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

$$\sqrt{27x^2 - 72} - \sqrt{57x} = 0$$

   A. $x \in [2.8, 3.3]$

   B. $x_1 \in [-2.1, -0.5]$ and $x_2 \in [3, 4]$

   C. $x \in [-2.1, -0.5]$

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

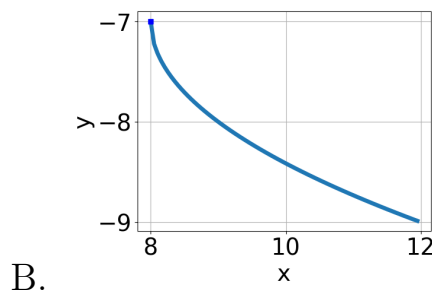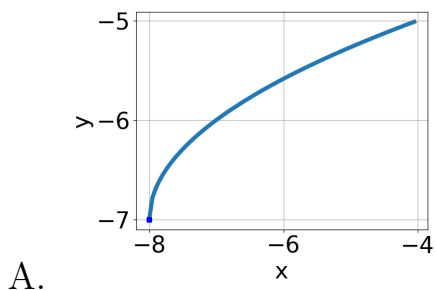   E. $x_1 \in [0.2, 1.7]$ and $x_2 \in [3, 4]$

2. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.
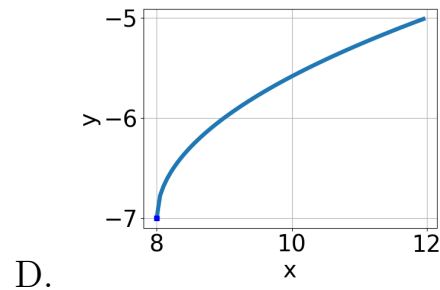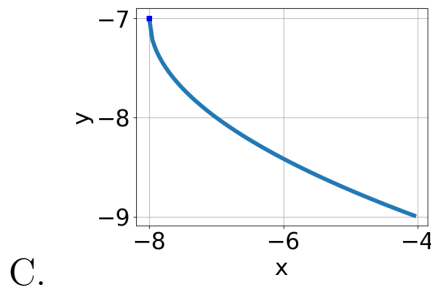
$$\sqrt{18x^2 - 18} - \sqrt{0x} = 0$$

   A. $x_1 \in [-0.2, 1.7]$ and $x_2 \in [0, 5]$

   B. $x \in [-0.2, 1.7]$

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

   D. $x \in [-1.4, 0.8]$

   E. $x_1 \in [-1.4, 0.8]$ and $x_2 \in [0, 5]$

3. Choose the graph of the equation below.
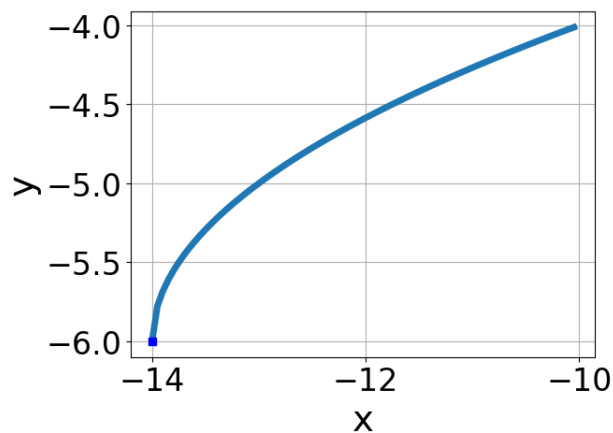
$$f(x) = \sqrt{x + 8} - 7$$

A.   B.

C.

D.

E. None of the above.

---

4. What is the domain of the function below?

$$f(x) = \sqrt[6]{7x + 8}$$

A. $[a, \infty)$, where $a \in [-1.45, -1.05]$

B. $(-\infty, a]$, where $a \in [-1.43, -0.96]$

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

D. $[a, \infty)$, where $a \in [-1.06, -0.66]$

E. $(-\infty, a]$, where $a \in [-1.01, -0.69]$

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5. Choose the equation of the function graphed below.

