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

$$\sqrt{21x^2 - 63} - \sqrt{-42x} = 0$$

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

B. $x_1 \in [-4, -1]$ and $x_2 \in [-1, 2]$

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

D. $x \in [-4, -1]$

E. $x_1 \in [0, 2]$ and $x_2 \in [3, 4]$

---

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

$$\sqrt{-56x^2 + 16} - \sqrt{-4x} = 0$$

A. $x \in [-0.57, -0.43]$

B. $x \in [0.56, 0.67]$

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

D. $x_1 \in [-0.57, -0.43]$ and $x_2 \in [-3.43, 2.57]$

E. $x_1 \in [0.49, 0.56]$ and $x_2 \in [-3.43, 2.57]$

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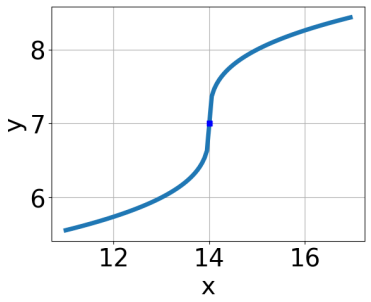
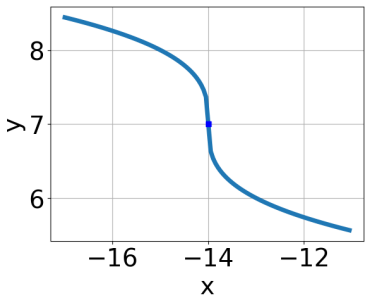
3. Choose the graph of the equation below.

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

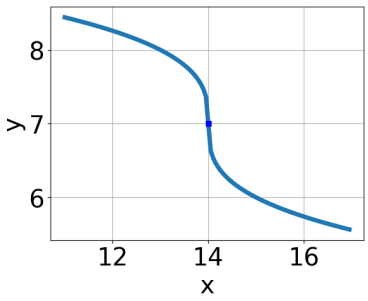
A.



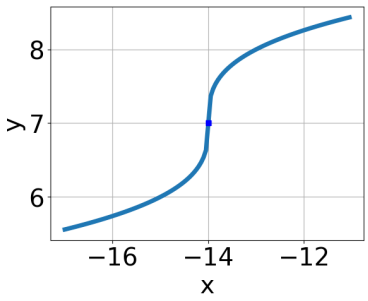
B.



C.



D.



E. None of the above.

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4. What is the domain of the function below?

$$f(x) = \sqrt[6]{8x+5}$$

A. $(-\infty, a]$, where $a \in [-0.65, -0.34]$

B. $[a, \infty)$, where $a \in [-0.68, -0.23]$

C. $[a, \infty)$, where $a \in [-1.75, -1.34]$

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

E. $(-\infty, a]$, where $a \in [-2.11, -1.44]$

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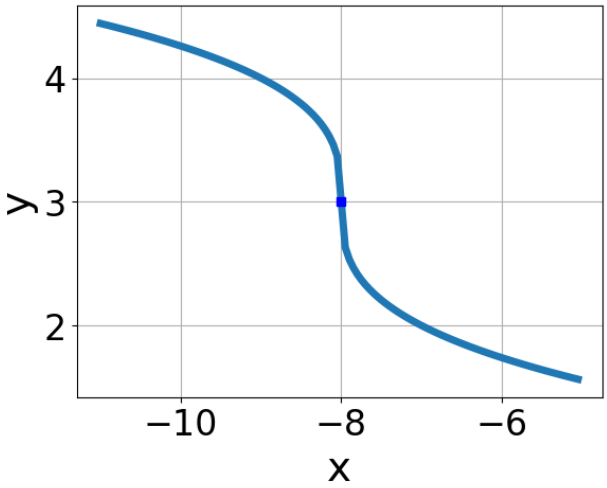
5. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt{x+8} + 3$

