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

$$\sqrt{-45x^2 - 14} - \sqrt{-53x} = 0$$

A. $x \in [0, 0.62]$

B. $x \in [0.49, 0.88]$

C. $x_1 \in [0, 0.62]$ and $x_2 \in [-0.07, 0.98]$

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

E. $x_1 \in [-0.47, -0.35]$ and $x_2 \in [-1.8, -0.36]$

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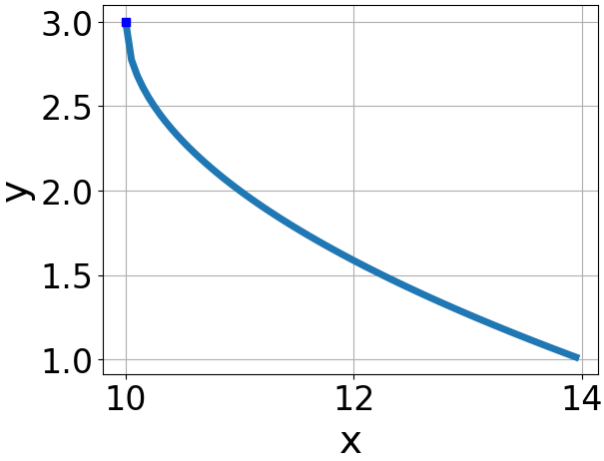
2. Choose the equation of the function graphed below.



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

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

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

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

E. None of the above

---

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

$$\sqrt{81x^2 + 40} - \sqrt{-117x} = 0$$

A. $x_1 \in [0.54, 0.7]$ and $x_2 \in [-0.3, 2.7]$

B. $x \in [-0.65, -0.55]$

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

D. $x \in [-0.93, -0.6]$

E. $x_1 \in [-0.93, -0.6]$ and $x_2 \in [-1.7, 0.4]$

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

$$\sqrt{-6x-2} - \sqrt{-7x-9} = 0$$

A. $x \in [11, 16]$

B. $x_1 \in [-10, -6]$ and $x_2 \in [-2.33, 2.67]$

C. $x_1 \in [-3.29, 0.71]$ and $x_2 \in [-2.33, 2.67]$

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

E. $x \in [-10, -6]$

---

5. What is the domain of the function below?

$$f(x) = \sqrt[6]{7x+8}$$

A. $(-\infty, a]$, where $a \in [-1.87, -0.95]$

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

C. $[a, \infty)$, where $a \in [-1.02, -0.56]$

D. $[a, \infty)$, where $a \in [-1.34, -0.98]$

E. $(-\infty, a]$, where $a \in [-0.94, -0.62]$

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6. What is the domain of the function below?

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

A. $(-\infty, a]$, where $a \in [-1.72, -1.11]$

B. $[a, \infty)$, where $a \in [-1.46, -0.87]$

C. $[a, \infty)$, where $a \in [-1.03, -0.64]$

D. $(-\infty, a]$, where $a \in [-0.87, -0.61]$

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

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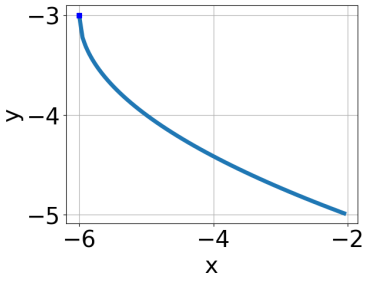
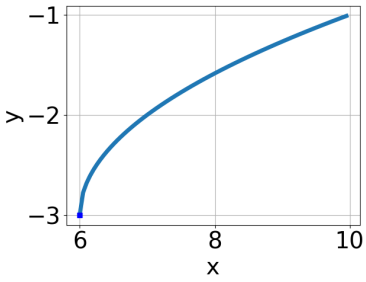
7. Choose the graph of the equation below.

