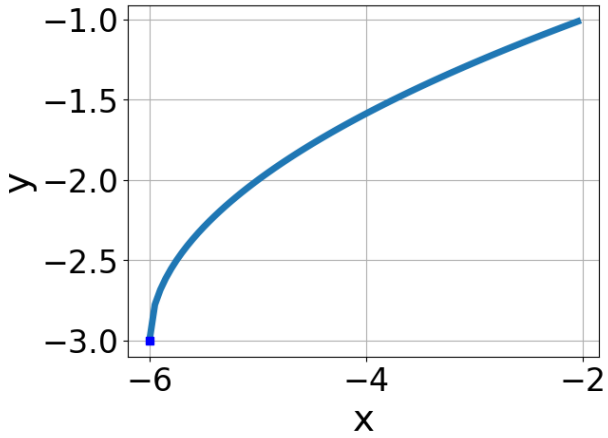
1. Choose the equation of the function graphed below.



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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2. What is the domain of the function below?

$$f(x) = \sqrt[8]{3x+9}$$

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

B. $[a, \infty)$, where $a \in [-3.8, -1.7]$

C. $(-\infty, a]$, where $a \in [-4, -1]$

D. $(-\infty, a]$, where $a \in [-1, 2]$

E. $[a, \infty)$, where $a \in [-2.5, 1.6]$

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

$$\sqrt{45x^2 + 54} - \sqrt{-99x} = 0$$

A. $x \in [-1.18, -0.86]$

B. $x_1 \in [-1.21, -1.09]$ and $x_2 \in [-3.6, -0.9]$

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

D. $x \in [-1.21, -1.09]$

E. $x_1 \in [0.97, 1.14]$ and $x_2 \in [-0.7, 2.3]$

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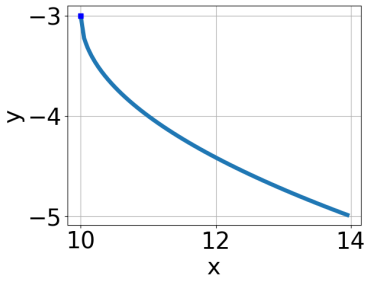
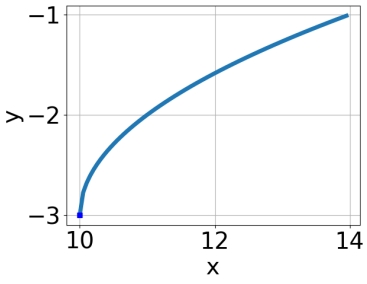
4. Choose the graph of the equation below.

$$f(x) = \sqrt{x - 10} - 3$$

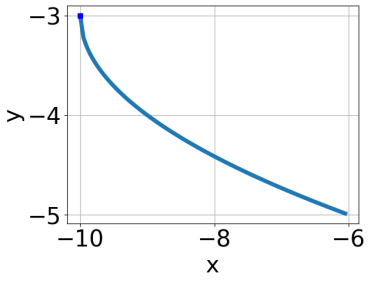
A.



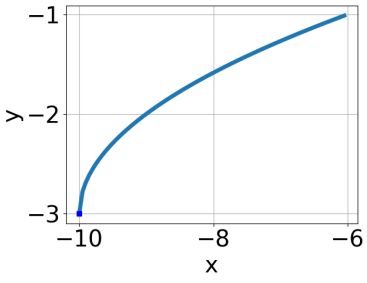
C.



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.

$$\sqrt{-9x + 5} - \sqrt{4x + 9} = 0$$

A. $x_1 \in [-0.97, -0.3]$ and $x_2 \in [-1, 1]$

B. $x \in [-0.97, -0.3]$

C. $x_1 \in [-3.04, -1.93]$ and $x_2 \in [-1, 1]$

D. $x \in [0.24, 2.5]$

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