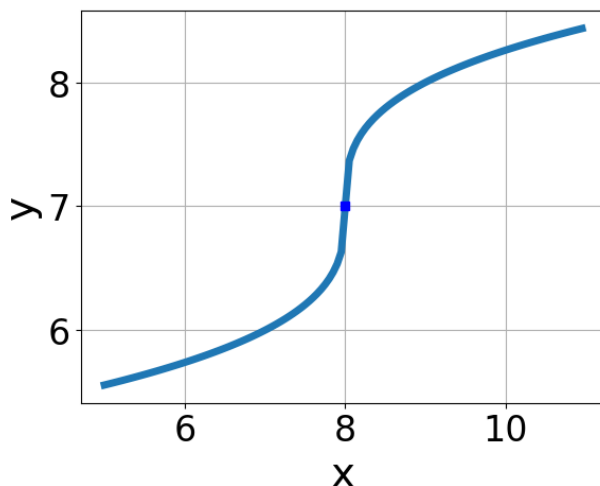1. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{8x^2 + 24} - \sqrt{-28x} = 0$$

A. $x \in [-1.94, -1.24]$

B. $x_1 \in [1.27, 1.89]$ and $x_2 \in [-1, 4]$

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

D. $x \in [-2.29, -1.98]$

E. $x_1 \in [-2.29, -1.98]$ and $x_2 \in [-1.5, -0.5]$

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2. Choose the equation of the function graphed below.

A. $f(x) = -\sqrt{x + 8} + 7$

B. $f(x) = \sqrt{x + 8} + 7$

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

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

E. None of the above

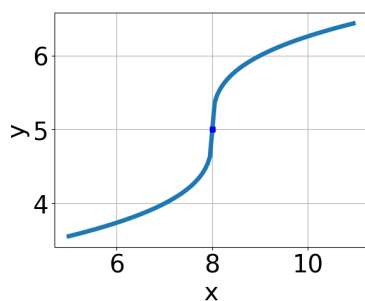3. Solve the radical equation below. Then, choose the interval(s) that the

solution(s) belongs to.
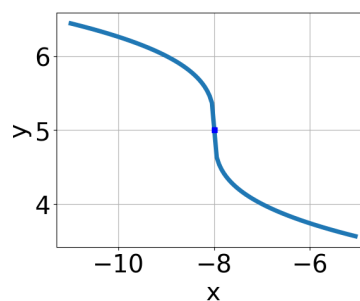
$$\sqrt{15x^2 - 48} - \sqrt{-22x} = 0$$

A. $x_1 \in [-3.67, -0.67]$ and $x_2 \in [0.75, 1.23]$

B. $x_1 \in [-0.8, 4.2]$ and $x_2 \in [1.53, 3.1]$

C. $x \in [-0.8, 4.2]$

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

E. $x \in [-3.67, -0.67]$
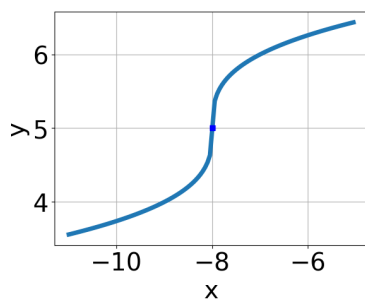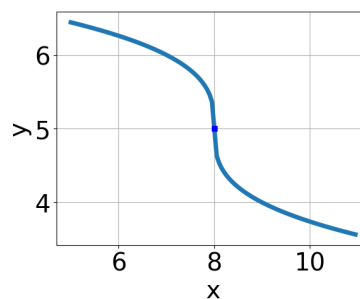
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4. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x + 8} + 5$$

A.

