61. Determine whether the function below is 1-1.

$$f(x) = 24x^2 - 26x - 110$$

A. No, because the range of the function is not $(-\infty, \infty)$.

B. No, because there is an x-value that goes to 2 different y-values.

C. No, because there is a y-value that goes to 2 different x-values.

D. No, because the domain of the function is not $(-\infty, \infty)$.

E. Yes, the function is 1-1.

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62. Find the inverse of the function below. Then, evaluate the inverse at $x = 8$ and choose the interval that $f^{-1}(8)$ belongs to.

$$f(x) = e^{x+5} - 4$$

A. $f^{-1}(8) \in [7.24, 7.7]$

B. $f^{-1}(8) \in [-2.59, -2.17]$

C. $f^{-1}(8) \in [-1.47, -1.36]$

D. $f^{-1}(8) \in [-3.16, -2.79]$

E. $f^{-1}(8) \in [-2.81, -2.57]$

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63. Multiply the following functions, then choose the domain of the resulting function from the list below.

$$f(x) = \frac{1}{4x + 19} \text{ and } g(x) = \frac{5}{3x - 13}$$

A. The domain is all Real numbers greater than or equal to $x = a,$ where $a \in [-9, 2]$

B. The domain is all Real numbers less than or equal to $x = a,$ where $a \in [-5, 5]$

C. The domain is all Real numbers except $x = a,$ where $a \in [3, 6]$

D. The domain is all Real numbers except $x = a$ and $x = b,$ where $a \in [-8, -3]$ and $b \in [3, 12]$

E. The domain is all Real numbers.

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64. Choose the interval below that f composed with g at $x = -1$ is in.

$$f(x) = x^3 - 2x^2 - 3x - 2 \text{ and } g(x) = 3x^3 + 3x^2 + x$$

A. $(f \circ g)(-1) \in [-15.1, -13]$

B. $(f \circ g)(-1) \in [-9.5, -4.2]$

C. $(f \circ g)(-1) \in [-4.3, -0.7]$

D. $(f \circ g)(-1) \in [-22.4, -15.3]$

E. It is not possible to compose the two functions.

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65. Find the inverse of the function below (if it exists). Then, evaluate the inverse at $x = 14$ and choose the interval the $f^{-1}(14)$ belongs to.

$$f(x) = \sqrt[3]{5x - 3}$$

A. $f^{-1}(14) \in [549.26, 550.66]$

B. $f^{-1}(14) \in [547.94, 549.37]$

C. $f^{-1}(14) \in [-549.05, -546.33]$

D. $f^{-1}(14) \in [-549.52, -548.91]$

E. The function is not invertible for all Real numbers.