# 4.1

18

Solve Inequalities Using Addition and Subtraction

> greater than

≥ greater than or equal to

< less than

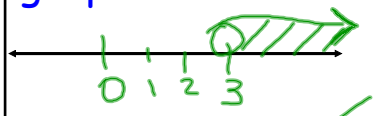
≤ less than or equal to

≠ not equal to

When you graph the circle is open

Sep 27-8:28 PM

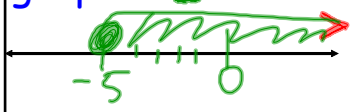
graph $x > 3$



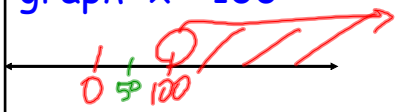

Standard form

Variable : Symbol : number

graph $x \geq -5$




graph $x > 100$

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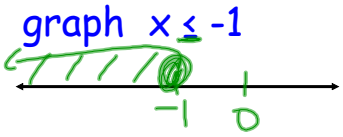
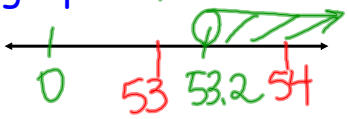
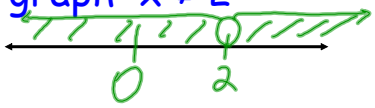
graph $x \leq -1$




graph $x > 53.2$




graph $x \neq 2$

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**Key Concept**

Addition Property of Inequality

If $a > b$, then $a + c > b + c$
If $a < b$, then $a + c < b + c$

If $a \geq b$, then $a + c \geq b + c$
If $a \leq b$, then $a + c \leq b + c$

solve and graph your solution

$x - 3 > 11$

$+3 \quad +3$

$x > 14$


Sep 27-8:45 PM

**Key Concept**

Subtraction Property of Inequality

If $a > b$, then $a - c > b - c$
If $a < b$, then $a - c < b - c$

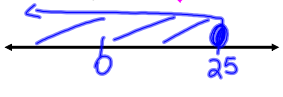
If $a \geq b$, then $a - c \geq b - c$
If $a \leq b$, then $a - c \leq b - c$

solve and graph your solution

$n + 7 \leq 32$

$-7 \quad -7$

$n \leq 25$

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$-7.2 < 12 + m$

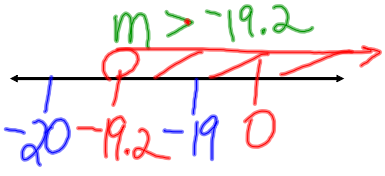
$-12. \quad -12$

$-19.2 < m$

$-19.2 < m$

Write final answer in standard form

$m > -19.2$

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$-2\frac{1}{3} \geq 4\frac{1}{5} + k$

$-4\frac{1}{5} \quad -4\frac{1}{5}$

$-6\frac{8}{15} \geq k$

$-7 \quad -6\frac{8}{15} \quad -6 \quad 0$

$k \leq -6\frac{8}{15}$

Sep 27-8:56 PM

$-2\frac{1}{3} = -2\frac{1 \cdot 5}{3 \cdot 5} = \frac{5}{15}$

$-4\frac{1}{5} = -4\frac{1 \cdot 3}{5 \cdot 3} = \frac{3}{15}$

$-6\frac{8}{15}$

Oct 21-10:47 AM

What inequality is represented by the graph?

-7 0 $x \geq -7$

0 9 $x > 9$

0 $x \leq 0$

-2.75 0 $x > -2.75$

0 234 $x < 234$

-112 0 $x \geq -112$

$-2\frac{3}{4}$ 0 $x \neq -2\frac{3}{4}$

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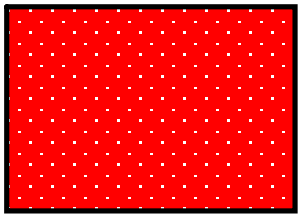
# Assignment

WB4.1 ; 1-20 all



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Translate the verbal sentence as an inequality.
Then solve the inequality and graph your solution.

The sum of 13 and h is less than -45

The difference of w and 21 is greater than or equal to 101.

The sum of -2 and m is not equal to 19

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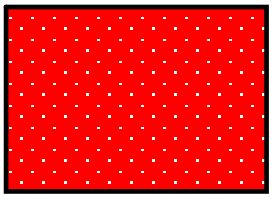
## Assignment



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