

# CH4 INEQUALITIES

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p.7

## 4.1 Writing & Graphing Inequalities

E.Q.: How can we show the solutions of inequalities using graphs?

\* **Inequality**: a mathematical phrase that compare 2 amounts w/ each other (terms or expressions).

\* **Solutions**: Any value (#) that makes an inequality true. ie  $x > 5$

6 IS a Solution  
3 is NOT a Solution

\* **An Inequality is another name**

found by isolating the variable

\* **Boundary Value**: The limit(s) of an inequality

①  $>$  greater than, larger than, more than, bigger  
over, higher,

$\geq$  ② greater than or = to, at least  
no less than, maximum of

$<$  ③ less than, smaller than, fewer than

$\leq$  ④ less than or = to, at most  
no more than, minimum of

## \* Writing an Inequality

Ex. 1 A number  $r$  plus 5 is at least  $-7.9$

*variable*  $r$   $+5$   $\geq$   $-7.9$

$$r + 5 \geq -7.9 \quad \text{OR}$$

$$-7.9 \leq r + 5$$

start from  
the side w/ the  
variable

Ex. 2 Felix's aunt says  
he may spend up to \$40  
at the movies. The

ticket costs 12 dollars. How much left  
to spend at the concession stand.

$C$  is \$ spent @ snack bar

$$C + 12 \leq 40$$

$$40 \geq C + 12$$