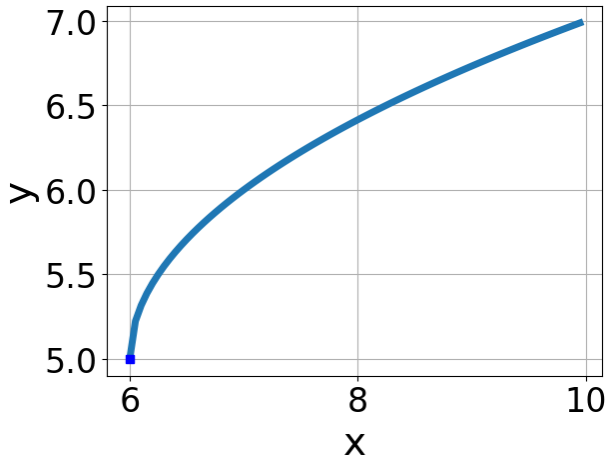
1. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt[3]{x+6} + 5$

B. $f(x) = \sqrt[3]{x+6} + 5$

C. $f(x) = \sqrt[3]{x-6} + 5$

D. $f(x) = -\sqrt[3]{x-6} + 5$

E. None of the above

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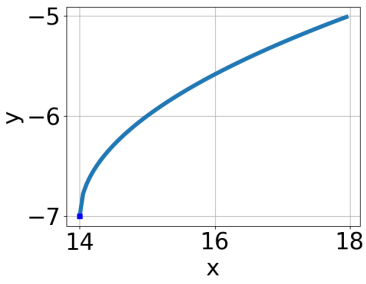
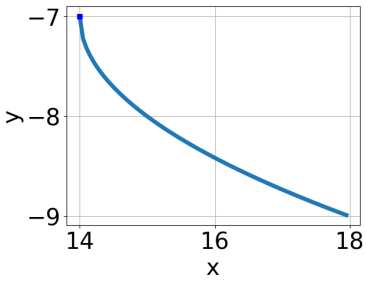
2. Choose the graph of the equation below.

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

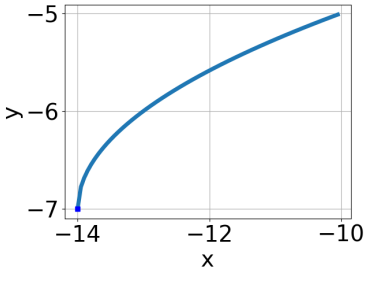
A.



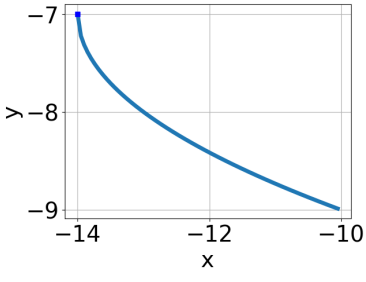
C.



B.



D.



E. None of the above.

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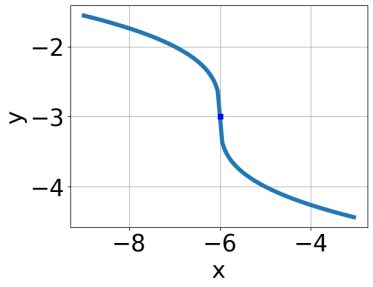
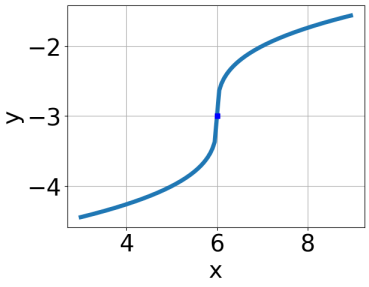
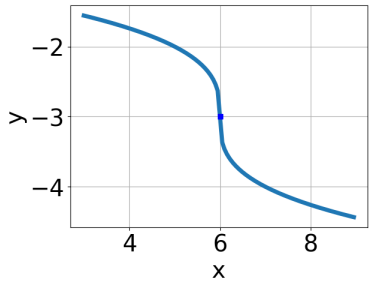
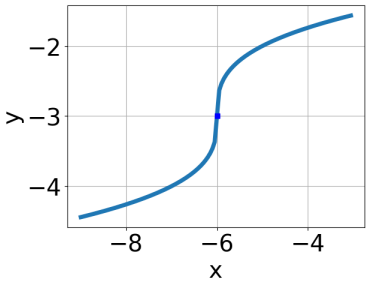
3. Choose the graph of the equation below.

