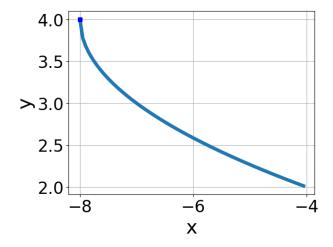
Progress Quiz 4

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

$$\sqrt{28x^2 + 14} - \sqrt{-42x} = 0$$

- A. $x \in [-0.55, -0.14]$
- B. $x \in [-1.08, -0.59]$
- C. $x_1 \in [-1.08, -0.59]$ and $x_2 \in [-1.8, 0.1]$
- D. All solutions lead to invalid or complex values in the equation.
- E. $x_1 \in [0.45, 0.56]$ and $x_2 \in [0, 2.2]$
- 2. Choose the equation of the function graphed below.



- A. $f(x) = \sqrt[3]{x+8} + 4$
- B. $f(x) = -\sqrt[3]{x-8} + 4$
- C. $f(x) = -\sqrt[3]{x+8} + 4$
- D. $f(x) = \sqrt[3]{x-8} + 4$
- E. None of the above
- 3. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{35x^2 + 21} - \sqrt{64x} = 0$$

6286-1986 Fall 2020

Progress Quiz 4

A.
$$x \in [0.8, 4.1]$$

B.
$$x_1 \in [-0.6, 0.9]$$
 and $x_2 \in [0.4, 4.4]$

C.
$$x_1 \in [-1.5, -0.2]$$
 and $x_2 \in [-4.43, 0.57]$

D.
$$x \in [-0.6, 0.9]$$

- E. All solutions lead to invalid or complex values in the equation.
- 4. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{9x+9} - \sqrt{5x-3} = 0$$

A.
$$x \in [-1.6, -1.16]$$

B.
$$x_1 \in [-4.22, -2.68]$$
 and $x_2 \in [-2, 0]$

C.
$$x_1 \in [-1.44, -0.97]$$
 and $x_2 \in [-0.4, 6.6]$

- D. All solutions lead to invalid or complex values in the equation.
- E. $x \in [-4.22, -2.68]$
- 5. What is the domain of the function below?

$$f(x) = \sqrt[3]{-7x - 4}$$

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

B. The domain is
$$(-\infty, a]$$
, where $a \in [-4, -1.4]$

C. The domain is
$$[a, \infty)$$
, where $a \in [-5, -1.3]$

D. The domain is
$$(-\infty, a]$$
, where $a \in [-1, 2.8]$

E. The domain is
$$[a, \infty)$$
, where $a \in [-1.3, 2.1]$

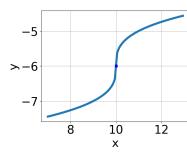
6. What is the domain of the function below?

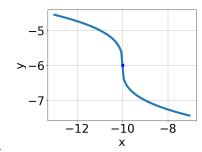
$$f(x) = \sqrt[3]{5x - 7}$$

6286-1986 Fall 2020

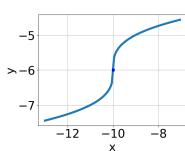
- A. The domain is $(-\infty, a]$, where $a \in [0.6, 1.1]$
- B. $(-\infty, \infty)$
- C. The domain is $(-\infty, a]$, where $a \in [0.9, 3.6]$
- D. The domain is $[a, \infty)$, where $a \in [0.05, 0.91]$
- E. The domain is $[a, \infty)$, where $a \in [1.04, 1.72]$
- 7. Choose the graph of the equation below.

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



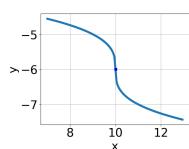


A.



C.

D.



В.

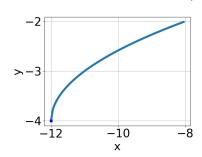
- E. None of the above.
- 8. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

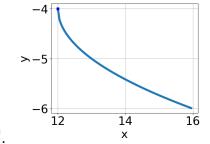
$$\sqrt{-2x - 5} - \sqrt{3x + 6} = 0$$

- A. $x_1 \in [-2.8, -2.21]$ and $x_2 \in [-2.18, -1.85]$
- B. $x \in [-0.13, 0.29]$
- C. $x_1 \in [-2.8, -2.21]$ and $x_2 \in [-2.38, -2.1]$

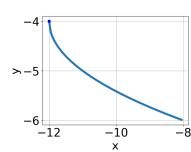
- D. $x \in [-2.39, -2.07]$
- E. All solutions lead to invalid or complex values in the equation.
- 9. Choose the graph of the equation below.

$$f(x) = \sqrt{x - 12} - 4$$



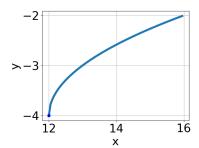






С.

D.



- В.
- E. None of the above.
- 10. Choose the equation of the function graphed below.

A.
$$f(x) = -\sqrt{x+12} - 7$$

B.
$$f(x) = \sqrt{x+12} - 7$$

C.
$$f(x) = \sqrt{x - 12} - 7$$

D.
$$f(x) = -\sqrt{x - 12} - 7$$

E. None of the above

6286-1986 Fall 2020