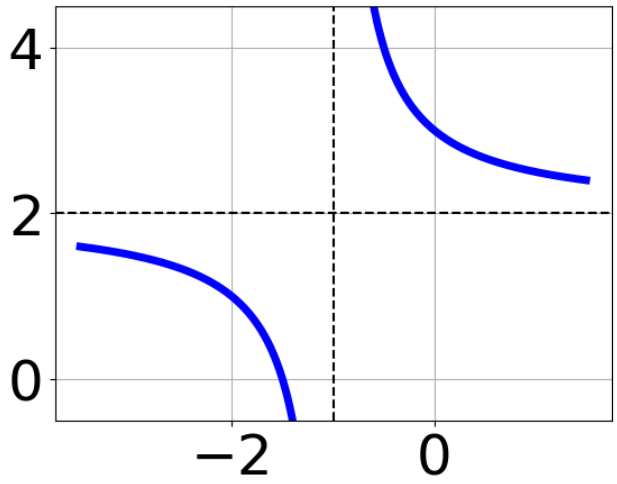
1. Choose the equation of the function graphed below.



A. $f(x) = \dfrac{-1}{x-1} + 2$

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

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

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

E. None of the above

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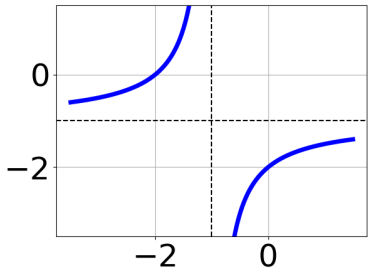
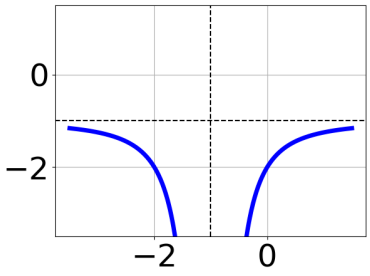
2. Choose the graph of the equation below.

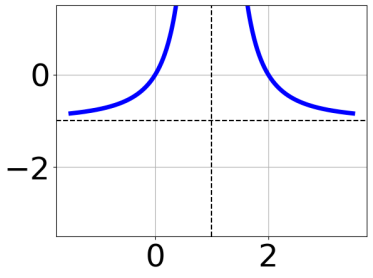
$$f(x) = \frac{-1}{(x+1)^2} - 1$$

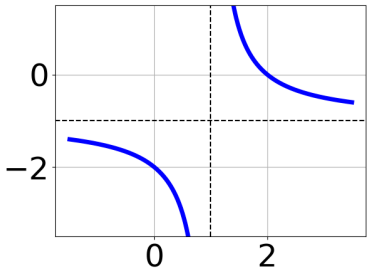
A.



B.



C. 

D. 

E. None of the above.

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

$$\frac{-7x}{-5x-2} + \frac{-3x^2}{10x^2+24x+8} = \frac{-4}{-2x-4}$$

A. $x \in [-1.93, -0.91]$

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

C. $x_1 \in [0.1, 3.44]$ and $x_2 \in [-1.66, -1.12]$

D. $x_1 \in [0.1, 3.44]$ and $x_2 \in [-0.46, -0.07]$

E. $x \in [-2.7, -1.86]$

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4. Determine the domain of the function below.

$$f(x) = \frac{4}{30x^2+54x+24}$$

A. All Real numbers except $x = a$ and $x = b$, where $a \in [-36.56, -35.81]$ and b $[-20.38, -19.72]$

B. All Real numbers except $x = a$ and $x = b$, where $a \in [-1.21, -0.9]$ and $b \in [-0.89, -0.45]$

C. All Real numbers except $x = a$, where $a \in [-1.21, -0.9]$

D. All Real numbers except $x = a$, where $a \in [-36.56, -35.81]$

E. All Real numbers.

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

$$\frac{9}{-2x+6} + 5 = \frac{6}{18x - 54}$$

A. $x \in [3.97, 4.97]$

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

C. $x_1 \in [-3, -1.7]$ and $x_2 \in [2, 6]$

D. $x \in [-3, -1.7]$

E. $x_1 \in [3.1, 3.7]$ and $x_2 \in [2, 6]$
