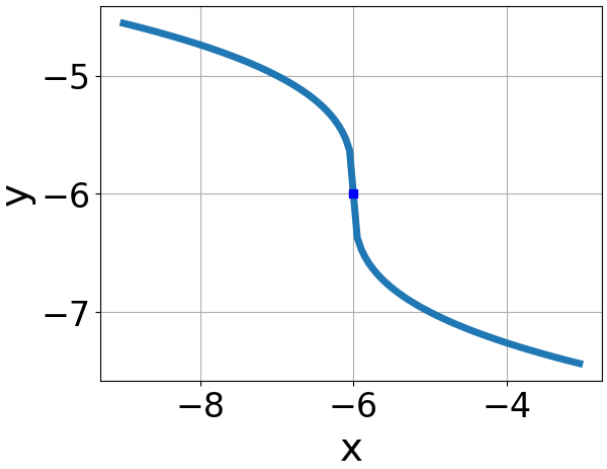
1. Choose the equation of the function graphed below.



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

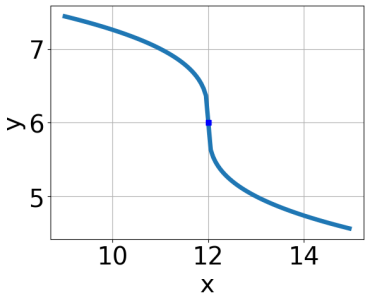
E. None of the above

---

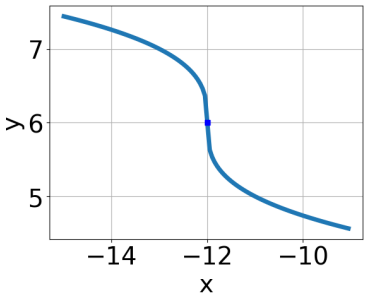
2. Choose the graph of the equation below.

$$f(x) = \sqrt[3]{x-12} + 6$$

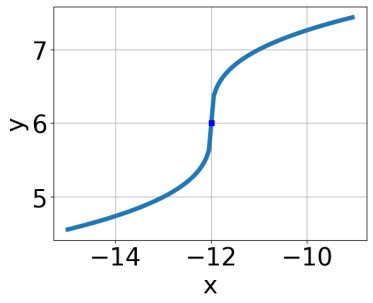
A.



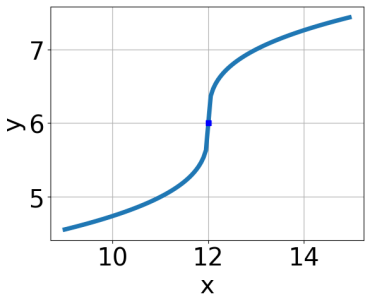
B.



C.



D.



E. None of the above.

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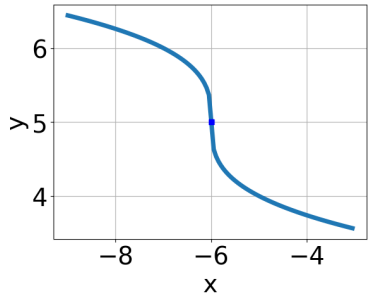
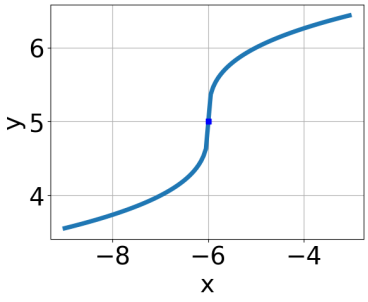
3. Choose the graph of the equation below.

$$f(x) = \sqrt[3]{x-6} + 5$$

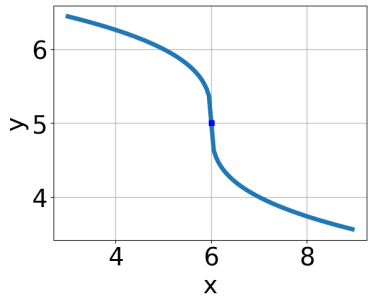
A.



