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

$$f(x) = -\log_2(x + 3) + 5$$

- A. $(a, \infty), a \in [-4.22, -1.46]$
 - B. $[a, \infty), a \in [-5.89, -4.56]$
 - C. $(-\infty, a), a \in [2.14, 3.83]$
 - D. $(-\infty, a], a \in [4.48, 6.12]$
 - E. $(-\infty, \infty)$
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37. Which of the following intervals describes the Domain of the function below?

$$f(x) = -e^{x-5} - 3$$

- A. $(-\infty, a), a \in [-6, -2]$
 - B. $(a, \infty), a \in [0, 4]$
 - C. $(-\infty, a], a \in [-6, -2]$
 - D. $[a, \infty), a \in [0, 4]$
 - E. $(-\infty, \infty)$
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38. Solve the equation for x and choose the interval that contains the solution (if it exists).

$$\log_5(-4x + 7) + 4 = 3$$

- A. $x \in [1.91, 2.49]$
 - B. $x \in [-29.73, -29.05]$
 - C. $x \in [-2.02, -0.88]$
 - D. $x \in [0.79, 1.76]$
 - E. There is no Real solution to the equation.
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39. Solve the equation for x and choose the interval that contains x (if it exists).

$$7 = \ln \sqrt{\frac{25}{e^x}}$$

- A. $x \in [-6, -5]$
- B. $x \in [2, 8]$
- C. $x \in [-14, -9]$
- D. $x \in [10, 13]$
- E. There is no solution to the equation.

40. Solve the equation for x and choose the interval that contains the solution (if it exists).

$$5^{3x+3} = 16^{2x+5}$$

- A. $x \in [0.2, 1.28]$
 - B. $x \in [-2.5, -1.56]$
 - C. $x \in [-0.46, 0.43]$
 - D. $x \in [-12.79, -12.25]$
 - E. There is no Real solution to the equation.
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