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

$$\sqrt{-21x^2 - 40} - \sqrt{71x} = 0$$
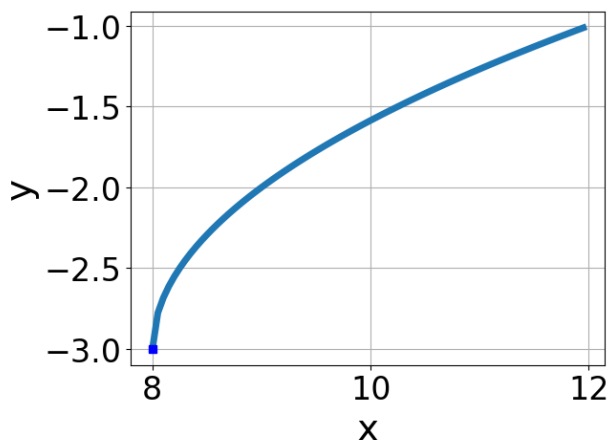
A. $x \in [-4.7, -2.1]$

B. $x \in [-0.8, 0.7]$

C. $x_1 \in [-4.7, -2.1]$ and $x_2 \in [-2.3, 0.5]$

D. $x_1 \in [0.7, 5.3]$ and $x_2 \in [0.4, 2.3]$

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

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2. What is the domain of the function below?

$$f(x) = \sqrt[8]{9x - 6}$$

A. $[a, \infty)$, where $a \in [0.1, 1.3]$

B. $[a, \infty)$, where $a \in [0.7, 1.9]$

C. $(-\infty, a]$, where $a \in [0.63, 0.78]$

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

E. $(-\infty, a]$, where $a \in [1.18, 1.52]$

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3. Choose the equation of the function graphed below.

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

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

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

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

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.

$$\sqrt{-36x^2 - 18} - \sqrt{-51x} = 0$$

A. $x_1 \in [-0.86, -0.64]$ and $x_2 \in [-1.75, 0.25]$

B. $x \in [0.73, 0.8]$

C. $x_1 \in [0.57, 0.68]$ and $x_2 \in [-0.25, 4.75]$

D. $x \in [0.57, 0.68]$

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.
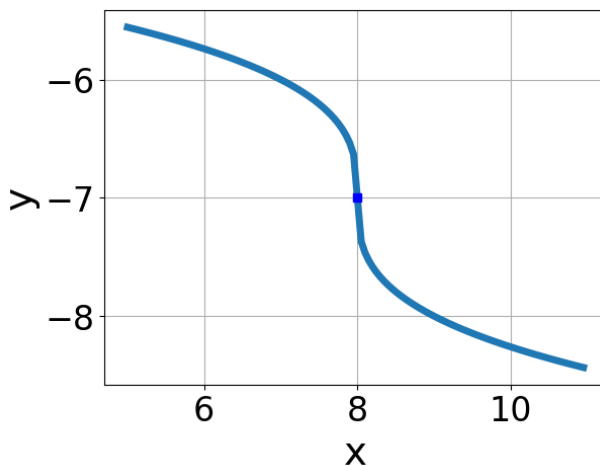
A. $f(x) = -\sqrt[3]{x-8} - 7$

