

36. Which of the following intervals describes the Range of the function below?

$$f(x) = \log_2(x + 1) - 4$$

- A. $[a, \infty), a \in [-1.73, -0.33]$
 - B. $[a, \infty), a \in [0.59, 1.31]$
 - C. $(-\infty, a), a \in [-4.94, -3.09]$
 - D. $(-\infty, a), a \in [3.02, 5.04]$
 - E. $(-\infty, \infty)$
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37. Solve the equation for x and choose the interval that contains the solution (if it exists).

$$4^{-3x+2} = \left(\frac{1}{9}\right)^{3x-5}$$

- A. $x \in [3.1, 3.7]$
 - B. $x \in [-1.5, -0.2]$
 - C. $x \in [-1.2, 1.7]$
 - D. $x \in [-3.3, -1.7]$
 - E. There is no Real solution to the equation.
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38. Solve the equation for x and choose the interval that contains x (if it exists).

$$21 = \sqrt[6]{\frac{10}{e^{8x}}}$$

- A. $x \in [-0.7, 0.4]$
 - B. $x \in [-16.7, -15.6]$
 - C. $x \in [1.3, 2.7]$
 - D. There is no Real solution to the equation.
 - E. None of the above.
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39. Solve the equation for x and choose the interval that contains the solution (if it exists).

$$\log_4(-2x + 8) + 4 = 3$$

- A. $x \in [-4.77, -4.32]$
 - B. $x \in [3.57, 4.18]$
 - C. $x \in [2.78, 3.71]$
 - D. $x \in [-28.74, -27.97]$
 - E. There is no Real solution to the equation.
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40. Which of the following intervals describes the Domain of the function below?

$$f(x) = e^{x-2} - 9$$

- A. $(-\infty, a], a \in [-15, -3]$
 - B. $(-\infty, a), a \in [-15, -3]$
 - C. $[a, \infty), a \in [8, 13]$
 - D. $(a, \infty), a \in [8, 13]$
 - E. $(-\infty, \infty)$
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