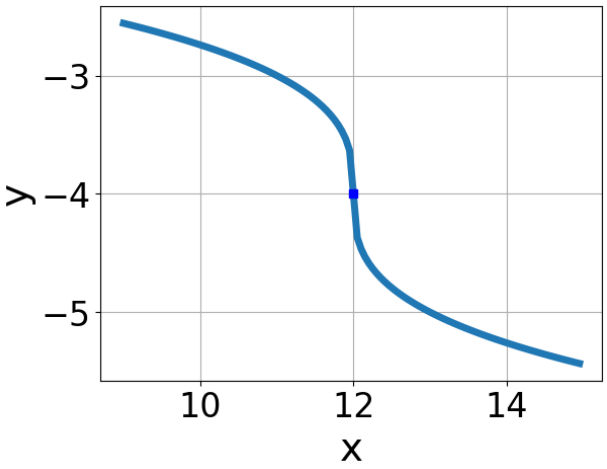
1. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt[3]{x-12} - 4$

B. $f(x) = -\sqrt[3]{x+12} - 4$

C. $f(x) = \sqrt[3]{x-12} - 4$

D. $f(x) = \sqrt[3]{x+12} - 4$

E. None of the above

---

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

$$\sqrt{-10x^2+20} - \sqrt{17x} = 0$$

A. $x \in [-1.2, 3.8]$

B. $x \in [-5.5, 0.5]$

C. $x_1 \in [-5.5, 0.5]$ and $x_2 \in [-2.2, 1.8]$

D. $x_1 \in [-1.2, 3.8]$ and $x_2 \in [2.5, 11.5]$

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

---

3. What is the domain of the function below?

$$f(x) = \sqrt[7]{-7x+9}$$

A. The domain is $(-\infty, a]$, where $a \in [1.2, 2.4]$

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

C. The domain is $[a, \infty)$, where $a \in [1.17, 1.3]$

D. The domain is $[a, \infty)$, where $a \in [0.28, 0.9]$

E. The domain is $(-\infty, a]$, where $a \in [0.7, 1.1]$

---

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

$$\sqrt{6x-5} - \sqrt{-6x-3} = 0$$

A. $x_1 \in [-0.29, 0.36]$ and $x_2 \in [-1.17, 1.83]$

B. $x \in [-0.29, 0.36]$

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

D. $x_1 \in [-0.89, -0.02]$ and $x_2 \in [-1.17, 1.83]$

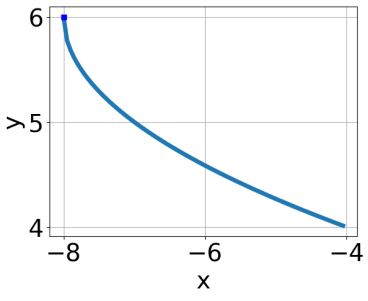
E. $x \in [0.44, 0.82]$

---

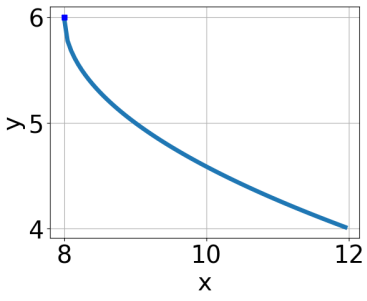
5. Choose the graph of the equation below.

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

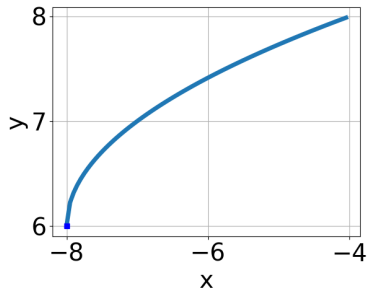
A.



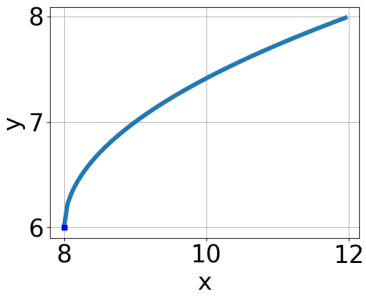
B.



