

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

$$\sqrt{-24x^2 - 18} - \sqrt{-62x} = 0$$

- A. All solutions lead to invalid or complex values in the equation.  
 B.  $x_1 \in [-0.31, 1.95]$  and  $x_2 \in [0.25, 10.25]$   
 C.  $x \in [1.66, 2.4]$   
 D.  $x \in [-0.31, 1.95]$   
 E.  $x_1 \in [-1.06, 0.31]$  and  $x_2 \in [-3.25, 1.75]$

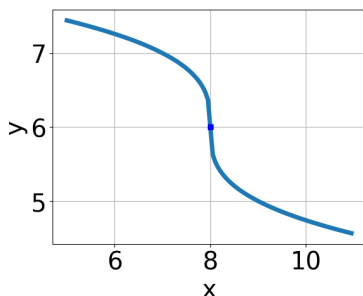
2. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-81x^2 - 21} - \sqrt{90x} = 0$$

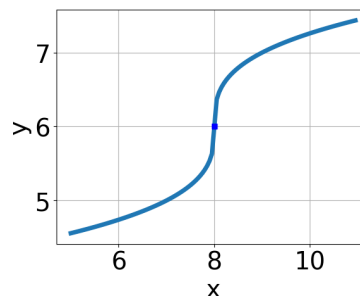
- A.  $x \in [-1.3, -0.42]$   
 B.  $x \in [-0.66, 0.15]$   
 C.  $x_1 \in [0, 1.5]$  and  $x_2 \in [0.06, 1.03]$   
 D.  $x_1 \in [-1.3, -0.42]$  and  $x_2 \in [-0.76, -0.27]$   
 E. All solutions lead to invalid or complex values in the equation.

3. Choose the graph of the equation below.

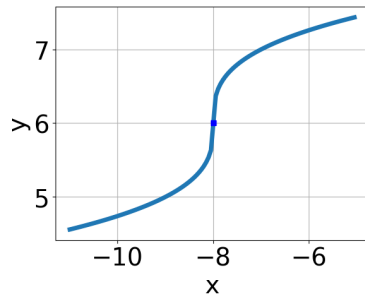
$$f(x) = \sqrt[3]{x + 8} + 6$$



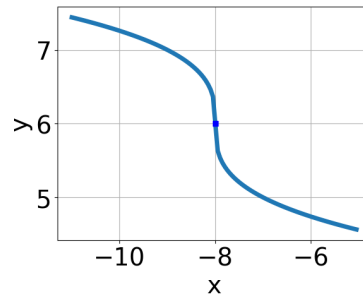
A.



B.



C.



D.

E. None of the above.

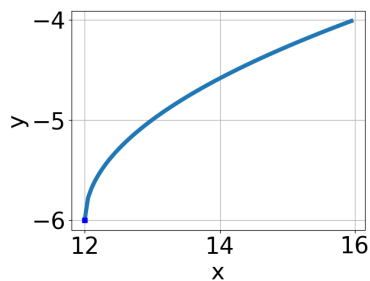
4. What is the domain of the function below?

$$f(x) = \sqrt[7]{4x - 3}$$

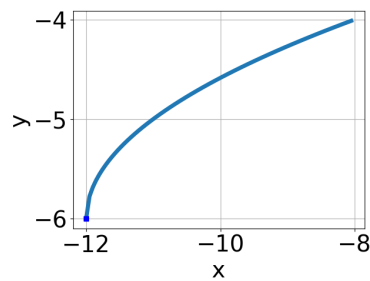
A.  $(-\infty, \infty)$ B. The domain is  $[a, \infty)$ , where  $a \in [1.07, 1.82]$ C. The domain is  $(-\infty, a]$ , where  $a \in [-0.11, 1.07]$ D. The domain is  $[a, \infty)$ , where  $a \in [-0.07, 0.92]$ E. The domain is  $(-\infty, a]$ , where  $a \in [0.79, 3.54]$ 

5. Choose the graph of the equation below.

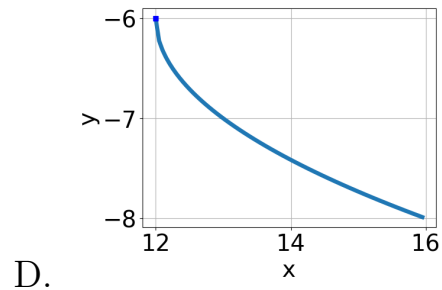
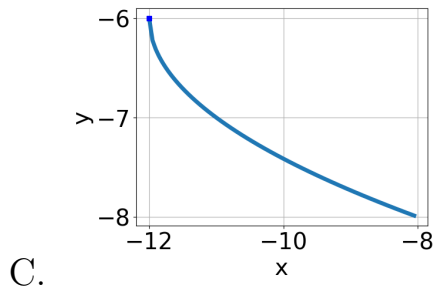
$$f(x) = -\sqrt{x + 12} - 6$$



A.

