

Algebra CC
Assignment #10
Translating English to Algebra

1. Translate each of the following statements into an algebraic expression.
 - (a) If x represents a number, then write an expression for a number that is three more than the number.
 - (b) If x represents a number, then write an expression for a number that is eight less than twice the value of x .
 - (c) If x represents a number, then write an expression for a number that is three more than one third the value of x .
 - (d) If n represents a number, then write an expression for two less than one fourth of n .
 - (e) If y represents a number, then write an expression for negative two times the sum of y and 7.
 - (f) If n represents a number, then write an expression for three times the difference of the number and six increased by four times the number.
 - (g) If k represents a number, then write an expression for the ratio of 3 less than k to 2 more than k .
 - (h) If h represents a number, then write an expression for the quotient of twice h and 10 more than h .
 - (i) If x represents a number, then write an expression for 7 more than one half the number.
 - (j) If x represents a number, then write an expression for one half the sum of x and 7.

2. The Miller family made mathematical statements out of their ages as follows. Tom is four less than twice Gary's age. Rebecca is the youngest and she is two less than half Gary's age after it was increased by three. Sam's age is the ratio of seven more than Gary's age to eight less than Gary's age.

- (a) Translate each of the Miller family members ages into algebraic expressions in terms of Gary's age, g .

Tom's Age:

Rebecca's Age:

Sam's Age:

- (b) If Gary is 11 years old how old are each of the family members?

R1. If n represents a integer, represent the next consecutive integer, in terms of n (*think....how do we get to the next integer?*)

R2. If n represents an odd integer, represent the next consecutive odd integer, in terms of n . (*think...how do we get to the next odd integer?*)

R3. Simplify: $-4x(x+3) + 3x^2(x+3)$

R4. If the expression $2x - 3$ has a value of 5, what is the value of $6x - 9$?

R5. Evaluate $3x^2 - 5x + 1$ if $x = -3$

R6. Simplify: $(-3x^3)^4$

1. (a) $x+3$

(b) $2x-8$

(c) $\frac{x}{3}+3$

(d) $\frac{n}{4}-2$

(e) $-2(y+7)$

(f) $3[n-(6+4n)]$

(g) $\frac{k-6}{k+2}$

(h) $\frac{2h}{h+10}$

(i) $\frac{x}{2}+7$

(j) $\frac{x+2}{2}$

2. (a) Tom's Age: $2g-4$

Rebecca's Age: $\frac{g+3}{2}-2$

Sam's Age: $\frac{g+7}{g-8}$

(b) Tom's Age: 18

Rebecca's Age: 5

Sam's Age: 6

R1. $n+1$

R2. $n+2$

R3. $3x^3+5x^2-12x$

R4. 15

R5. 43

R6. $27x^{12}$ Simplify: $(-3x^3)^4$