a \in [-1.57, 4.43]$

E. $(-\infty, a]$, where $a \in [-2.2, -1.1]$

10. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt{x-12}+3$

B. $f(x) = \sqrt{x-12}+3$

C. $f(x) = -\sqrt{x+12}+3$

D. $f(x) = \sqrt{x+12}+3$

E. None of the above
