## SM3-A HANDOUT 6-11 (Quadratic Modeling: Area)

Quantity	Unit of Measure
Height	
Weight	
Temperature	

Sometimes ratios of quantities become new quantities

Quantity	Ratio of:	Unit of Measure
Speed	Distance/time	
"unit price"	Cost/weight	

Vocabulary <u>Mathematical Modeling</u> : representing a real-world phenomenon or quantity with an equation or inequality.		
<u>Formula</u> : an equation that shows the relationship between two or more quantities.		
Examples of formulas you've seen are:		
$A_{circle} = \pi r^2 \qquad V_{box} = L^* w^* h$		
$A_{\text{rectangle}} = L * W$ $A = \frac{1}{2}(b_1 + b_2)h$		

Expressions from Phrases
What mathematical expression represents the following?
Three more than twice a number
Five less than three times a number
The width is 4 times the length.
The area of a rectangle whose width is4 times its length.

Write a mathematical expression that represent each statement:
1. The number of girls is three less than twice the number of boys.
2. The salary after a 4% increase
3. Area of a rectangle whose length is 2 more than twice its width.
4. The area of a rectangle with the same size square cut out of each corner.









