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

$$\log_2(-2x+6)+4=2$$

A. $x \in [-2, 1.1]$

B. $x \in [2.1, 4.2]$

C. $x \in [-2, 1.1]$

D. $x \in [-9.2, -4.7]$

E. There is no Real solution to the equation.

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

$$24=\sqrt[6]{\frac{7}{e^{3x}}}$$

A. $x \in [-7.71, -3.71]$

B. $x \in [-49.65, -47.65]$

C. $x \in [-4.47, -0.47]$

D. There is no Real solution to the equation.

E. None of the above.

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

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

A. $(-\infty, a), a \in [-4, 0]$

B. $(-\infty, a], a \in [-4, 0]$

C. $(a, \infty), a \in [0, 6]$

D. $[a, \infty), a \in [0, 6]$

E. $(-\infty, \infty)$

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

$$f(x) = -e^{x+4} + 8$$

A. $(-\infty, a], a \in [7, 9]$

B. $(-\infty, a), a \in [7, 9]$

C. $(a, \infty), a \in [-10, -4]$

D. $[a, \infty), a \in [-10, -4]$

E. $(-\infty, \infty)$

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

$$f(x) = \log_2(x - 4) + 6$$

A. $(-\infty, a), a \in [-6.73, -5.86]$

B. $[a, \infty), a \in [-5.19, -2.95]$

C. $(-\infty, a), a \in [5.52, 7.4]$

D. $[a, \infty), a \in [3.35, 4.8]$

E. $(-\infty, \infty)$

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

$$9 = \ln \sqrt[6]{\frac{12}{e^{5x}}}$$

A. $x \in [-3.13, -3.09]$

B. $x \in [10.28, 10.33]$

C. $x \in [-3.15, -3.13]$

D. There is no Real solution to the equation.

E. None of the above.

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

$$f(x) = \log_2(x - 7) - 8$$

A. $[a, \infty), a \in [6.18, 7.17]$

B. $(-\infty, a), a \in [7.63, 8.65]$

C. $[a, \infty), a \in [-7.88, -5.08]$

D. $(-\infty, a), a \in [-9.22, -7.34]$

E. $(-\infty, \infty)$

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

$$4^{2x-4} = \left(\frac{1}{25}\right)^{4x+5}$$

A. $x \in [-3, -0.4]$

B. $x \in [3.1, 6.3]$

C. $x \in [-0.3, 1.9]$

D. $x \in [-6.2, -3.1]$

E. There is no Real solution to the equation.

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

$$2^{-3x+3} = \left(\frac{1}{25}\right)^{-4x-5}$$

A. $x \in [-0.8, 1.5]$

B. $x \in [-10, -6.6]$

C. $x \in [13.6, 14.7]$

D. $x \in [-2.4, -0.5]$

E. There is no Real solution to the equation.

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

$$\log_5(-2x+5)+5=2$$

A. $x \in [120, 126]$

B. $x \in [-0.5, 5.5]$

C. $x \in [116, 122]$

D. $x \in [-12, -9]$

E. There is no Real solution to the equation.