

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

$$\sqrt{8x - 2} - \sqrt{-3x + 5} = 0$$

- A.  $x \in [-0.6, 0.03]$   
B.  $x_1 \in [0.2, 0.4]$  and  $x_2 \in [-0.77, 0.78]$   
C. All solutions lead to invalid or complex values in the equation.  
D.  $x \in [0.6, 0.84]$   
E.  $x_1 \in [0.2, 0.4]$  and  $x_2 \in [1.31, 1.82]$
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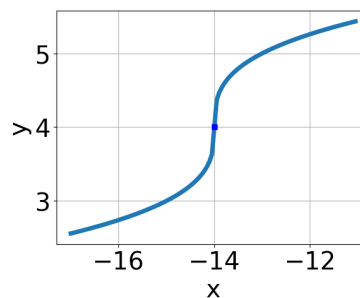
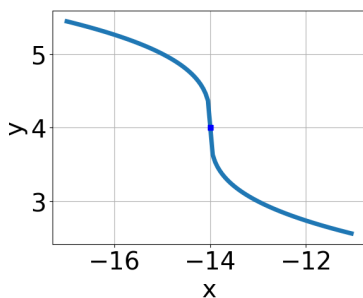
2. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

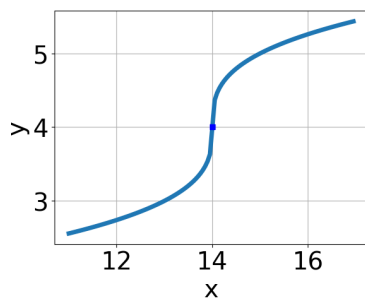
$$\sqrt{-48x^2 + 63} - \sqrt{-2x} = 0$$

- A.  $x \in [1.15, 1.19]$   
B.  $x_1 \in [1.08, 1.13]$  and  $x_2 \in [0.17, 2.17]$   
C. All solutions lead to invalid or complex values in the equation.  
D.  $x \in [-1.15, -1.11]$   
E.  $x_1 \in [-1.15, -1.11]$  and  $x_2 \in [0.17, 2.17]$
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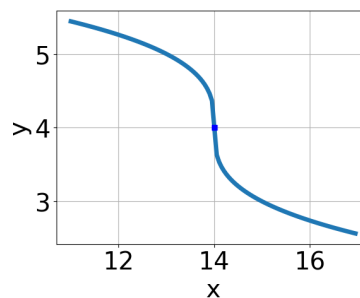
3. Choose the graph of the equation below.

$$f(x) = \sqrt[3]{x + 14} + 4$$





C.

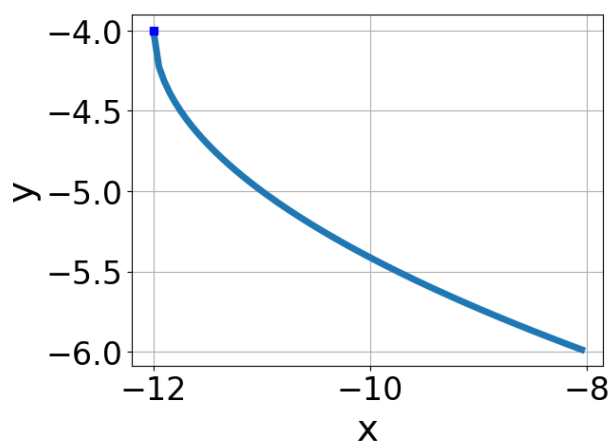


D.

E. None of the above.

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4. Choose the equation of the function graphed below.



A.  $f(x) = -\sqrt{x - 12} - 4$

B.  $f(x) = \sqrt{x + 12} - 4$

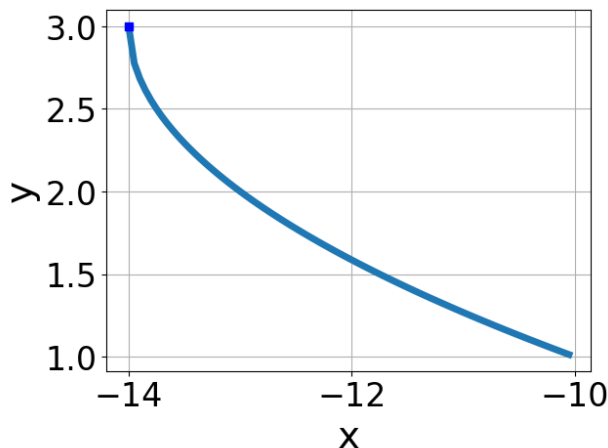
C.  $f(x) = \sqrt{x - 12} - 4$

D.  $f(x) = -\sqrt{x + 12} - 4$

E. None of the above

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5. Choose the equation of the function graphed below.



