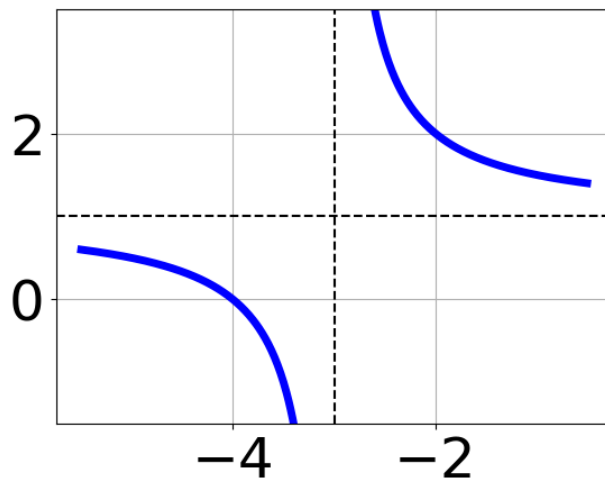


1. Choose the equation of the function graphed below.



- A. $f(x) = \frac{-1}{(x-3)^2} - 6$
- B. $f(x) = \frac{1}{(x+3)^2} - 6$
- C. $f(x) = \frac{-1}{x-3} - 6$
- D. $f(x) = \frac{1}{x+3} - 6$
- E. None of the above

-
2. Determine the domain of the function below.

$$f(x) = \frac{6}{15x^2 - 15}$$

- A. All Real numbers except $x = a$ and $x = b$, where $a \in [-3, 0]$ and $b \in [1, 5]$
- B. All Real numbers.
- C. All Real numbers except $x = a$, where $a \in [-28, -20]$
- D. All Real numbers except $x = a$, where $a \in [-3, 0]$
- E. All Real numbers except $x = a$ and $x = b$, where $a \in [-28, -20]$ and $b \in [9, 10]$

-
3. Solve the rational equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\frac{-6}{-5x - 9} + -8 = \frac{-9}{15x + 27}$$

- A. $x_1 \in [-1.88, -1.6]$ and $x_2 \in [-2.58, -0.57]$
 - B. $x \in [1.6, 2.33]$
 - C. $x \in [-1.57, 0.43]$
 - D. All solutions lead to invalid or complex values in the equation.
 - E. $x_1 \in [-1.59, -1.52]$ and $x_2 \in [1.02, 3.02]$
-

4. Determine the domain of the function below.

$$f(x) = \frac{3}{18x^2 + 18x - 36}$$

- A. All Real numbers except $x = a$ and $x = b$, where $a \in [-18.1, -16.8]$ and $b \in [33.8, 37.6]$
 - B. All Real numbers except $x = a$, where $a \in [-18.1, -16.8]$
 - C. All Real numbers.
 - D. All Real numbers except $x = a$ and $x = b$, where $a \in [-3.3, -1.6]$ and $b \in [0.2, 1.8]$
 - E. All Real numbers except $x = a$, where $a \in [-3.3, -1.6]$
-

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

$$\frac{20}{-45x + 15} + 1 = \frac{20}{-45x + 15}$$

- A. $x \in [0.33, 1.33]$
- B. All solutions lead to invalid or complex values in the equation.

- C. $x \in [-0.5, 0.2]$
 - D. $x_1 \in [-0.2, 0.9]$ and $x_2 \in [-1.67, 1.33]$
 - E. $x_1 \in [-0.5, 0.2]$ and $x_2 \in [-1.67, 1.33]$
-

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

$$\frac{7x}{-2x - 6} + \frac{-6x^2}{8x^2 + 32x + 24} = \frac{7}{-4x - 4}$$

- A. $x_1 \in [0.45, 1.22]$ and $x_2 \in [-2.32, 1]$
 - B. $x \in [-2.09, -1.04]$
 - C. All solutions lead to invalid or complex values in the equation.
 - D. $x_1 \in [0.45, 1.22]$ and $x_2 \in [-3.34, -2.32]$
 - E. $x \in [-1.21, -0.69]$
-