C.



D.



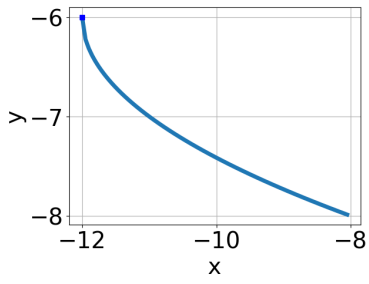
E. None of the above.

---

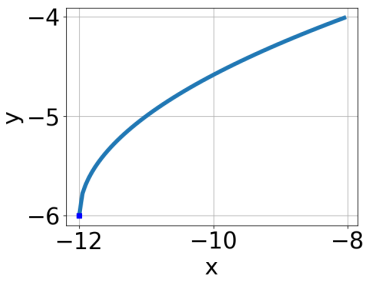
6. Choose the graph of the equation below.

$$f(x) = \sqrt{x - 12} - 6$$

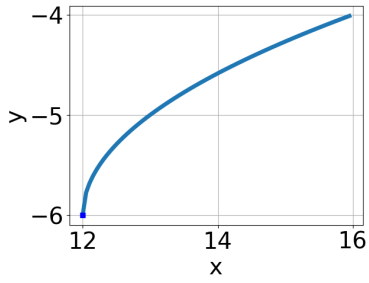
A.



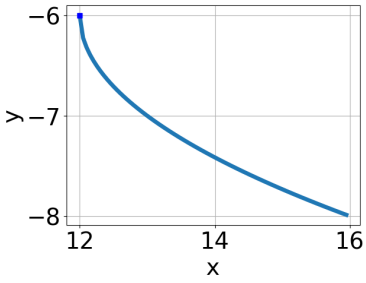
C.



B.



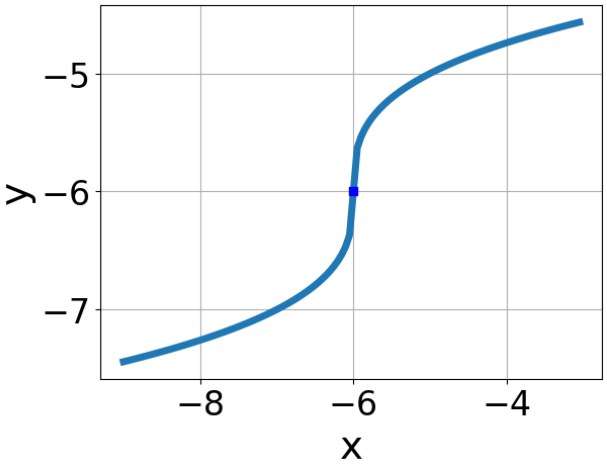
D.



E. None of the above.

---

7. Choose the equation of the function graphed below.



A. $f(x) = \sqrt[3]{x-6} - 6$

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

C. $f(x) = -\sqrt[3]{x-6} - 6$

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

E. None of the above

---

8. What is the domain of the function below?

$$f(x) = \sqrt[4]{-4x-9}$$

A. $[a, \infty)$, where $a \in [-0.7, 0.9]$

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

C. $(-\infty, a]$, where $a \in [-3, -2.1]$

D. $(-\infty, a]$, where $a \in [-1, 1.2]$

E. $[a, \infty)$, where $a \in [-2.8, -0.9]$

---

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

$$\sqrt{27x^2+63} - \sqrt{90x} = 0$$

A. $x \in [1.3, 3.1]$

B. $x \in [-1.3, 1.1]$

C. $x_1 \in [-1.3, 1.1]$ and $x_2 \in [1.33, 3.33]$

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

E. $x_1 \in [-4.8, 0.1]$ and $x_2 \in [-2, 0]$

---

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

$$\sqrt{-5x+8} - \sqrt{4x-6} = 0$$

A. $x_1 \in [1.54, 1.58]$ and $x_2 \in [0.6, 5.6]$

B. $x_1 \in [1.45, 1.5]$ and $x_2 \in [0.6, 5.6]$

C. $x \in [0.14, 0.33]$

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

E. $x \in [1.54, 1.58]$