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

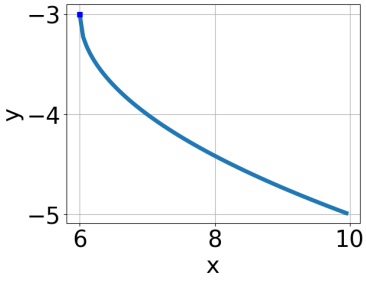
A.



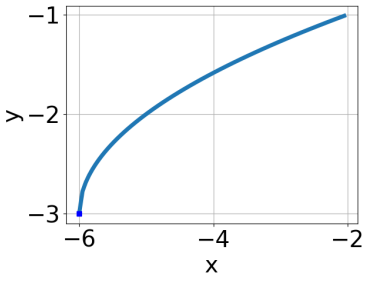
C.



B.



D.



E. None of the above.

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

$$\sqrt{4x-7} - \sqrt{-8x+4} = 0$$

A. $x \in [0.01, 0.39]$

B. $x_1 \in [0.83, 1.03]$ and $x_2 \in [1.75, 2.75]$

C. $x_1 \in [0.33, 0.55]$ and $x_2 \in [1.75, 2.75]$

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

E. $x \in [0.83, 1.03]$

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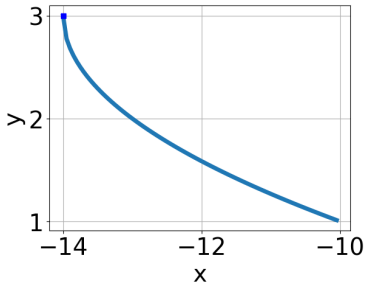
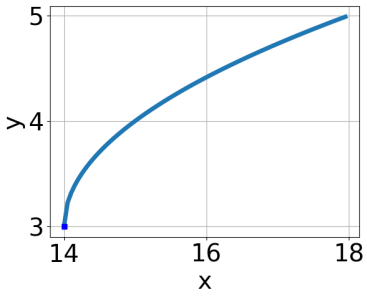
9. Choose the graph of the equation below.

$$f(x) = \sqrt{x + 14} + 3$$

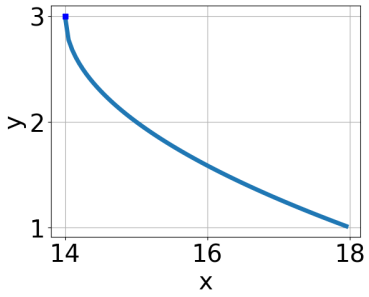
A.



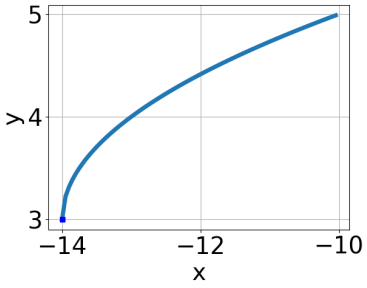
C.



B.



D.



E. None of the above.

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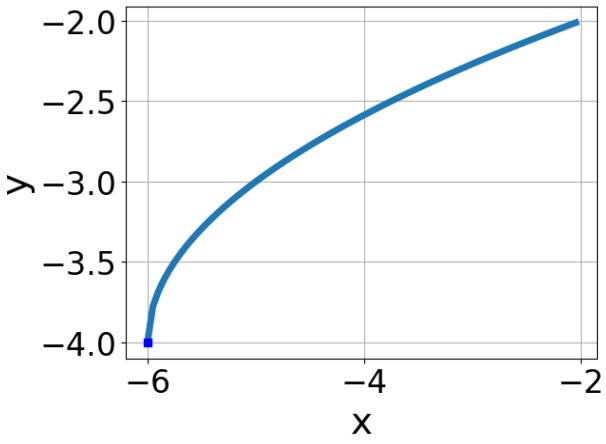
10. Choose the equation of the function graphed below.



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

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

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

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

E. None of the above
