EXAM 1/CHAPTER 1-2
80 POINTS POSSIBLE NAME_____

COEFFICIENTS SHOULD BE INTEGERS OR SIMPLIFIED IMPROPER FRACTIONS
SHOW ALL WORK IN ORDER TO EARN FULL CREDIT
NO DECIMALS UNLESS INDICATED IN THE PROBLEM
BOX YOUR FINAL ANSWER

1. (1 POINT) Determine if -1 is a solution to the equation $6x+12=18$.

   Circle One: YES NO

2. (20 POINTS) Perform the indicated operations and simplify. Each part is worth 5 points.

   a. $\dfrac{-8^2}{3^3-(21\div 7)}$

   c. $\dfrac{7}{12}-\left(-\dfrac{5}{8}\right)$

   b. $\dfrac{15}{16}\div\left(-\dfrac{4}{3}\right)$

   d. $\left(9\dfrac{1}{5}\right)\left(1\dfrac{9}{46}\right)$

3. (6 POINTS) Translate the English statements into expressions or equations. Each part is worth 3 points.

   a. The difference of a number and five increased by eleven.

   b. The quotient of twice a number and 3 is fifteen.

4. (10 POINTS) Each part is worth 5 points. Simplify the given algebraic expressions.

   a. $1-2(2x-6)-\left[-7(x-10)\right]$

   b. (Decimal is okay)
   $0.2(0.1x-0.8)-0.18x$

5. (6 POINTS) A car rental agency charges $200 per week plus $0.25 per mile. How many miles can you travel in one week for $550? Show all steps—no trial and error. If needed, you may round to the nearest dollar.

6. (6 POINTS) One angle of a triangle is twice as large as another. The measure of the third angle is 40° more than that of the smallest angle. Find the measure of each angle. Show all steps—no trial and error. If necessary, you may round to the nearest tenth of a degree.

7. (20 POINTS) Each part is worth 5 points. Solve the equation. Use set notation to identify solutions.

a. $3(x+2)+12=-5$

b. $9x+2=16$

c. $2x-1=5(x-4)+8$

d. $6-(x+5)+1=1-x$

8. (2 POINTS) Solve the formula $d = rt$ for t.

9. (5 POINTS) A pair of boots is on sale for 40% off the original price. The sale price is $110. What was the original price? You may round to the nearest dollar, if necessary.

10. (4 POINTS) Solve the inequality, represent the set of solutions in interval and set-builder notation, and graph the solution set.

a. $-2(x-8)-12 \geq -x+7$

Interval notation: _____

Set-builder notation: _____