Unit 04-03 Quiz

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. (Review) Which would be a correct next step in solving the following equation for \( x \)?

\[
3x - 2(x + 3) = x + 5
\]

a. \[
\frac{3x - 2(x + 3)}{x} = x + 5
\]
b. \[
3x - 2(x + 3) = x + 5
\]

\( x(x + 3) = x + 5 \)
c. \[
\frac{3x - 2(x + 3)}{4x - 2(x + 3)} = \frac{5}{x + 5}
\]
d. \[
3x - 2(x + 3) = x + 5
\]

____ 2. Solve the following equation for \( x \)

\[
3^x - 10 = 71
\]

a. \( x = 1 \)
b. \( x = 2 \)
c. \( x = 4 \)
d. \( x = 8 \)

____ 3. Which is the only equation below that has a different solution than the rest?

a. \( 2^x = 32 \)
b. \( 2^x + 2 = 66 \)
c. \( 4^{x - 2} = 64 \)
d. \( 3^x - 150 = 93 \)

____ 4. Solve the following equation for \( x \)

\[
5^x - 3 \leq 22
\]

a. 

b. 

\( \approx 3.8 \)
c. 

\( 5 \)
d. 

\( 5 \)
5. Which is the only inequality below has a solution that could be represented by the following graph?

- a. \(7 \geq 3x + 1\)
- b. \(3^x - 7 \leq 20\)
- c. \(4^x \geq 16\)
- d. \(2^x - 3 \geq 5\)

6. Solve the following by FACTORING and using the ZERO PRODUCT PROPERTY.
\[x^2 + 9x - 36 = 0\]
- a. \(x = -12, 3\)
- b. \(x = -9, 4\)
- c. \(x = 9, -4\)
- d. \(x = 12, -3\)

7. Find the solutions of the following quadratic:
\[2x^2 + 10x = 12\]
- a. \(x = \frac{1}{6}, -2\)
- b. \(x = -6, 1\)
- c. \(x = -3, -2\)
- d. \(x = \frac{1}{2}, -6\)