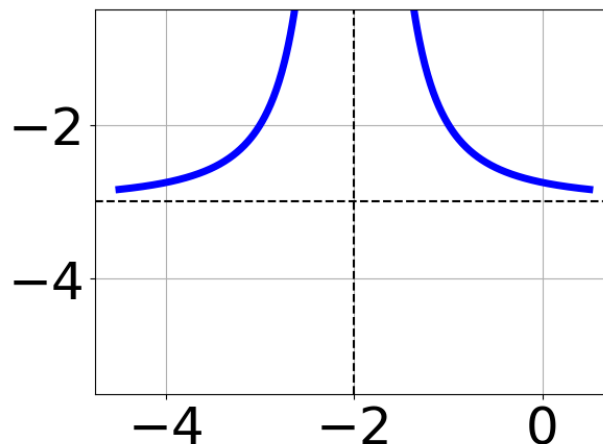


1. Determine the domain of the function below.

$$f(x) = \frac{4}{25x^2 - 36}$$

- A. All Real numbers.
 - B. All Real numbers except $x = a$ and $x = b$, where $a \in [-30, -29]$ and $b \in [28, 31]$
 - C. All Real numbers except $x = a$ and $x = b$, where $a \in [-2.2, -0.2]$ and $b \in [0.2, 3.2]$
 - D. All Real numbers except $x = a$, where $a \in [-2.2, -0.2]$
 - E. All Real numbers except $x = a$, where $a \in [-30, -29]$
-

2. Choose the equation of the function graphed below.



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

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

$$\frac{-4x}{-6x+5} + \frac{-6x^2}{-30x^2+x+20} = \frac{-2}{5x+4}$$

- A. All solutions lead to invalid or complex values in the equation.
B. $x \in [-1.41, -1.22]$
C. $x_1 \in [0.19, 0.87]$ and $x_2 \in [-0.9, 1.7]$
D. $x_1 \in [0.19, 0.87]$ and $x_2 \in [-4.7, -0.5]$
E. $x \in [-0.9, -0.56]$

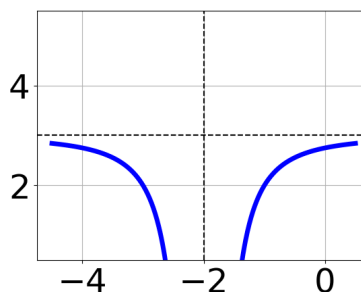
4. Solve the rational equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\frac{40}{20x-35} + 1 = \frac{40}{20x-35}$$

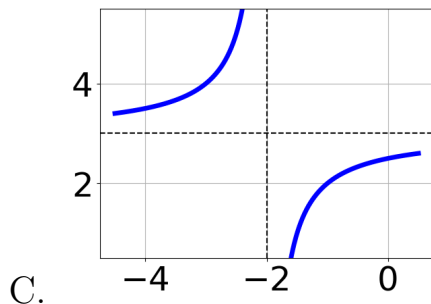
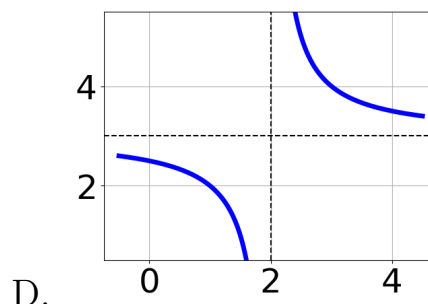
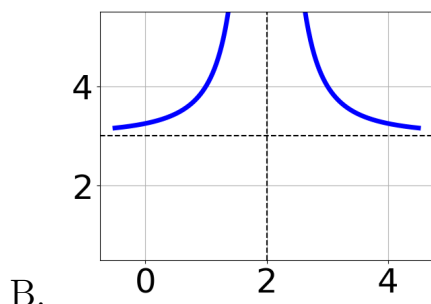
- A. $x \in [0.75, 4.75]$
B. $x_1 \in [0.75, 2.75]$ and $x_2 \in [0.75, 4.75]$
C. All solutions lead to invalid or complex values in the equation.
D. $x \in [-1.75, -0.75]$
E. $x_1 \in [-1.75, -0.75]$ and $x_2 \in [0.75, 4.75]$

5. Choose the graph of the equation below.

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



A.