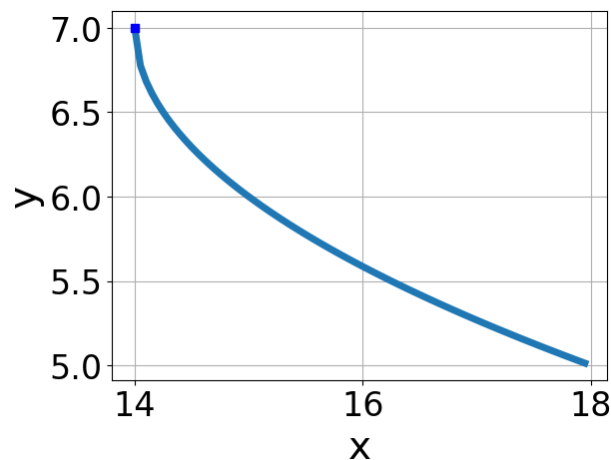


B.



E. None of the above.

6. Choose the equation of the function graphed below.



- A.  $f(x) = \sqrt{x + 14} + 7$
- B.  $f(x) = -\sqrt{x + 14} + 7$
- C.  $f(x) = -\sqrt{x - 14} + 7$
- D.  $f(x) = \sqrt{x - 14} + 7$
- E. None of the above

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

$$\sqrt{9x - 8} - \sqrt{4x - 3} = 0$$

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

- B.  $x \in [2.15, 2.39]$
  - C.  $x_1 \in [0.68, 0.83]$  and  $x_2 \in [0.6, 0.89]$
  - D.  $x \in [0.97, 1.04]$
  - E.  $x_1 \in [0.8, 0.93]$  and  $x_2 \in [0.91, 1.31]$
- 

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

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

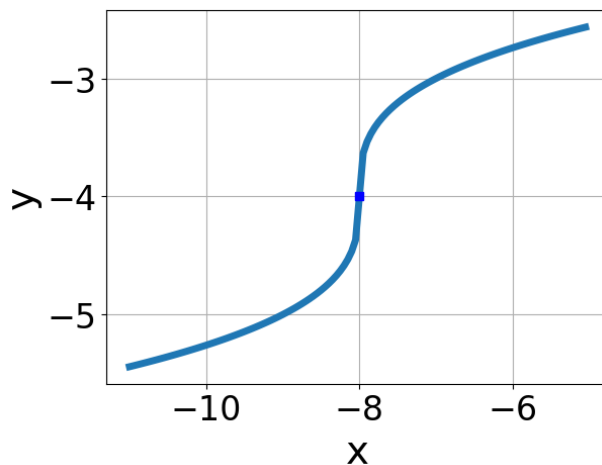
- A. All solutions lead to invalid or complex values in the equation.
  - B.  $x \in [-0.55, -0.44]$
  - C.  $x_1 \in [-0.34, -0.12]$  and  $x_2 \in [-0.22, 0.41]$
  - D.  $x \in [0.19, 0.24]$
  - E.  $x_1 \in [-0.34, -0.12]$  and  $x_2 \in [0.35, 1]$
- 

9. What is the domain of the function below?

$$f(x) = \sqrt[4]{3x + 7}$$

- A.  $[a, \infty)$ , where  $a \in [-1.37, 1.2]$
  - B.  $(-\infty, \infty)$
  - C.  $(-\infty, a]$ , where  $a \in [-1.57, -0.12]$
  - D.  $(-\infty, a]$ , where  $a \in [-2.57, -2.32]$
  - E.  $[a, \infty)$ , where  $a \in [-2.34, -1.39]$
- 

10. Choose the equation of the function graphed below.



- A.  $f(x) = -\sqrt[3]{x+8} - 4$
- B.  $f(x) = \sqrt[3]{x+8} - 4$
- C.  $f(x) = \sqrt[3]{x-8} - 4$
- D.  $f(x) = -\sqrt[3]{x-8} - 4$
- E. None of the above