Math 135: Section 3.1

## Translating English Phrases into Algebraic Expressions:

Add	Subtract	Multiply	Divide	Equal To
- increased by	- less than	- multiplied by	- divided	- is/was/has
- more than	- decreased by	- of	- ratio of	- is the same as
- greater than	- smaller than	- product of	- quotient of	- equals
- added to	- fewer than	- times		- costs
- sum of	- shorter than			- represents
	- difference of			

Let x equal a number. Write each English phrase as an algebraic expression.

1. Twelve more than a number.

$$x + 12$$

2. Eight less than a number.

$$x - 8$$

3. Five times a number.

4. Five times the sum of a number and three.

5. Three more than the product of five and a number.

$$3 + 5 \times$$



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6. Six less than one-third of the sum of a number and four.

$$\frac{1}{3}(x+4) - 6$$

Now define a variable using a "let" statement and then write each quantity using the defined variable.

1. The sandwich cost \$2 more than the muffin.

let 
$$x = cost$$
 of multin  
 $x + 2 = cost$  of multin  
 $x + 2 = cost$  of  $x = cost$  of

2. During the summer, Sarah read twice as many books as Ted. Peter read five more books than Ted.

let x = number of books that Ted read

$$2x =$$
 $x+5 =$ 

Peter

3. The first angle of a triangle is 20 degrees more than the third angle. The second angle is double the third angle.