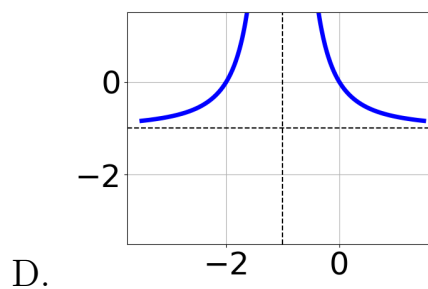
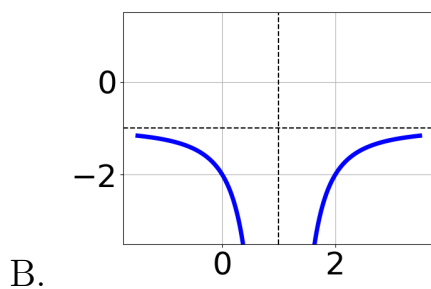
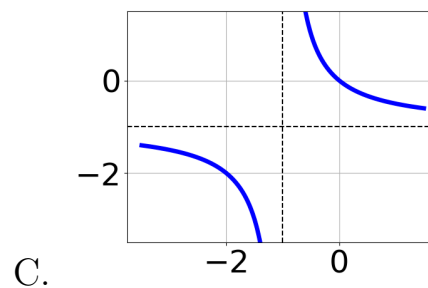
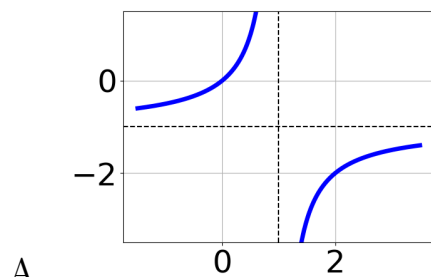
7. Solve the rational equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\frac{-6x}{-2x - 4} + \frac{-5x^2}{6x^2 - 24} = \frac{-5}{-3x + 6}$$

- A. $x_1 \in [-0.96, 0.54]$ and $x_2 \in [-3, 2]$
 - B. $x_1 \in [-0.96, 0.54]$ and $x_2 \in [-0.07, 4.93]$
 - C. $x \in [2.63, 4.13]$
 - D. All solutions lead to invalid or complex values in the equation.
 - E. $x \in [1.45, 2.86]$
-

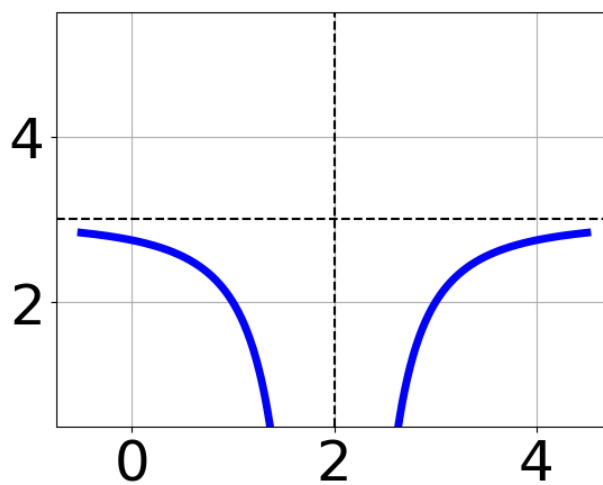
8. Choose the graph of the equation below.

$$f(x) = \frac{-1}{(x - 1)^2} - 1$$



E. None of the above.

9. Choose the equation of the function graphed below.



A. $f(x) = \frac{1}{(x+2)^2} + 1$

B. $f(x) = \frac{1}{x+2} + 1$

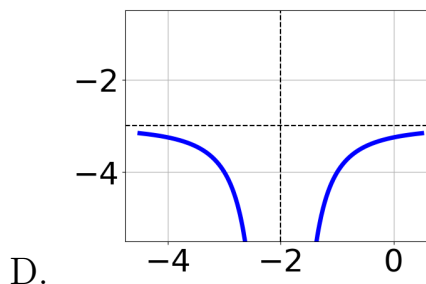
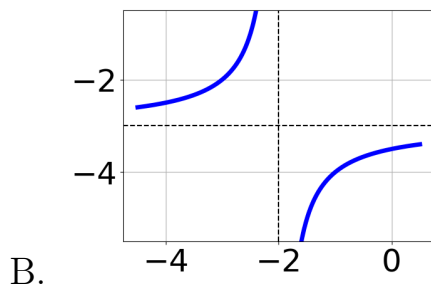
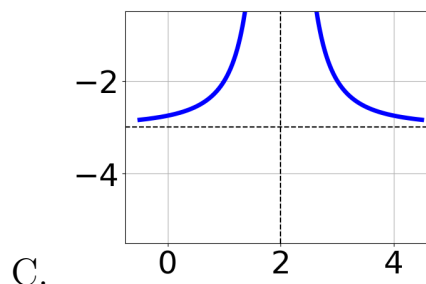
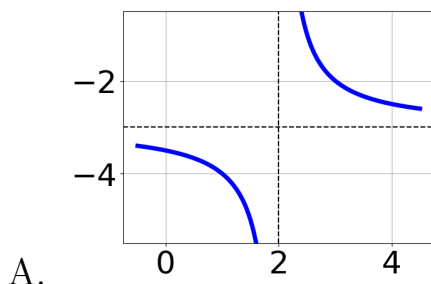
C. $f(x) = \frac{-1}{x-2} + 1$

D. $f(x) = \frac{-1}{(x-2)^2} + 1$

E. None of the above

10. Choose the graph of the equation below.

$$f(x) = \frac{-1}{(x+2)^2} + 3$$



E. None of the above.
