Lesson #43-Inequality Word Problems

irections: Represent each of the following as an algebraic inequality.

1) x is <u>at most</u> 30

x = 30

2) The sum of 5x and 2x is at least 14

5x+2x ≥ 14

3) The product of x and y is less than or equal to 4

4) 5 less than a number y is under 20

4-5 420

Directions: Fill in the following table with key words for each inequality symbol.

			1.7 4 1.
<	>	\leq	<u>></u>
is less than is under	is greater than is above	is less than or equal to	is greater than or equal to
is below.	is more than	is at most	is at least
is fewer than		is not above	is not under
		is no more than	is no fewer than
		does not exceed	is no: less than

1st: Read carefully and <u>underline key words</u> 2nd: Write a legend

 3^{rd} : Determine whether to use <, \le , >, or \ge

4th: Write and solve the inequality

5) If 5 times a number is increased by 4, the result is at least 19. Find the least possible number that satisfies these conditions.

$$X = a$$
 number

6) The sum of twice a number and 5 is at most 15. What are the possible values for the number?

7) The cost of a gallon of orange juice is \$3.50. What is the maximum number of containers you can buy for \$15?

$$\frac{3.50 \times \pm 15}{3.50}$$

8) Three times a number increased by 8 is no more than 4. Find the greatest number.

9) Two-thirds of a number plus 5 is greater than 12. Find the least integer.

$$\frac{2}{3} \times +5 > 12$$

$$\frac{2}{3} \times -5 -5$$

$$(2) \frac{2}{3} \times > 7(2)$$

$$\times > 10.5$$