- A.  $f(x) = \sqrt{x - 14} + 3$
- B.  $f(x) = \sqrt{x + 14} + 3$
- C.  $f(x) = -\sqrt{x + 14} + 3$
- D.  $f(x) = -\sqrt{x - 14} + 3$
- E. None of the above

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

$$\sqrt{7x - 8} - \sqrt{8x - 2} = 0$$

- A.  $x \in [-12, -9]$
- B.  $x \in [-6, -1]$
- C. All solutions lead to invalid or complex values in the equation.
- D.  $x_1 \in [-1.75, 2.25]$  and  $x_2 \in [0.14, 6.14]$
- E.  $x_1 \in [-6, -1]$  and  $x_2 \in [0.14, 6.14]$

7. What is the domain of the function below?

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

- A.  $[a, \infty)$ , where  $a \in [-3, -1]$

- B.  $(-\infty, a]$ , where  $a \in [-3.05, -1]$
  - C.  $(-\infty, \infty)$
  - D.  $(-\infty, a]$ , where  $a \in [-1.55, 0.9]$
  - E.  $[a, \infty)$ , where  $a \in [-1.5, 4.5]$
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8. What is the domain of the function below?

$$f(x) = \sqrt[5]{7x - 8}$$

- A. The domain is  $[a, \infty)$ , where  $a \in [1.13, 1.26]$
  - B. The domain is  $(-\infty, a]$ , where  $a \in [0.9, 3]$
  - C. The domain is  $(-\infty, a]$ , where  $a \in [0.8, 1]$
  - D. The domain is  $[a, \infty)$ , where  $a \in [0.62, 1.06]$
  - E.  $(-\infty, \infty)$
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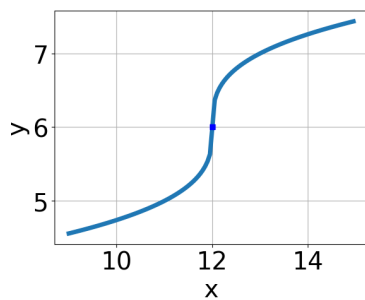
9. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-12x^2 - 48} - \sqrt{50x} = 0$$

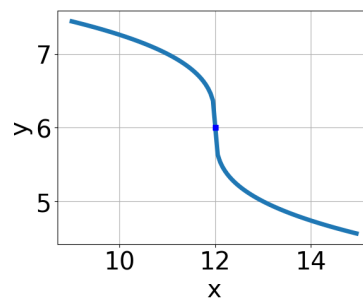
- A.  $x \in [-3.4, -2.1]$
  - B.  $x_1 \in [1.75, 3.35]$  and  $x_2 \in [-1, 2.4]$
  - C.  $x_1 \in [-3.4, -2.1]$  and  $x_2 \in [-2, 0.9]$
  - D.  $x \in [-2.12, -1.09]$
  - E. All solutions lead to invalid or complex values in the equation.
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10. Choose the graph of the equation below.

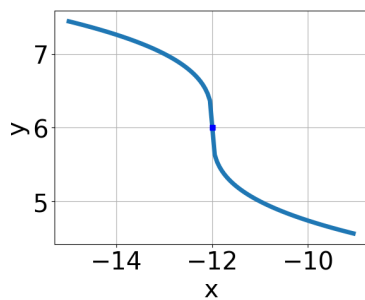
$$f(x) = \sqrt[3]{x - 12} + 6$$



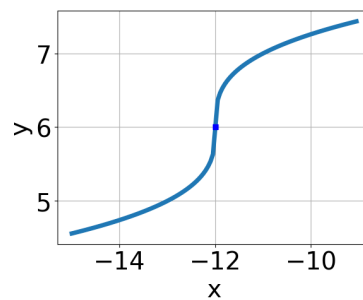
A.



C.



B.



D.

E. None of the above.