

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

$$\sqrt{-72x^2 - 20} - \sqrt{77x} = 0$$

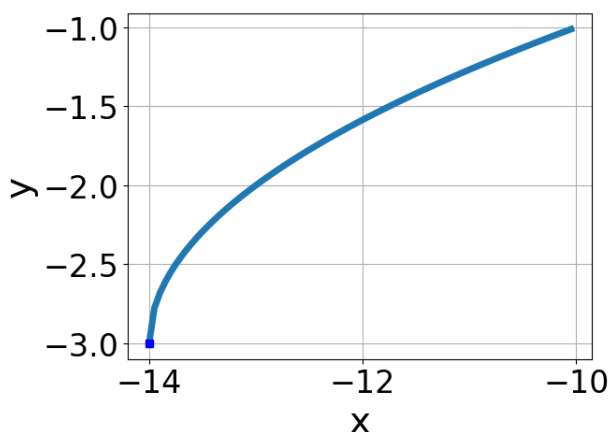
- A.  $x_1 \in [0.43, 0.89]$  and  $x_2 \in [0.22, 0.79]$   
B.  $x_1 \in [-0.88, -0.54]$  and  $x_2 \in [-0.69, -0.21]$   
C. All solutions lead to invalid or complex values in the equation.  
D.  $x \in [-0.88, -0.54]$   
E.  $x \in [-0.47, -0.41]$
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2. What is the domain of the function below?

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

- A. The domain is  $(-\infty, a]$ , where  $a \in [-0.9, -0.77]$   
B. The domain is  $[a, \infty)$ , where  $a \in [-1.13, -0.8]$   
C.  $(-\infty, \infty)$   
D. The domain is  $(-\infty, a]$ , where  $a \in [-1.37, -1.1]$   
E. The domain is  $[a, \infty)$ , where  $a \in [-1.81, -0.93]$
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3. Choose the equation of the function graphed below.



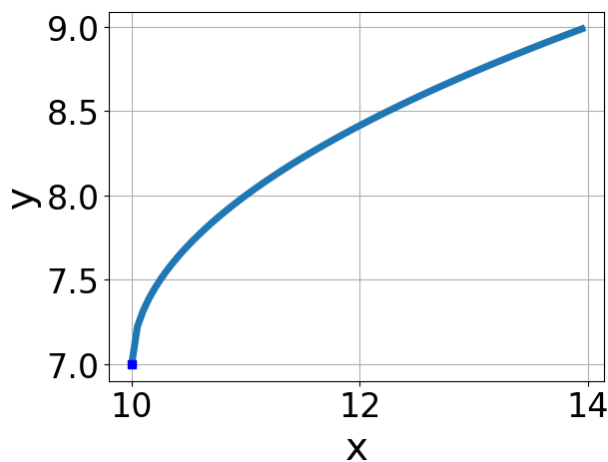
- A.  $f(x) = \sqrt[3]{x+14} - 3$
- B.  $f(x) = -\sqrt[3]{x-14} - 3$
- C.  $f(x) = -\sqrt[3]{x+14} - 3$
- D.  $f(x) = \sqrt[3]{x-14} - 3$
- E. None of the above

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

$$\sqrt{-12x^2 - 10} - \sqrt{34x} = 0$$

- A.  $x_1 \in [2.5, 3.5]$  and  $x_2 \in [0, 2.2]$
- B.  $x \in [-1.33, 1.67]$
- C.  $x_1 \in [-5.5, -0.5]$  and  $x_2 \in [-1.7, -0.2]$
- D.  $x \in [-5.5, -0.5]$
- E. All solutions lead to invalid or complex values in the equation.

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5. 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

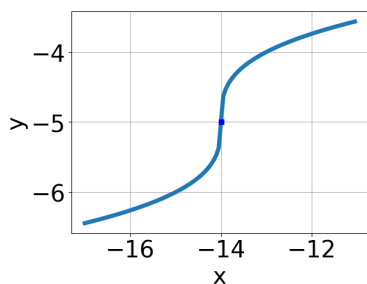
6. What is the domain of the function below?

