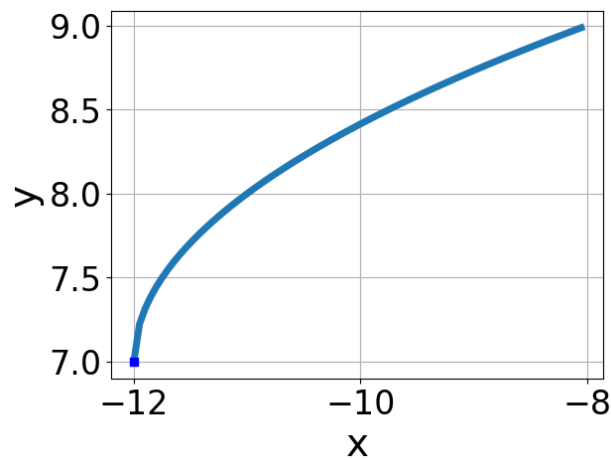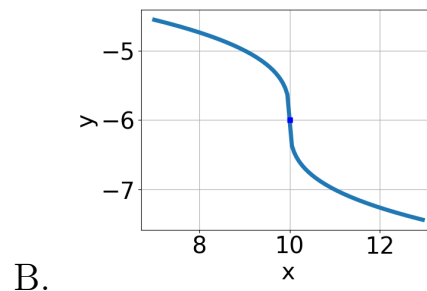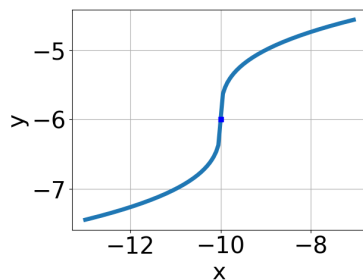1. Choose the equation of the function graphed below.
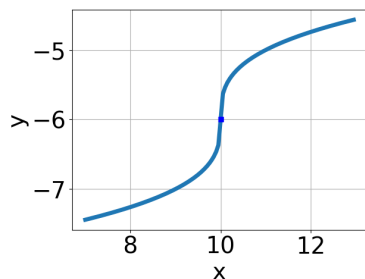

A. $f(x) = \sqrt{x + 12} - 6$

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

C. $f(x) = -\sqrt{x + 12} - 6$
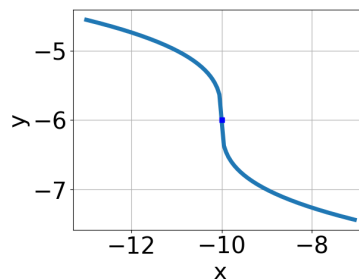
D. $f(x) = \sqrt{x - 12} - 6$

E. None of the above

2. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x - 10} - 6$$

A.

B.

C.

D.

E. None of the above.

3. What is the domain of the function below?

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

A. The domain is $(-\infty, a]$, where $a \in [-1, -0.54]$

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

C. The domain is $[a, \infty)$, where $a \in [-1.2, -0.77]$

D. The domain is $[a, \infty)$, where $a \in [-3.52, -1.11]$

E. The domain is $(-\infty, a]$, where $a \in [-1.34, -0.89]$

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

$$\sqrt{8x - 8} - \sqrt{9x - 4} = 0$$

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

B. $x \in [-13, -6]$

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

D. $x_1 \in [-5, 0]$ and $x_2 \in [-1, 4]$

E. $x_1 \in [-1, 3]$ and $x_2 \in [-1, 4]$

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

$$\sqrt{72x^2 + 6} - \sqrt{42x} = 0$$

A. $x \in [0.24, 0.32]$

B. $x_1 \in [0.24, 0.32]$ and $x_2 \in [-0.22, 0.46]$

C. $x \in [0.28, 0.35]$

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

E. $x_1 \in [-0.43, -0.2]$ and $x_2 \in [-0.51, 0.09]$