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

$$\sqrt{-49x^2 + 15} - \sqrt{-14x} = 0$$
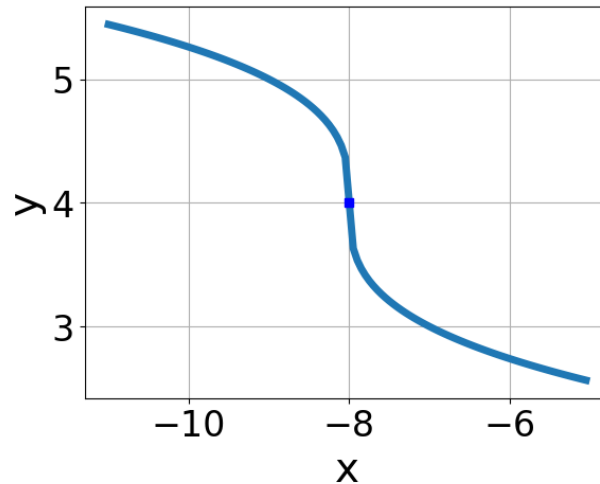
A. All solutions lead to invalid or complex values in the equation.

B. $x_1 \in [-0.27, 0.45]$ and $x_2 \in [-1.29, 1.71]$

C. $x_1 \in [-1.17, -0.03]$ and $x_2 \in [-1.29, 1.71]$

D. $x \in [0.67, 1.33]$

E. $x \in [-1.17, -0.03]$

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

$$\sqrt{-7x - 5} - \sqrt{5x + 2} = 0$$

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

B. $x_1 \in [-0.85, -0.66]$ and $x_2 \in [-1.01, -0.46]$

C. $x \in [-0.45, -0.18]$

D. $x_1 \in [-0.85, -0.66]$ and $x_2 \in [-0.41, 1.37]$

E. $x \in [-0.68, -0.27]$

3. Choose the equation of the function graphed below.

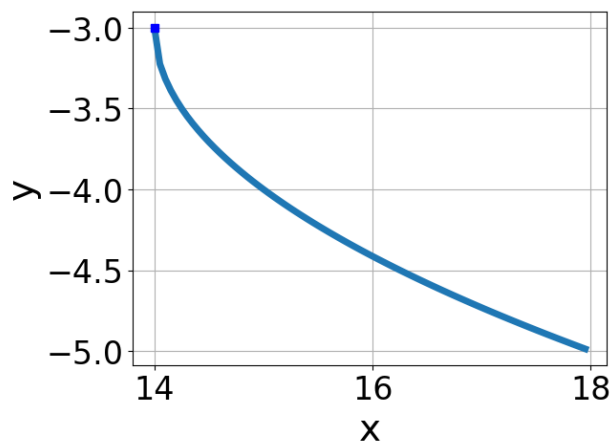A. $f(x) = -\sqrt{x - 8} + 4$

B. $f(x) = -\sqrt{x + 8} + 4$

C. $f(x) = \sqrt{x - 8} + 4$

D. $f(x) = \sqrt{x + 8} + 4$

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.

$$\sqrt{-21x^2 - 42} - \sqrt{-67x} = 0$$

A. $x \in [2.06, 2.43]$

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

C. $x \in [0.6, 1.44]$

D. $x_1 \in [0.6, 1.44]$ and $x_2 \in [2.33, 3.33]$
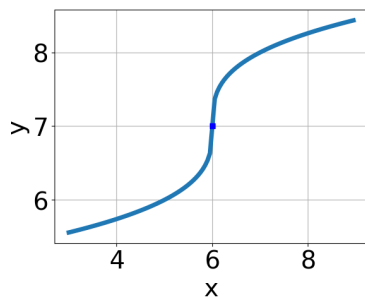
E. $x_1 \in [-1.01, -0.35]$ and $x_2 \in [-4.33, 1.67]$

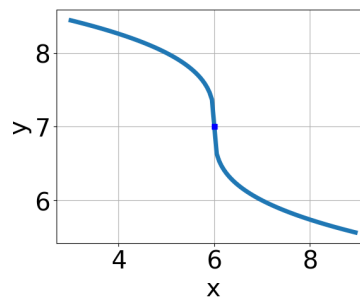5. Choose the equation of the function graphed below.