B. $f(x) = \sqrt[3]{x-8} - 7$

C. $f(x) = -\sqrt[3]{x+8} - 7$
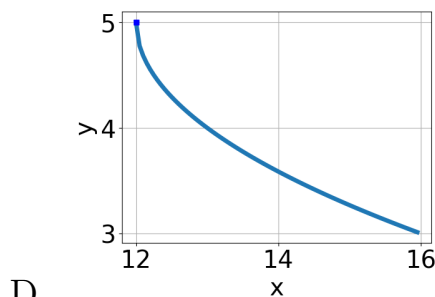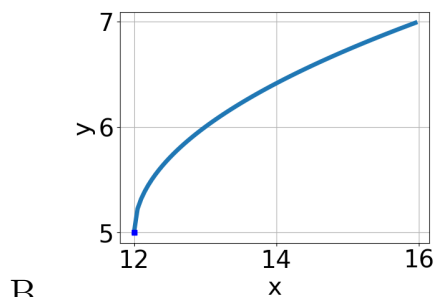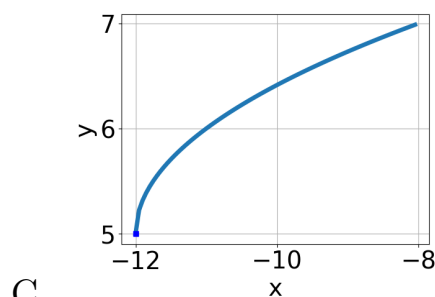
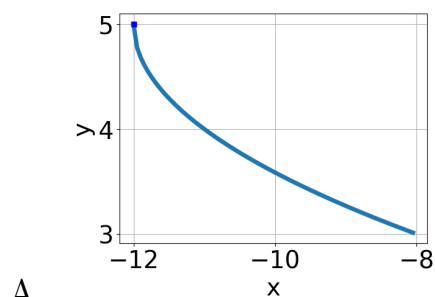D. $f(x) = \sqrt[3]{x+8} - 7$

E. None of the above

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6. What is the domain of the function below?

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

A. The domain is $(-\infty, a]$, where $a \in [-0.63, -0.37]$

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

C. The domain is $[a, \infty)$, where $a \in [-0.9, -0.2]$

D. The domain is $(-\infty, a]$, where $a \in [-3.46, -1.16]$

E. The domain is $[a, \infty)$, where $a \in [-2.4, -1.4]$

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7. Choose the graph of the equation below.

$$f(x) = \sqrt{x - 12} + 5$$
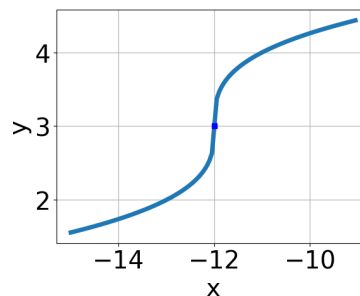
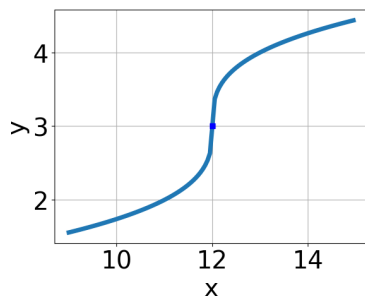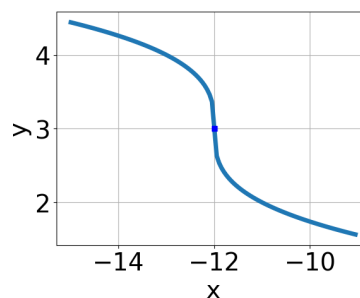A.

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.

$$\sqrt{5x + 6} - \sqrt{9x - 7} = 0$$

A. $x_1 \in [-2, -0.3]$ and $x_2 \in [-0.4, 2.1]$

B. $x \in [-0.8, 3]$

C. $x_1 \in [-2, -0.3]$ and $x_2 \in [3.2, 5.2]$

D. $x \in [1.2, 4.8]$

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

9. Choose the graph of the equation below.

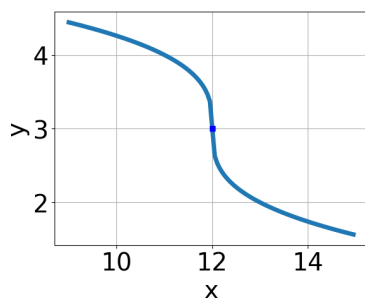$$f(x) = \sqrt[3]{x - 12} + 3$$

A.

C.

B.

D.

E. None of the above.

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

$$\sqrt{9x+7} - \sqrt{2x+3} = 0$$

A. $x_1 \in [-0.8, -0.64]$ and $x_2 \in [-0.69, -0.18]$

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

C. $x \in [-1.48, -1.38]$

D. $x_1 \in [-1.58, -1.49]$ and $x_2 \in [-0.88, -0.69]$

E. $x \in [-0.61, -0.45]$