A. $f(x) = \sqrt{x - 14} - 6$
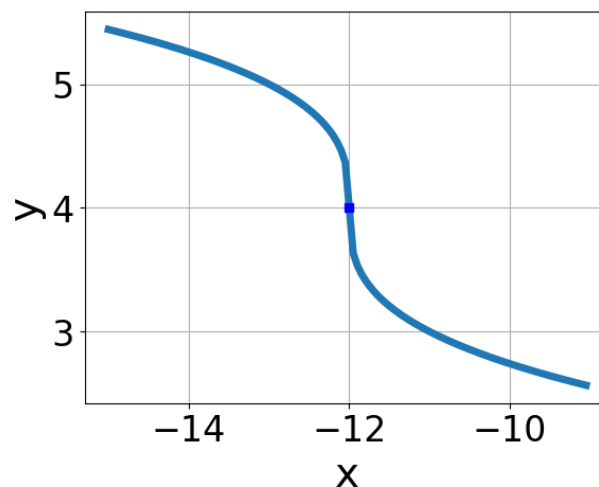
B. $f(x) = -\sqrt{x - 14} - 6$

C. $f(x) = \sqrt{x + 14} - 6$

D. $f(x) = -\sqrt{x + 14} - 6$

E. None of the above

6. What is the domain of the function below?

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

A. The domain is $[a, \infty)$, where $a \in [1.3, 3.4]$

B. The domain is $(-\infty, a]$, where $a \in [-1.58, 1.15]$

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

D. The domain is $(-\infty, a]$, where $a \in [1.77, 2.6]$

E. The domain is $[a, \infty)$, where $a \in [-1.3, 0.7]$
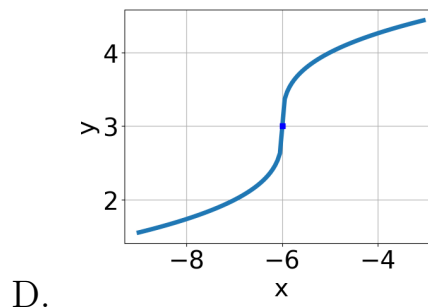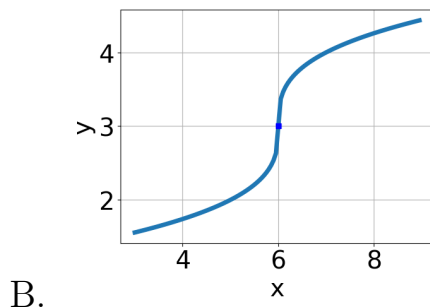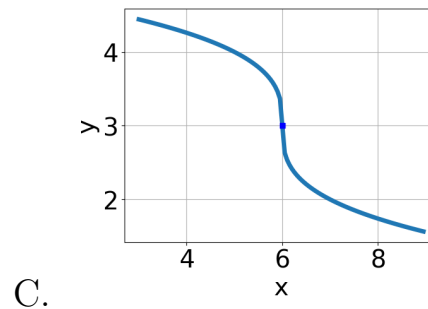
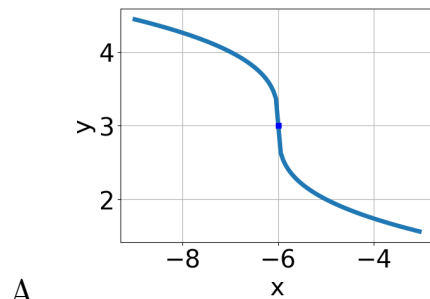7. Choose the equation of the function graphed below.

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

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

C. $f(x) = \sqrt{x + 12} + 4$

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

E. None of the above

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8. Choose the graph of the equation below.

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

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.

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

A. $x_1 \in [0.12, 0.44]$ and $x_2 \in [-0.12, 0.69]$

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

C. $x \in [-0.18, 0.07]$

D. $x_1 \in [0.12, 0.44]$ and $x_2 \in [0.68, 1.53]$

E. $x \in [0.45, 0.5]$

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

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

A. $x \in [-0.73, 0.25]$

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

C. $x_1 \in [-2.7, -1.21]$ and $x_2 \in [-0.2, 1.6]$

D. $x \in [-1.04, -0.4]$

E. $x_1 \in [-2.7, -1.21]$ and $x_2 \in [-0.76, 0.27]$