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
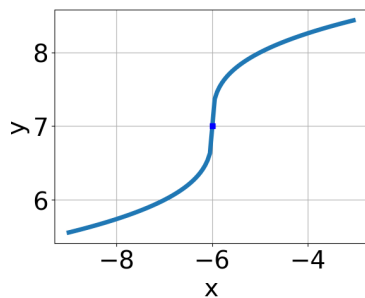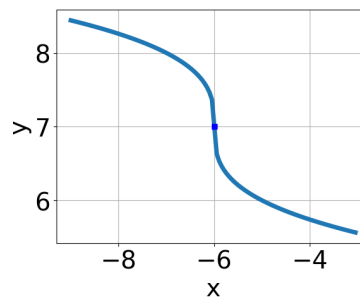
6. Choose the graph of the equation below.

$$f(x) = \sqrt[3]{x + 6} + 7$$
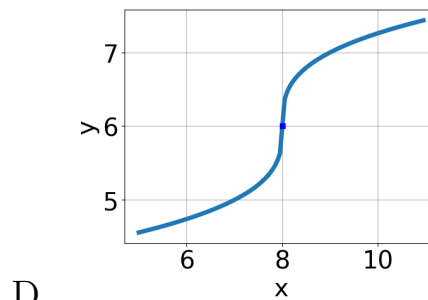

A.

C.

B.

D.

E. None of the above.
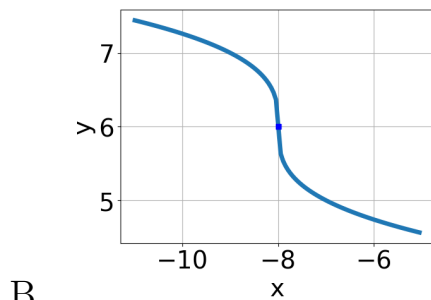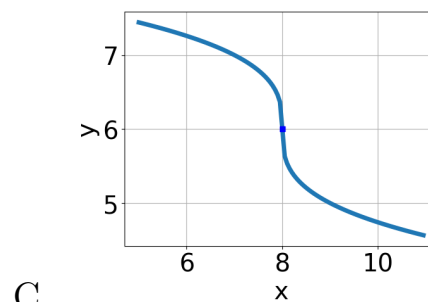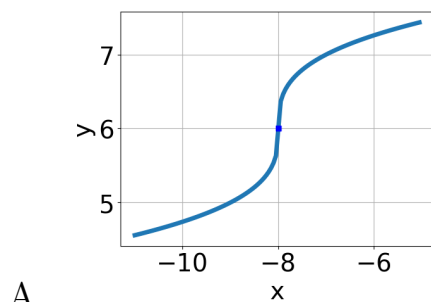
7. What is the domain of the function below?

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

A. The domain is $[a, \infty)$, where $a \in [-1.8, 1.3]$

B. The domain is $(-\infty, a]$, where $a \in [0.22, 1.96]$

C. The domain is $[a, \infty)$, where $a \in [0.6, 2.5]$

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

E. The domain is $(-\infty, a]$, where $a \in [0.84, 2.71]$

8. Choose the graph of the equation below.

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

A.

C.

B.

D.

E. None of the above.

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

$$\sqrt{9x - 7} - \sqrt{4x + 2} = 0$$

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

B. $x_1 \in [0.75, 0.84]$ and $x_2 \in [1.5, 2.5]$

C. $x_1 \in [-0.71, -0.38]$ and $x_2 \in [-0.6, 1.6]$

D. $x \in [1, 1.13]$

E. $x \in [1.77, 1.87]$

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10. What is the domain of the function below?

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

A. The domain is $(-\infty, a]$, where $a \in [1.22, 2.13]$

B. The domain is $[a, \infty)$, where $a \in [0.99, 2.22]$

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

D. The domain is $(-\infty, a]$, where $a \in [0.58, 1.23]$

E. The domain is $[a, \infty)$, where $a \in [0.56, 1.14]$