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

$$\sqrt{6x^2+18}-\sqrt{-31x}=0$$

A. $x \in [-6.6, -3]$

B. $x \in [-3.2, 0.3]$

C. $x_1 \in [0.2, 1.4]$ and $x_2 \in [4.5, 6.5]$

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

E. $x_1 \in [-6.6, -3]$ and $x_2 \in [-6.67, 1.33]$

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2. What is the domain of the function below?

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

A. $[a, \infty)$, where $a \in [-5.2, -1.1]$

B. $(-\infty, a]$, where $a \in [-7.67, -1.67]$

C. $(-\infty, a]$, where $a \in [-1.38, 4.62]$

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

E. $[a, \infty)$, where $a \in [-0.6, 1.6]$

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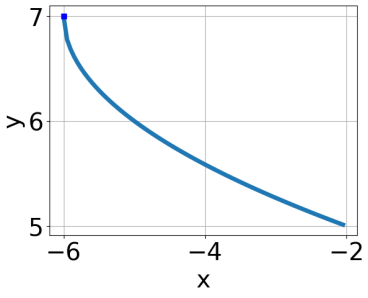
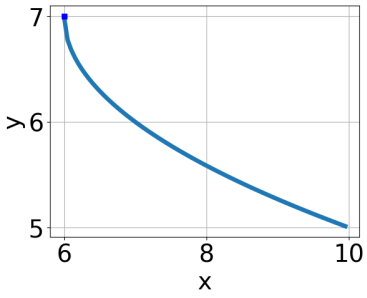
3. Choose the graph of the equation below.

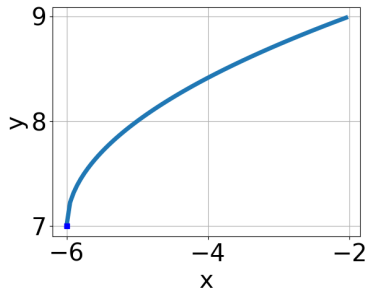
$$f(x)=-\sqrt{x+6}+7$$

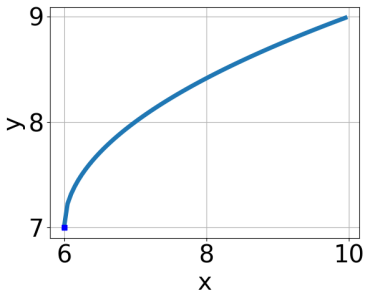
A.



B.



C.


D.


E. None of the above.

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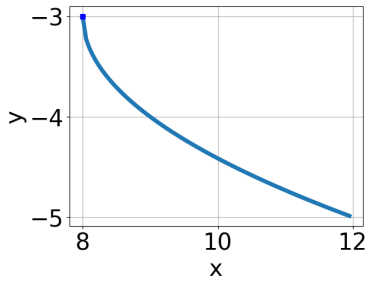
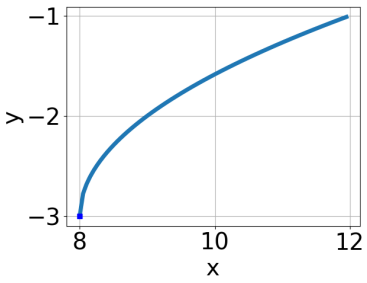
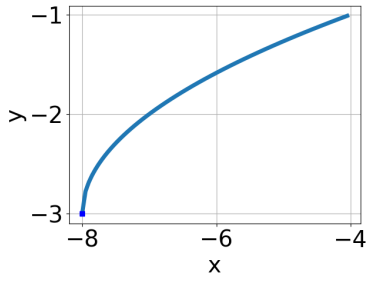
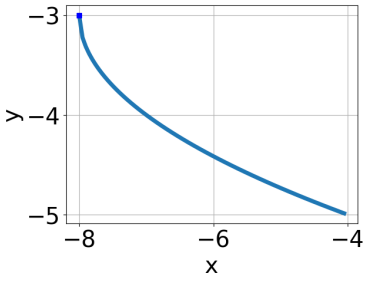
4. Choose the graph of the equation below.