B. $f(x) = \sqrt{x+8}+3$

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

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

E. None of the above

---

6. What is the domain of the function below?

$$f(x) = \sqrt[7]{3x-5}$$

A. The domain is $[a, \infty)$, where $a \in [0.9, 3.5]$

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

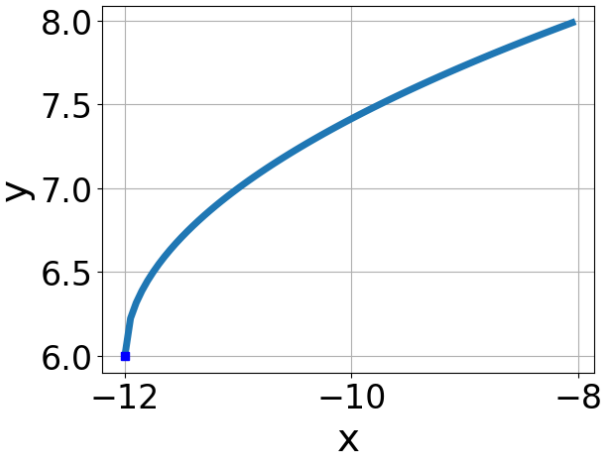
C. The domain is $[a, \infty)$, where $a \in [-0.7, 0.9]$

D. The domain is $(-\infty, a]$, where $a \in [1.1, 4.6]$

E. The domain is $(-\infty, a]$, where $a \in [0.5, 1.3]$

---

7. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt[3]{x+12}+6$

B. $f(x) = -\sqrt[3]{x-12}+6$

C. $f(x) = \sqrt[3]{x+12}+6$

D. $f(x) = \sqrt[3]{x-12}+6$

E. None of the above

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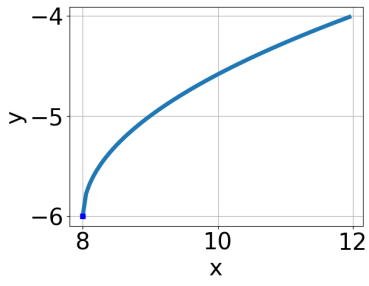
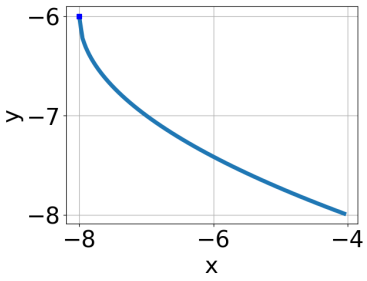
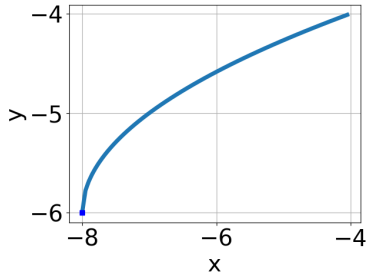
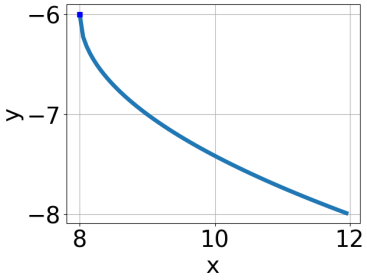
8. Choose the graph of the equation below.

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

A.


C.


B.


D.


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.

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

A. $x \in [-1.36, -1.25]$

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

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

D. $x_1 \in [-1.23, -0.85]$ and $x_2 \in [-1, 1]$

E. $x_1 \in [-1.23, -0.85]$ and $x_2 \in [1.5, 3.5]$

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

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

A. $x_1 \in [-0.95, -0.84]$ and $x_2 \in [-0.09, 0.28]$

B. $x \in [0.04, 0.3]$

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

D. $x \in [-1.03, -0.99]$

E. $x_1 \in [-0.95, -0.84]$ and $x_2 \in [0.85, 2.01]$