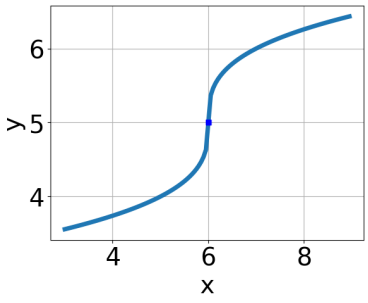
C.



B.



D.



E. None of the above.

---

4. What is the domain of the function below?

$$f(x) = \sqrt[4]{-8x-5}$$

A. $(-\infty, a]$, where $a \in [-3.8, -1.2]$

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

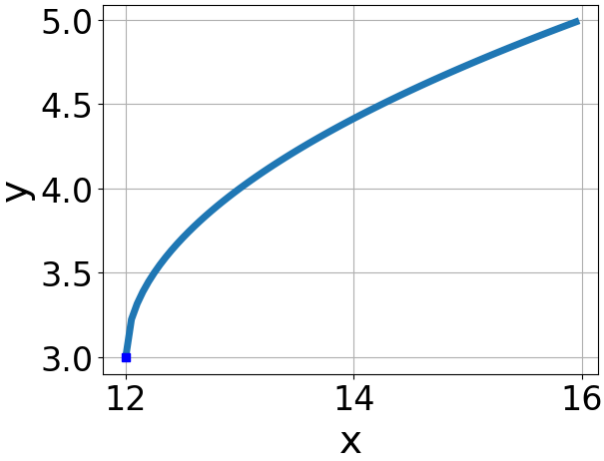
C. $[a, \infty)$, where $a \in [-1.07, -0.3]$

D. $[a, \infty)$, where $a \in [-2.42, -1.37]$

E. $(-\infty, a]$, where $a \in [-1.1, -0.4]$

---

5. Choose the equation of the function graphed below.



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

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

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

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

E. None of the above

---

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

$$\sqrt{-14x^2 - 54} - \sqrt{-75x} = 0$$

A. $x_1 \in [-2.1, -0.1]$ and $x_2 \in [-7.5, -2.5]$

B. $x_1 \in [-0.5, 1.9]$ and $x_2 \in [3.5, 7.5]$

C. $x \in [-0.5, 1.9]$

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

E. $x \in [1.8, 8.8]$

---

7. What is the domain of the function below?

$$f(x) = \sqrt[3]{-5x - 7}$$

A. The domain is $[a, \infty)$, where $a \in [-1.05, -0.1]$

B. The domain is $[a, \infty)$, where $a \in [-2.22, -1]$

C. The domain is $(-\infty, a]$, where $a \in [-1.33, 1.27]$

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

E. The domain is $(-\infty, a]$, where $a \in [-1.43, -1.06]$

---

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

$$\sqrt{-6x - 7} - \sqrt{-4x + 7} = 0$$

A. $x_1 \in [-7, -5]$ and $x_2 \in [-6.17, -0.17]$

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

C. $x_1 \in [-1.17, -0.17]$ and $x_2 \in [-0.25, 6.75]$

D. $x \in [-7, -5]$

E. $x \in [-0, 5]$

---

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

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

A. $x_1 \in [-0.91, -0.73]$ and $x_2 \in [0.32, 1.53]$

B. $x \in [-0.78, -0.65]$

C. $x \in [-0.03, 0.05]$

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

E. $x_1 \in [-0.91, -0.73]$ and $x_2 \in [-0.28, 0.2]$

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

$$\sqrt{54x^2 - 28} - \sqrt{-39x} = 0$$

A. $x \in [-6.17, -0.17]$

B. $x_1 \in [0.44, 1.44]$ and $x_2 \in [0.84, 1.26]$

C. $x \in [0.44, 1.44]$

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

E. $x_1 \in [-6.17, -0.17]$ and $x_2 \in [0.1, 0.54]$