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

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.

$$\sqrt{-32x^2 + 45} - \sqrt{-4x} = 0$$

A. $x \in [-1.24, -0.95]$

B. $x_1 \in [0.96, 1.17]$ and $x_2 \in [0.25, 6.25]$

C. $x \in [1.15, 1.5]$

D. $x_1 \in [-1.24, -0.95]$ and $x_2 \in [0.25, 6.25]$

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

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

$$\sqrt{-4x-3} - \sqrt{-9x+7} = 0$$

A. $x_1 \in [-0.76, -0.73]$ and $x_2 \in [1.16, 2.65]$

B. $x \in [2, 2.07]$

C. $x_1 \in [-0.76, -0.73]$ and $x_2 \in [0.67, 1.6]$

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

E. $x \in [-0.89, -0.77]$

---

7. What is the domain of the function below?

$$f(x) = \sqrt[8]{-9x+5}$$

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

B. $[a, \infty)$, where $a \in [1.7, 3.1]$

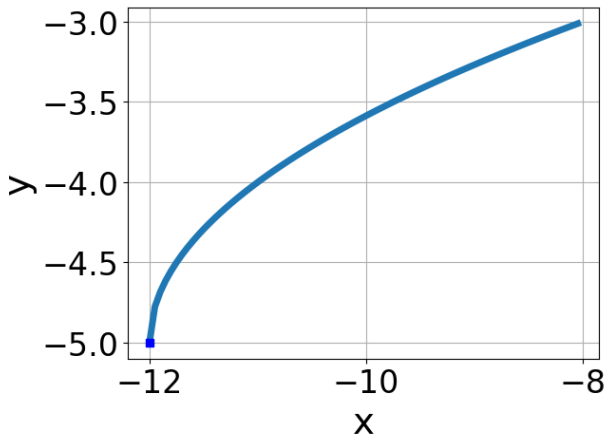
C. $(-\infty, a]$, where $a \in [-1.44, 1.56]$

D. $(-\infty, a]$, where $a \in [0.8, 4.8]$

E. $[a, \infty)$, where $a \in [-2, 0.8]$

---

8. Choose the equation of the function graphed below.



A. $f(x) = \sqrt[3]{x-12} - 5$

B. $f(x) = \sqrt[3]{x+12} - 5$

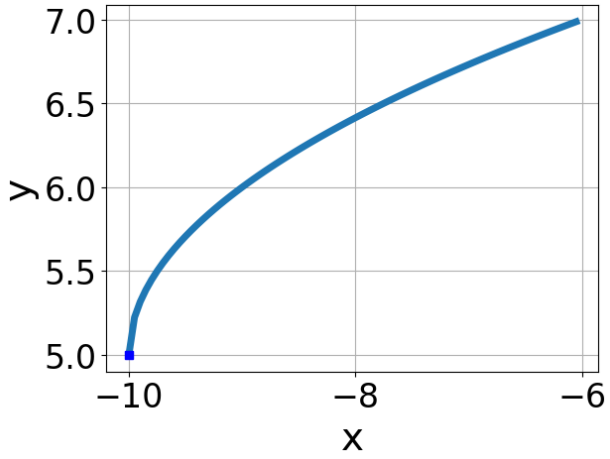
C. $f(x) = -\sqrt[3]{x-12} - 5$

D. $f(x) = -\sqrt[3]{x+12} - 5$

E. None of the above

---

9. Choose the equation of the function graphed below.



A. $f(x) = \sqrt[3]{x-10} + 5$

B. $f(x) = -\sqrt[3]{x-10} + 5$

C. $f(x) = -\sqrt[3]{x+10} + 5$

D. $f(x) = \sqrt[3]{x+10} + 5$

E. None of the above

---

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

$$\sqrt{-3x-8}-\sqrt{-9x-6}=0$$

A. $x \in [1.5, 4.2]$

B. $x_1 \in [-4.2, -0.4]$ and $x_2 \in [-0.67, 0.33]$

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

D. $x \in [-0.2, 1.4]$

E. $x_1 \in [-4.2, -0.4]$ and $x_2 \in [0.33, 1.33]$
