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

$$\frac{8}{-6x-7} - 3 = \frac{8}{12x+14}$$

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

B. $x_1 \in [-3, 0]$ and $x_2 \in [-0.9, 2.3]$

C. $x \in [-1.83, -0.83]$

D. $x_1 \in [-3, 0]$ and $x_2 \in [-1.5, 0.1]$

E. $x \in [0, 2]$

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32. Determine the domain of the function below.

$$f(x) = \frac{5}{16x^2 + 40x + 24}$$

A. All Real numbers except $x = a$, where $a \in [-24.85, -22.71]$

B. All Real numbers except $x = a$, where $a \in [-1.76, -1.14]$

C. All Real numbers except $x = a$ and $x = b$, where $a \in [-24.85, -22.71]$ and $b \in [-16.2, -15.46]$

D. All Real numbers.

E. All Real numbers except $x = a$ and $x = b$, where $a \in [-1.76, -1.14]$ and $b \in [-1.3, -0.72]$

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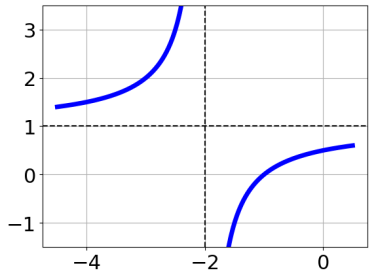
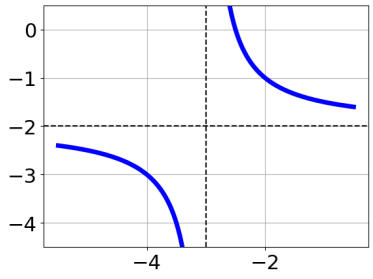
33. Choose the graph of the equation below.

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

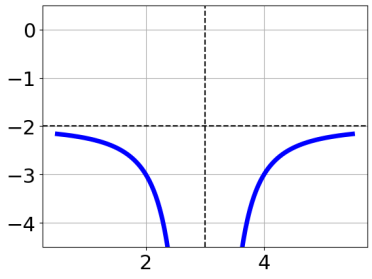
A.



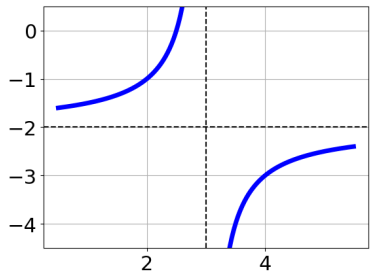
C.



B.



D.



E. None of the above.

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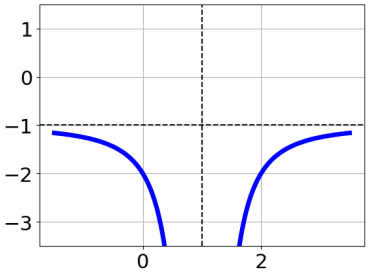
34. Choose the equation of the function graphed below.



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

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

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

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

E. None of the above

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

$$\frac{3x}{-4x-7} + \frac{-2x^2}{12x^2+33x+21} = \frac{6}{-3x-3}$$

A. $x \in [-1.2, -0.86]$

B. $x_1 \in [2.74, 2.77]$ and $x_2 \in [-1.91, -1.67]$

C. $x \in [-1.45, -1.24]$

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

E. $x_1 \in [2.74, 2.77]$ and $x_2 \in [-1.44, -0.82]$