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

A. 

C. 

B. 

D. 

E. None of the above.

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4. What is the domain of the function below?

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

A. $(-\infty, a]$, where $a \in [-3.7, -2.3]$

B. $(-\infty, a]$, where $a \in [-2, 0.6]$

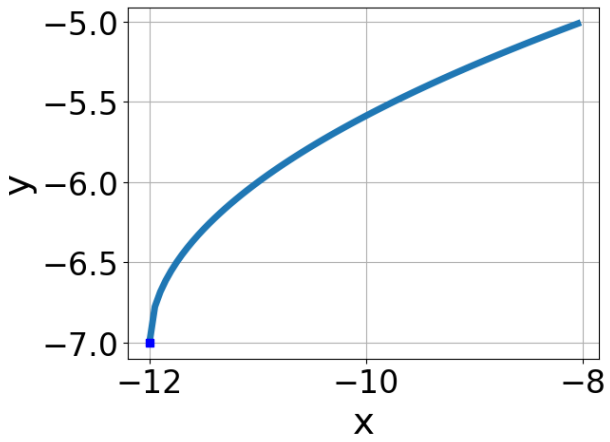
C. $(-\infty, \infty)$

D. $[a, \infty)$, where $a \in [-4.6, -0.5]$

E. $[a, \infty)$, where $a \in [-0.7, -0.2]$

---

5. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt{x - 12} - 7$

B. $f(x) = -\sqrt{x + 12} - 7$

C. $f(x) = \sqrt{x + 12} - 7$

D. $f(x) = \sqrt{x - 12} - 7$

E. None of the above

---

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

$$\sqrt{-54x^2 - 18} - \sqrt{-93x} = 0$$

A. $x_1 \in [-0.1, 0.87]$ and $x_2 \in [1.2, 4.5]$

B. $x \in [-0.1, 0.87]$

C. $x \in [1.3, 1.52]$

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

E. $x_1 \in [-0.47, 0.19]$ and $x_2 \in [-1.8, -0.6]$

---

7. What is the domain of the function below?

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

A. $[a, \infty)$, where $a \in [0.38, 1.27]$

B. $(-\infty, a]$, where $a \in [0.15, 1.28]$

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

D. $[a, \infty)$, where $a \in [1.05, 1.39]$

E. $(-\infty, a]$, where $a \in [1.09, 1.6]$

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

$$\sqrt{4x+7} - \sqrt{6x-6} = 0$$

A. $x_1 \in [-2.8, -0.1]$ and $x_2 \in [1, 3]$

B. $x \in [-0.3, 1.2]$

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

D. $x_1 \in [-2.8, -0.1]$ and $x_2 \in [4.5, 7.5]$

E. $x \in [4.3, 6.6]$

---

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

$$\sqrt{9x-4} - \sqrt{-8x-8} = 0$$

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

B. $x_1 \in [-2.37, -0.6]$ and $x_2 \in [-3.56, 4.44]$

C. $x \in [-0.6, 0.03]$

D. $x_1 \in [-0.6, 0.03]$ and $x_2 \in [-3.56, 4.44]$

E. $x \in [0.43, 1.39]$

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

$$\sqrt{81x^2+56} - \sqrt{-135x} = 0$$

A. $x_1 \in [0.67, 0.9]$ and $x_2 \in [0.63, 1.39]$

B. $x \in [-0.94, -0.81]$

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

D. $x \in [-0.8, -0.69]$

E. $x_1 \in [-0.94, -0.81]$ and $x_2 \in [-0.82, -0.61]$
