

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

$$\sqrt{-30x^2 - 63} - \sqrt{-87x} = 0$$

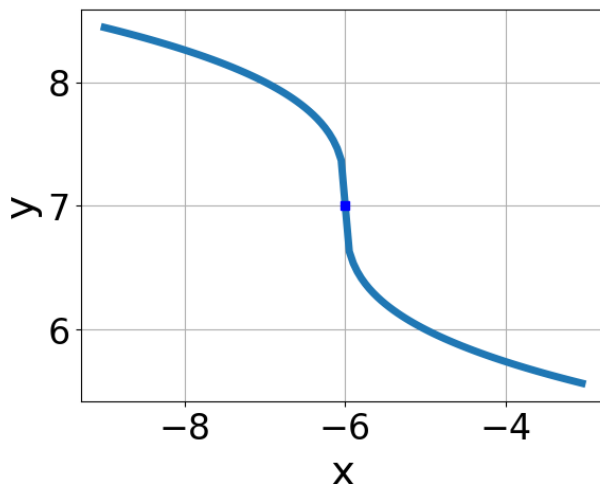
- A. $x_1 \in [1.17, 1.47]$ and $x_2 \in [-0.5, 5.5]$
 - B. $x_1 \in [-1.58, -1.2]$ and $x_2 \in [-3.5, 0.5]$
 - C. All solutions lead to invalid or complex values in the equation.
 - D. $x \in [1.17, 1.47]$
 - E. $x \in [1.47, 1.5]$
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2. What is the domain of the function below?

$$f(x) = \sqrt[4]{3x - 5}$$

- A. $[a, \infty)$, where $a \in [-1.47, 0.82]$
 - B. $[a, \infty)$, where $a \in [0.98, 2.8]$
 - C. $(-\infty, a]$, where $a \in [0.67, 6.67]$
 - D. $(-\infty, \infty)$
 - E. $(-\infty, a]$, where $a \in [0.6, 1.6]$
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3. Choose the equation of the function graphed below.



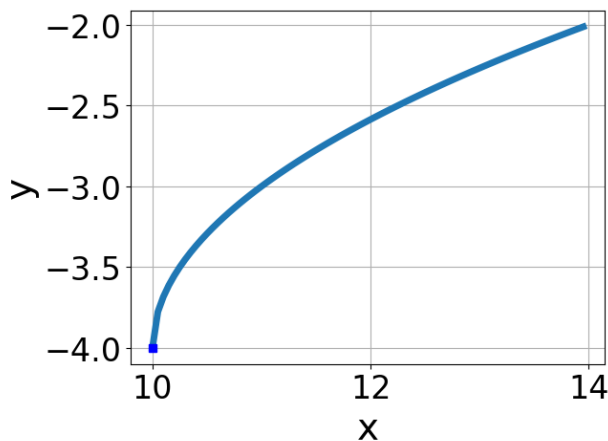
- A. $f(x) = \sqrt{x-6} + 7$
- B. $f(x) = \sqrt{x+6} + 7$
- C. $f(x) = -\sqrt{x-6} + 7$
- D. $f(x) = -\sqrt{x+6} + 7$
- E. None of the above

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

$$\sqrt{27x^2 - 15} - \sqrt{36x} = 0$$

- A. $x \in [1.56, 1.86]$
- B. $x_1 \in [-0.06, 0.56]$ and $x_2 \in [-0.33, 2.67]$
- C. $x_1 \in [-0.55, -0.26]$ and $x_2 \in [-0.33, 2.67]$
- D. All solutions lead to invalid or complex values in the equation.
- E. $x \in [-0.55, -0.26]$

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5. Choose the equation of the function graphed below.



- A. $f(x) = \sqrt{x-10} - 4$
- B. $f(x) = \sqrt{x+10} - 4$

- C. $f(x) = -\sqrt{x+10} - 4$
 D. $f(x) = -\sqrt{x-10} - 4$
 E. None of the above

