I.   Develop a strategy for how to solve word problems

    A.   Read the problem carefully!
    B.   Try to write down the information given in your own words.
    C.   Identify what the word problem is asking you for. Are you suppose to just write out the algebraic equation or do you also have to solve it?
    D.   "Translate" the word problem into algebraic terms using the table provided. Key words are underlined.

Algebraic Translations of English Phrases

	English phrase	Algebraic expression
Addition		
	The <u>sum</u> of a number and 7	$x + 7$
	Five <u>more than</u> a number; a number <u>plus</u> 5	$x + 5$
	A number <u>increased by</u> 6; 6 <u>added to</u> a number	$x + 6$
Subtraction		
	A number <u>minus</u> 4	$x - 4$
	A number <u>decreased by</u> 5	$x - 5$
✓	A number <u>subtracted from</u> 8	$8 - x$
✓	The <u>difference between</u> a number and 6	$x - 6$
✓	The difference between 6 and a number	$6 - x$
✓	Seven <u>less than</u> a number	$x - 7$
✓	Seven <u>minus</u> a number	$7 - x$
✓	Nine <u>fewer than</u> a number	$x - 9$
Multiplication		
	Five <u>times</u> a number	$5x$
	The <u>product</u> of 3 and a number	$3x$
	Two-thirds <u>of</u> a number (used in fractions)	$\frac{2}{3}x$

	Seventy-five percent <u>of</u> a number (used in decimals)	$0.75x$
	Thirteen <u>multiplied by</u> a number	$13x$
	A number multiplied by 13	$13x$
	Twice a number	$2x$
Division		
✓	A number <u>divided by</u> 3	$\frac{x}{3}$
✓	The <u>quotient of</u> 7 and a number	$\frac{7}{x}$
✓	The quotient of a number and 7	$\frac{x}{7}$
	The <u>reciprocal of</u> a number	$\frac{1}{x}$
More than one operation		
	The sum of twice a number and 7	$2x+7$
	Twice the sum of a number and 7	$2(x+7)$
	Three times the sum of 1 and twice a number	$3(1+2x)$
	Nine subtracted from 8 times a number	$8x-9$
	Twenty-five percent of the sum of 3 times a number and 14	$0.25(3x+14)$
	Seven times a number, increased by 24	$7x+24$
	Seven times the sum of a number and 24	$7(x+24)$

✓ -- These key words require special attention to the order of the information given.

Example 1 –

A.   Six subtracted from 5 times a number.

B.   Twice a number plus one is equal to 145.