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

$$\sqrt{-15x^2+30}-\sqrt{15x}=0$$

A. $x_1 \in [0, 2]$ and $x_2 \in [1.56, 2.69]$

B. $x \in [0, 2]$

C. $x \in [-6, -1]$

D. $x_1 \in [-6, -1]$ and $x_2 \in [0.72, 1.17]$

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

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

$$\sqrt{-15x^2-36}-\sqrt{-48x}=0$$

A. $x_1 \in [0.96, 1.4]$ and $x_2 \in [2, 3]$

B. $x \in [1.82, 2.13]$

C. $x_1 \in [-1.3, -0.9]$ and $x_2 \in [-5, 0]$

D. $x \in [0.96, 1.4]$

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

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3. What is the domain of the function below?

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

A. $(-\infty, a]$, where $a \in [0.59, 0.82]$

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

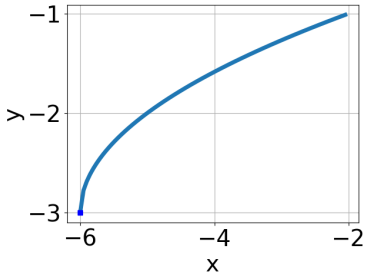
C. $[a, \infty)$, where $a \in [1.04, 2.01]$

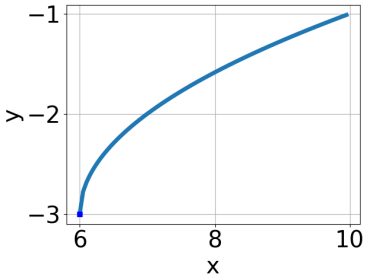
D. $[a, \infty)$, where $a \in [0.53, 1.15]$

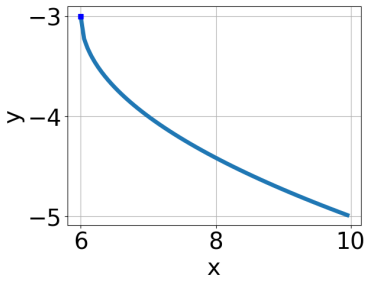
E. $(-\infty, a]$, where $a \in [1.19, 1.4]$

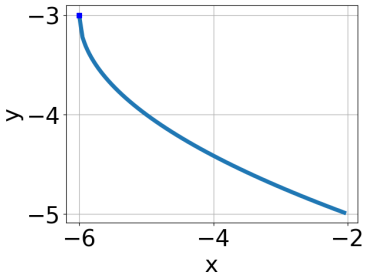
4. Choose the graph of the equation below.

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

A.


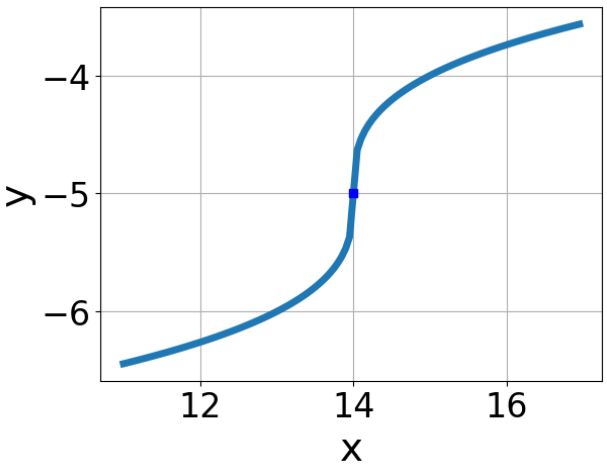
C.


B.


D.


E. None of the above.

5. 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

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

$$\sqrt{-5x+8} - \sqrt{8x-7} = 0$$

A. $x_1 \in [0.7, 0.92]$ and $x_2 \in [-2.4, 3.6]$

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

C. $x \in [1.04, 1.35]$

D. $x_1 \in [1.04, 1.35]$ and $x_2 \in [-2.4, 3.6]$

E. $x \in [-0.01, 0.22]$

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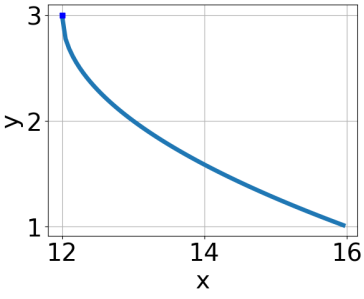
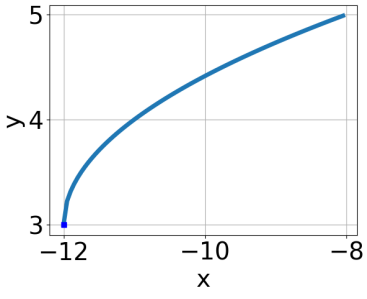
7. Choose the graph of the equation below.

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

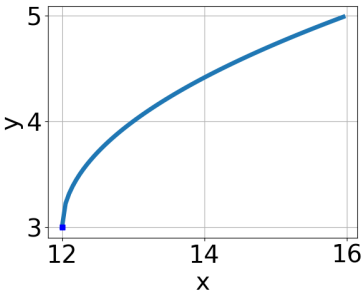
A.



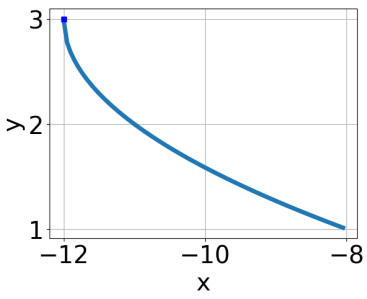
C.



B.



D.



E. None of the above.

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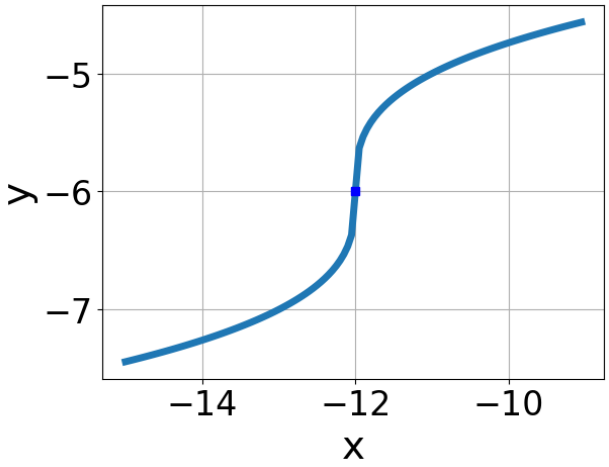
8. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt{x+12} - 6$

B. $f(x) = \sqrt{x+12} - 6$

C. $f(x) = \sqrt{x-12} - 6$

D. $f(x) = -\sqrt{x-12} - 6$

E. None of the above

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

$$\sqrt{-7x+5} - \sqrt{4x+7} = 0$$

A. $x \in [-1.1, 0.65]$

B. $x_1 \in [-1.1, 0.65]$ and $x_2 \in [-2.29, 3.71]$

C. $x_1 \in [-2.03, -1.37]$ and $x_2 \in [-2.29, 3.71]$

D. $x \in [0.19, 1.58]$

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

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10. What is the domain of the function below?

$$f(x) = \sqrt[4]{-3x - 7}$$

A. $[a, \infty)$, where $a \in [-3.62, -0.76]$

B. $[a, \infty)$, where $a \in [-0.91, 1.29]$

C. $(-\infty, a]$, where $a \in [-3.3, -1.4]$

D. $(-\infty, a]$, where $a \in [-2.1, 1.6]$

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