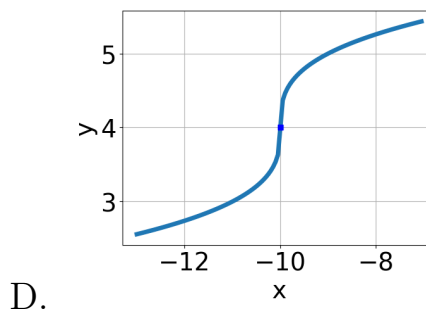
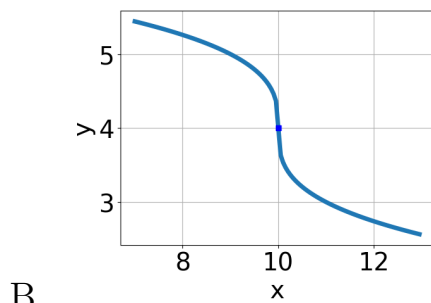
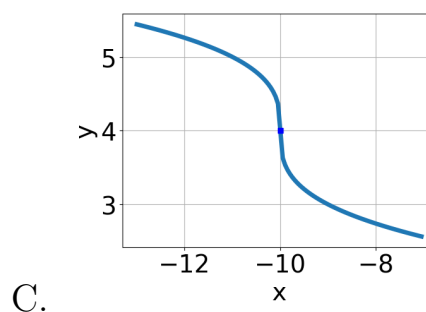
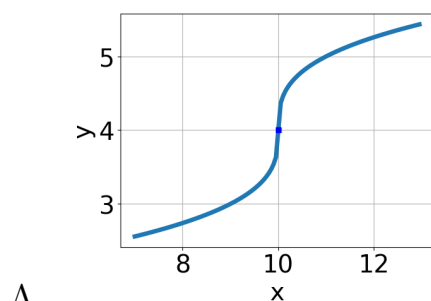
6. What is the domain of the function below?

$$f(x) = \sqrt[5]{9x-3}$$

- A. The domain is $[a, \infty)$, where $a \in [0.9, 4.3]$
 B. The domain is $(-\infty, a]$, where $a \in [0.9, 3.1]$
 C. The domain is $(-\infty, a]$, where $a \in [0, 1.2]$
 D. The domain is $[a, \infty)$, where $a \in [-3.5, 0.8]$
 E. $(-\infty, \infty)$

7. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x+10} + 4$$



E. None of the above.

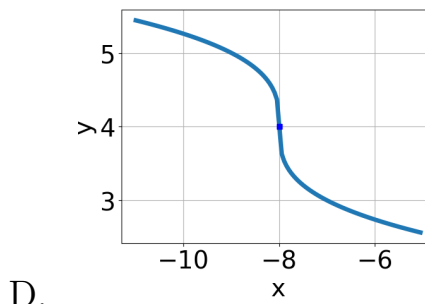
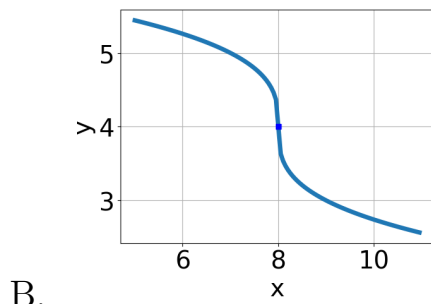
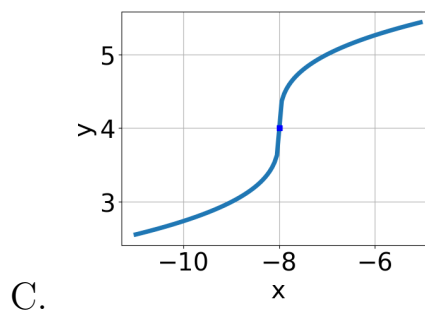
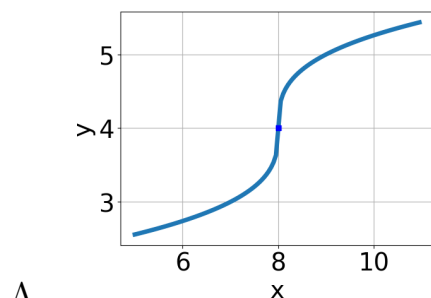
8. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-8x+6} - \sqrt{8x+5} = 0$$

- A. $x \in [0.36, 1.39]$
 B. $x \in [-0.01, 0.16]$
 C. $x_1 \in [-1.23, -0.47]$ and $x_2 \in [0.75, 4.75]$
 D. All solutions lead to invalid or complex values in the equation.
 E. $x_1 \in [-0.01, 0.16]$ and $x_2 \in [0.75, 4.75]$

9. Choose the graph of the equation below.

$$f(x) = \sqrt[3]{x+8} + 4$$



- E. None of the above.

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

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

- A. $x_1 \in [-1.63, -1.4]$ and $x_2 \in [0.65, 3.2]$
 - B. All solutions lead to invalid or complex values in the equation.
 - C. $x \in [-0.32, 0.21]$
 - D. $x \in [-1.3, -1.23]$
 - E. $x_1 \in [-1.63, -1.4]$ and $x_2 \in [-0.77, 0.54]$
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