Name: _____

Term 1 - Assignment #1
Algebraic Word Problems

1. Translate the following sentence into an algebraic expression. “The sum of twice x and three times y.”

2. Translate the following sentence into an algebraic expression. “The product of x and 5.”

3. Translate the following sentence into an algebraic expression. “The area of a rectangle if the length is x and the width is y.”

4. Translate the following sentence into an algebraic expression. “Twice the sum of x and one–fifth of y.”

5. Translate the following sentence into an algebraic expression. “The sum of y squared and z squared.”

6. What algebraic expression represents the perimeter of a rectangle whose length is $8x + 5$ and whose width is $6x – 3$?

7. The weight of a person would be different if they lived on other places in our solar system. Give the algebraic expression for the weight of a person on each of the following places based on its comparison to the weight on Earth (weight on Earth = x)

a. A person's weight on the Moon is 33 less than one half of the weight on Earth.

b. On Jupiter the weight is twice the weight on Earth plus 36.

c. On the Sun you would find a person's weight by squaring the weight on Earth and then dividing by 4.

8. Given the dimensions of a first rectangle is 3y cm wide by 8x cm in length. Find the algebraic expression to define the perimeter of a second rectangle if its width is 4 less than three times the first and its length is the square of the first.

9. In a movie theatre, there are 180 spectators. The ticket price is $8.50 per adult and $4.75 per child. Let x represent the number of adults. What simplified algebraic expression represents the total revenue for this show?

10. Leslie is 10 years older than twice Anthony's age, whereas Nancy is 40 years less than three times Leslie's age. What is the average age of all 3?

11. Determine

a. The sum of three consecutive natural numbers if the 1st one is (n + 5)

b. The sum of three consecutive odd numbers if the 2nd one is (2n + 11)