Algebra I
Solving Equations Assessment

GOOD LUCK to: ___________________________ Date: _____________

1) Translate the sentence into an equation: (Do NOT solve!)
Fourteen minus 4 times $y$ is equal to $y$ increased by 4. ______________________________

2) Solve and check:

\[ \frac{t - 8}{4} = 9 \]

3) Solve: (If answers come up as fractions, leave them as fractions)

a) \[ 2.6n - 5 = 2.1n + 4.5 \]

b) \[ w - \frac{3}{4} = \frac{5}{8} \]

c) \[ 3x - 5(x - 6) = 10 + x \]

d) \[ 5(m + 1) + 6 = 3(4 + m) + 2m - 1 \]

e) \[ 14 + 6 + 3c = 4c - c \]

f) \[ 4 - 2y = 7y + 13 \]

SHOW ALL OF YOUR WORK! CHECK OVER YOUR ANSWERS!
4) Solve for the specific variable.

a) \(ax - n = v\), for \(x\)  

b) \(7r + 3s + 3 = 5s\), for \(r\)

5) Determine whether the ratio forms a proportion. **Show your work and write yes or no.**

\[
\frac{0.05}{1}, \frac{1}{20}
\]

6) Solve the following proportion. Show all work.

\[
\frac{3 + y}{4} = \frac{-y}{8}
\]
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9) Eduardo is buying pizza toppings for a birthday party. His recipe uses 8 ounces of shredded cheese for 6 servings. How many ounces of cheese are needed for 27 servings?

10) The perimeter \( P \) of a rectangle with length \( L \) and width \( W \) is \( P = 2L + 2W \). Solve for formula for \( L \).

11) This is the grading rationale for Mrs. Smith’s French class: Tests: 50% Quizzes: 30% Homework: 20%. Joey has an 80% test average, 83% quiz average and 60% homework average. What is Joey’s quarter grade?

SHOW ALL OF YOUR WORK! CHECK OVER YOUR ANSWERS!