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

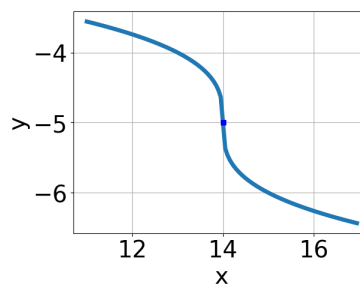
- A. The domain is  $(-\infty, a]$ , where  $a \in [-1.1, 1.1]$   
 B. The domain is  $[a, \infty)$ , where  $a \in [-0.23, 1.25]$   
 C. The domain is  $[a, \infty)$ , where  $a \in [1.07, 2.59]$   
 D. The domain is  $(-\infty, a]$ , where  $a \in [0.8, 3.6]$   
 E.  $(-\infty, \infty)$

7. Choose the graph of the equation below.

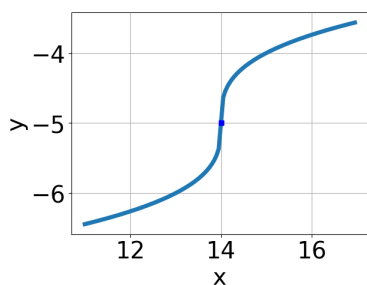
$$f(x) = -\sqrt[3]{x+14} - 5$$



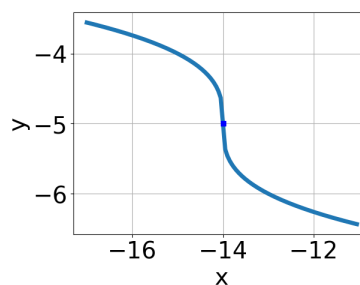
A.



C.



B.



D.

E. None of the above.

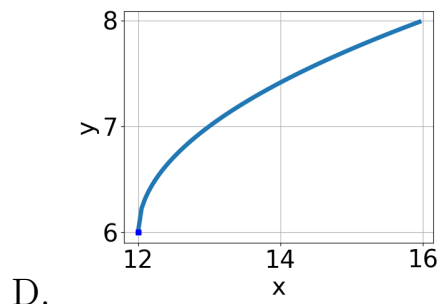
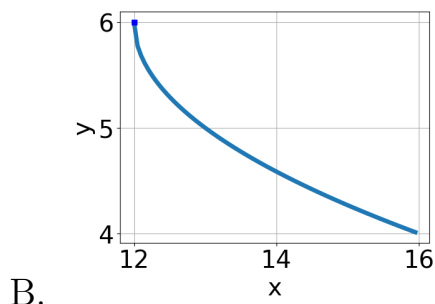
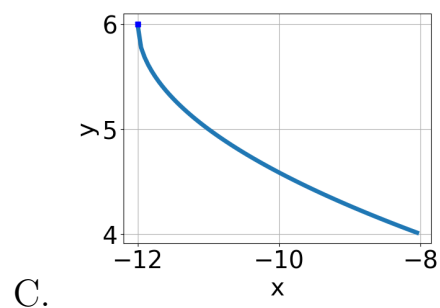
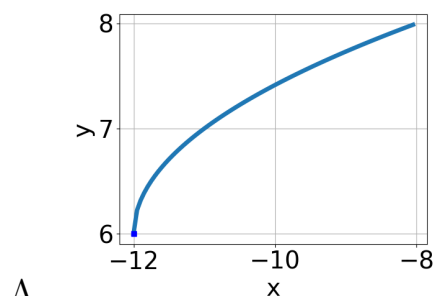
8. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-4x - 7} - \sqrt{-2x - 2} = 0$$

- A.  $x_1 \in [-3.14, -1.9]$  and  $x_2 \in [-2.62, -1.4]$   
B.  $x \in [-3.14, -1.9]$   
C. All solutions lead to invalid or complex values in the equation.  
D.  $x_1 \in [-2.06, -0.67]$  and  $x_2 \in [-1.41, -0.79]$   
E.  $x \in [-5.15, -3.82]$

9. Choose the graph of the equation below.

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



- E. None of the above.

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

$$\sqrt{3x + 5} - \sqrt{4x - 2} = 0$$

- A.  $x_1 \in [-3.1, 0.6]$  and  $x_2 \in [6, 10]$
  - B.  $x \in [2.9, 4.4]$
  - C. All solutions lead to invalid or complex values in the equation.
  - D.  $x \in [6.2, 7.2]$
  - E.  $x_1 \in [-3.1, 0.6]$  and  $x_2 \in [-3.5, 3.5]$
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