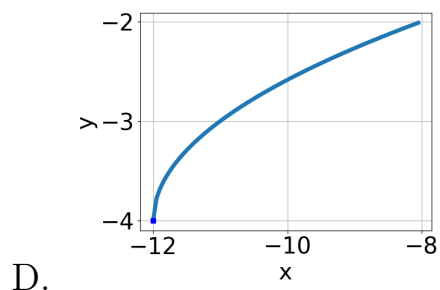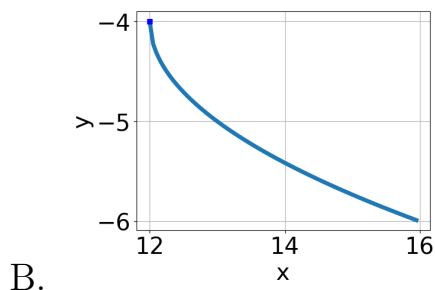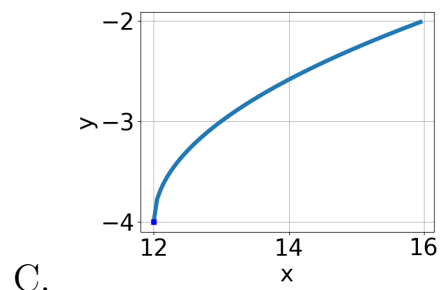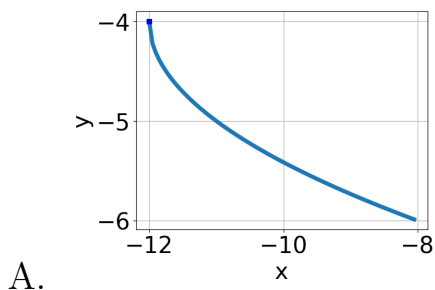C.

B.

D.

E. None of the above.

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

$$\sqrt{-7x + 5} - \sqrt{8x + 2} = 0$$

A. $x_1 \in [-0.3, -0.08]$ and $x_2 \in [-0.29, 1.71]$

B. $x_1 \in [0.1, 0.46]$ and $x_2 \in [-0.29, 1.71]$

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

D. $x \in [0.1, 0.46]$

E. $x \in [0.3, 0.57]$

6. Choose the graph of the equation below.

$$f(x) = \sqrt{x - 12} - 4$$

A.

C.

B.

D.

E. None of the above.

7. What is the domain of the function below?

$$f(x) = \sqrt[6]{-5x - 7}$$

A. $[a, \infty)$, where $a \in [-4.3, -0.9]$

B. $(-\infty, a]$, where $a \in [-1.13, -0.68]$

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

D. $(-\infty, a]$, where $a \in [-1.75, -1.32]$

E. $[a, \infty)$, where $a \in [-1.2, -0.6]$

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8. What is the domain of the function below?

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

A. $[a, \infty)$, where $a \in [-1.5, 1.9]$

B. $[a, \infty)$, where $a \in [0.7, 4]$

C. $(-\infty, a]$, where $a \in [-0.5, 1.5]$

D. $(-\infty, a]$, where $a \in [2, 8]$

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

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

$$\sqrt{-8x + 5} - \sqrt{-9x - 8} = 0$$

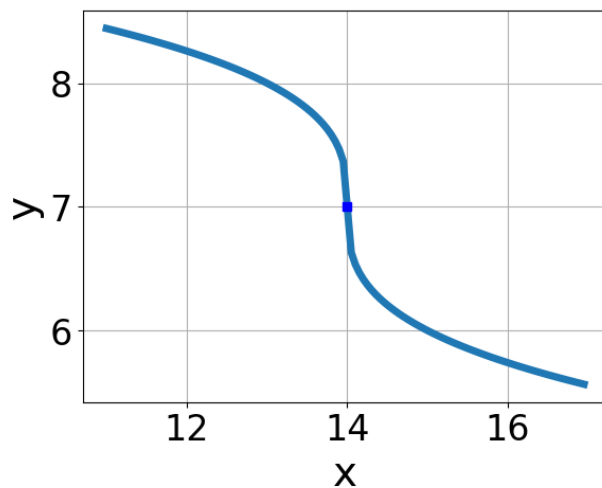A. $x_1 \in [-1.6, 0.5]$ and $x_2 \in [0.62, 6.62]$

B. $x_1 \in [-15.3, -11.9]$ and $x_2 \in [0.62, 6.62]$

C. $x \in [-15.3, -11.9]$

D. $x \in [1.7, 3.8]$

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

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10. 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