1. What is the domain of the function below?

$$f(x) = \sqrt[5]{4x - 3}$$

A. The domain is $[a, \infty)$, where $a \in [0.64, 0.99]$

B. The domain is $(-\infty, a]$, where $a \in [0.01, 0.94]$

C. The domain is $[a, \infty)$, where $a \in [1.1, 1.66]$

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

E. The domain is $(-\infty, a]$, where $a \in [1.23, 2.25]$

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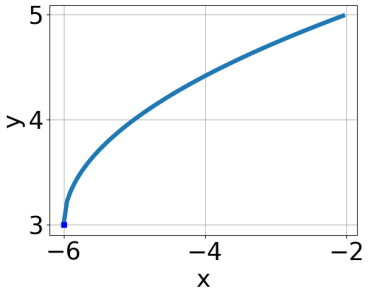
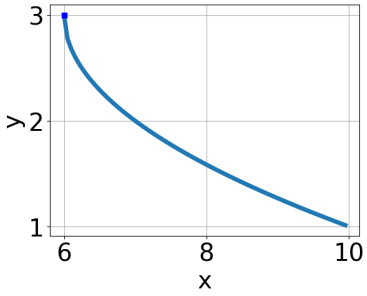
2. Choose the graph of the equation below.

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

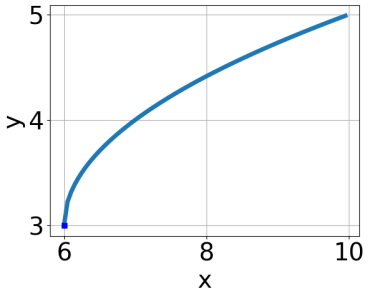
A.



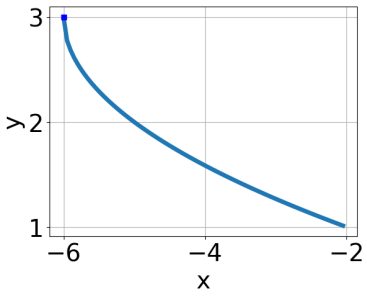
C.



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.

