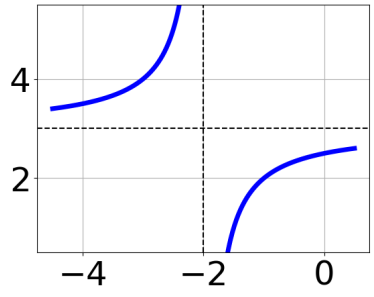
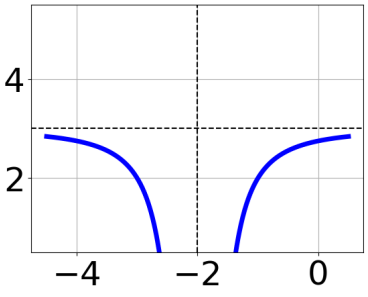
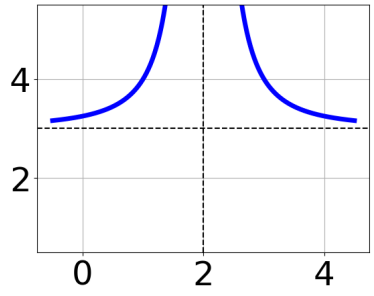
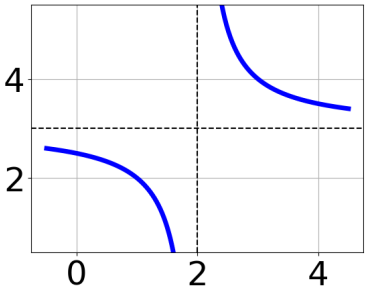
1. Choose the graph of the equation below.

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

A. 

C. 

B. 

D. 

E. None of the above.

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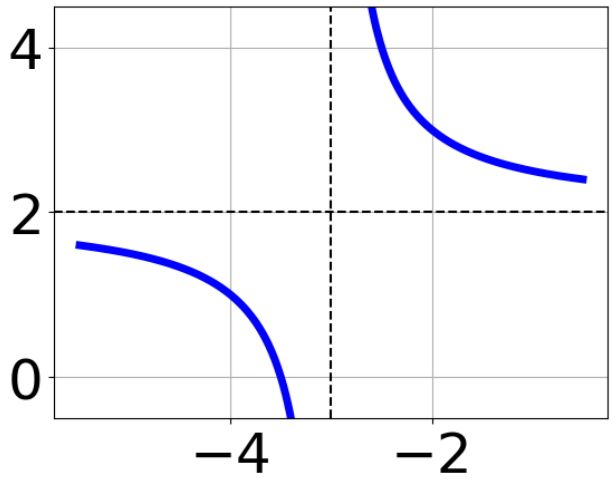
2. Choose the equation of the function graphed below.



A. $f(x) = \dfrac{-1}{x+3} + 5$

B. $f(x) = \dfrac{1}{(x-3)^2} + 5$

C. $f(x) = \dfrac{1}{x-3} + 5$

D. $f(x) = \dfrac{-1}{(x+3)^2} + 5$

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.

$$\frac{3x}{7x-2} + \frac{-6x^2}{-35x^2-4x+4} = \frac{-7}{-5x-2}$$

A. $x \in [-0.58, -0.14]$

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

C. $x \in [0.61, 2.44]$

D. $x_1 \in [0.07, 0.98]$ and $x_2 \in [0.72, 3.88]$

E. $x_1 \in [0.07, 0.98]$ and $x_2 \in [-0.19, 0.45]$

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

$$\frac{-56}{-56x-72} + 1 = \frac{-56}{-56x-72}$$

A. $x \in [-1.29, 0.71]$

B. $x \in [-1, 2]$

C. $x_1 \in [-3, -1]$ and $x_2 \in [-1, 2]$

D. $x_1 \in [-3, -1]$ and $x_2 \in [-2, 0]$

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

5. Determine the domain of the function below.

$$f(x) = \frac{3}{25x^2 + 5x - 12}$$

A. All Real numbers except $x = a$, where $a \in [-1.6, -0.4]$

B. All Real numbers except $x = a$ and $x = b$, where $a \in [-1.6, -0.4]$ and $b \in [-0.2, 1.9]$

C. All Real numbers.

D. All Real numbers except $x = a$, where $a \in [-21.3, -19.5]$

E. All Real numbers except $x = a$ and $x = b$, where $a \in [-21.3, -19.5]$ and $b \in [14.1, 16.8]$