1.3 Simple Algebraic Inequalities

$>$ → is greater than
is more than
is bigger than

$<$ → is less than
is smaller than

$\geq$ → is greater than or equal to
is at least
minimum

$\leq$ → is less than or equal to
is at most
maximum

$\neq$ → is not equal to

Write an inequality to model the situation.

1. Twice a number is at most 12 more than the number.
   let a = number
   $2a \leq a+12$

2. Five times a number decreased by 7 is greater than 20.
   let a = number
   $5a-7>20$

3. A number is less than twice the result of the number minus 8. let x = number
   $x < 2(x-8)$

4. The larger of two numbers is 3 more than twice the smaller. The sum of the numbers has a maximum value of 63.
   let x = smaller #
   $2x+3$ = larger #
   $x+(2x+3) \leq 63$

5. Holly is three years younger than Brian. The sum of their ages is greater than 43.
   let x = Brian's age
   $x-3$ = Holly's age
   $x+(x-3)>43$

HOMEWORK

Worksheet HW 1.3
Simple Inequalities