$$\sqrt{7x - 5} - \sqrt{9x - 8} = 0$$

A. $x \in [1.11, 1.73]$

B. $x \in [-6.75, -6.14]$

C. $x_1 \in [-0.28, 1.29]$ and $x_2 \in [1.19, 1.6]$

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

E. $x_1 \in [-0.28, 1.29]$ and $x_2 \in [0.66, 0.91]$

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

$$\sqrt{-35x^2 - 49} - \sqrt{84x} = 0$$

A. $x_1 \in [-1.85, -1.38]$ and $x_2 \in [-1.1, 0]$

B. $x_1 \in [0.88, 1.92]$ and $x_2 \in [0.6, 4.4]$

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

D. $x \in [-1.06, -0.59]$

E. $x \in [-1.85, -1.38]$

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

$$\sqrt{9x - 8} - \sqrt{7x - 6} = 0$$

A. $x_1 \in [0.87, 0.94]$ and $x_2 \in [0.95, 1.05]$

B. $x_1 \in [0.72, 0.86]$ and $x_2 \in [0.79, 0.98]$

C. $x \in [6.99, 7.07]$

D. $x \in [0.98, 1.06]$

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

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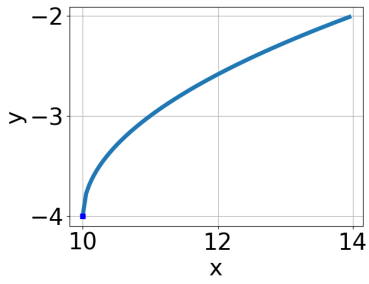
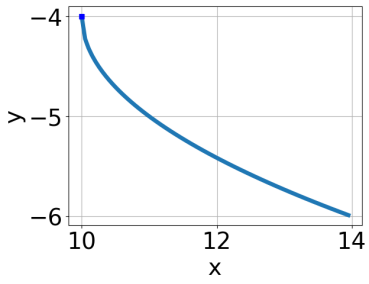
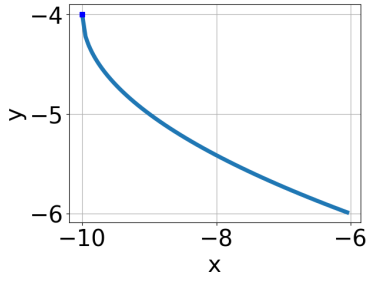
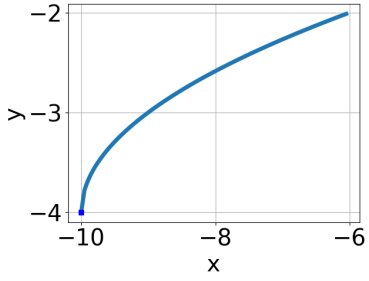
6. Choose the graph of the equation below.

$$f(x) = \sqrt{x + 10} - 4$$

A.


C.


B.


D.


E. None of the above.

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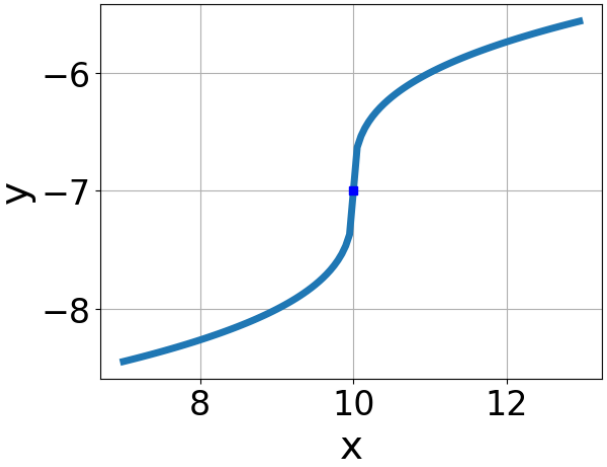
7. Choose the equation of the function graphed below.



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

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

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

$$\sqrt{-28x^2 - 72} - \sqrt{-95x} = 0$$

A. $x \in [-1.1, 1.3]$

B. $x_1 \in [-1.3, 0.7]$ and $x_2 \in [-4.25, -1.25]$

C. $x_1 \in [-1.1, 1.3]$ and $x_2 \in [2.25, 4.25]$

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

E. $x \in [1.8, 4.3]$

9. What is the domain of the function below?

$$f(x) = \sqrt[6]{-7x - 4}$$

A. $[a, \infty)$, where $a \in [-3.9, -1]$

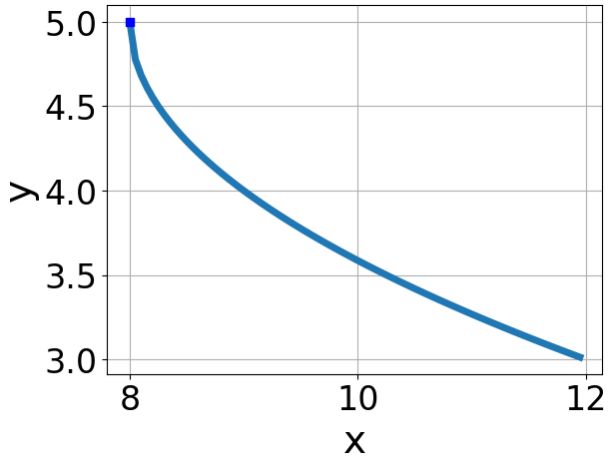
B. $(-\infty, a]$, where $a \in [-1.2, 1]$

C. $[a, \infty)$, where $a \in [-1, 0.6]$

D. $(-\infty, a]$, where $a \in [-3.3, -0.6]$

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

10. Choose the equation of the function graphed below.



A. $f(x) = \sqrt[3]{x+8} + 5$

B. $f(x) = -\sqrt[3]{x-8} + 5$

C. $f(x) = -\sqrt[3]{x+8} + 5$

D. $f(x) = \sqrt[3]{x-8} + 5$

E. None of the above