E. None of the above.

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

$$\frac{-7}{5x-9} + -6 = \frac{-2}{-30x+54}$$

- A. All solutions lead to invalid or complex values in the equation.
 B. $x_1 \in [-3.04, 0.96]$ and $x_2 \in [1.47, 1.59]$
 C. $x \in [-3.04, 0.96]$
 D. $x \in [0.56, 3.56]$
 E. $x_1 \in [0.56, 2.56]$ and $x_2 \in [1.57, 1.92]$

7. Determine the domain of the function below.

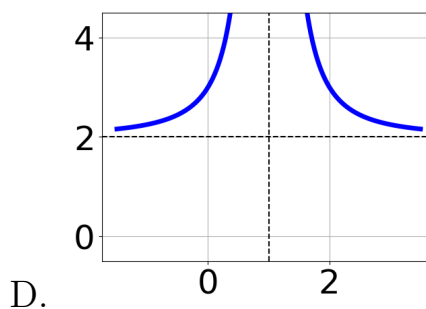
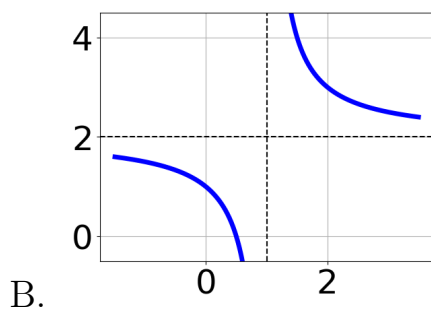
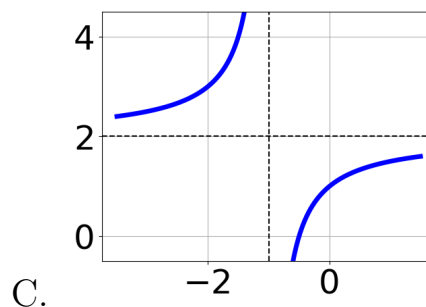
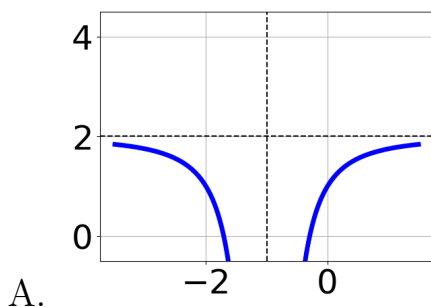
$$f(x) = \frac{3}{36x^2 + 48x + 15}$$

- A. All Real numbers except $x = a$ and $x = b$, where $a \in [-30.12, -29.31]$ and $b \in [-18.17, -17.5]$

- B. All Real numbers except $x = a$, where $a \in [-30.12, -29.31]$
- C. All Real numbers except $x = a$, where $a \in [-0.86, -0.54]$
- D. All Real numbers except $x = a$ and $x = b$, where $a \in [-0.86, -0.54]$ and $b \in [-0.73, 0.03]$
- E. All Real numbers.
-

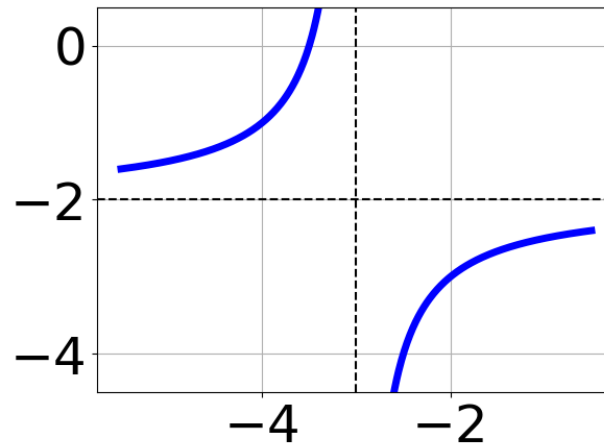
8. Choose the graph of the equation below.

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



E. None of the above.

9. Choose the equation of the function graphed below.



- A. $f(x) = \frac{1}{(x-3)^2} - 4$
- B. $f(x) = \frac{-1}{x+3} - 4$
- C. $f(x) = \frac{-1}{(x+3)^2} - 4$
- D. $f(x) = \frac{1}{x-3} - 4$
- E. None of the above

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

$$\frac{-2x}{2x-7} + \frac{-3x^2}{-10x^2+25x+35} = \frac{-3}{-5x-5}$$

- A. $x \in [-1.69, 0.55]$
- B. $x_1 \in [0.01, 1.5]$ and $x_2 \in [0.5, 4.5]$
- C. All solutions lead to invalid or complex values in the equation.
- D. $x \in [-3.37, -1.37]$
- E. $x_1 \in [0.01, 1.5]$ and $x_2 \in [-6.22, 2.78]$