Translation Handout

Addition +	Subtraction -	Multiplication ·	Division ÷	Equal Sign =
	Order matters		**Order Matters**	
sum	difference	product	quotient	equals
plus	minus	times	divided by	gives
added to	less	multiply	into	is/was/will be
more than	decreased by	twice	per	results in
increased by	**Translates Backwards**	of		amounts to
total	subtracted from	double		yields
	less than			is equal to

Parentheses are used when something is done to an entire quantity.
Example: Twice the sum of a number and 2   2(x + 2)
                                                 twice   sum

Translate into Algebraic Expressions
1. a number increased by 10
2. the product of -8 and a number
3. the difference of a number and 5
4. the quotient of 4 and a number
5. a number less than 16
6. b decreased by the product of 2 and b
7. 8 divided by the difference between x and 6
8. 20 less than the square of a number
9. 5 less a number
10. 5 less than the product of eleven and a number
11. 4 times the sum of a number and 5
12. a number divided by 5
13. twice the difference between a number and 4
14. 8 subtracted from a number
15. 4 more than one half of a number
16. The number of rabbits is 4 more than 3 times the number of ducks. If x is the number of ducks, write an expression for the total number of ducks and rabbits.
17. There are 4 times more dimes than nickels. Let x be the number of nickels. Write an expression for the total number of dimes and nickels.

Answers to Translation Handout

1. x + 10
2. -8x
3. x - 5
4. $\dfrac{4}{x}$
5. 16 - x
6. B - 2B
7. $\dfrac{8}{x-6}$
8. $x^2 - 20$
9. 5 - x
10. 11x - 5
11. 4(x + 5)
12. $\dfrac{x}{5}$
13. 2(x - 4)
14. x - 8
15. $\dfrac{1}{2}x + 4$
16. x = number of ducks
    3x + 4 = number of rabbits
    total = ducks + rabbits
    x + 3x + 4
    4x + 4
17. x = number of nickels
    4x = number of dimes
    total = number of nickels + number of dimes
    x + 4x
    5x