$\{x \mid x \geq 17\}$

* 8th grade standard

Algebra 1 5.1

Solve linear inequalities by using addition*

Solve linear inequalities by using subtraction*

inequality
set builder notation
addition property
subtraction property
whiteboards

triangle puzzles (?)

$x + 6 \geq 11$

$-6 \quad -6$

$x \geq 17$

$20 + -6 \geq 11$ ☺

$14 \geq 11$

set-builder notation.

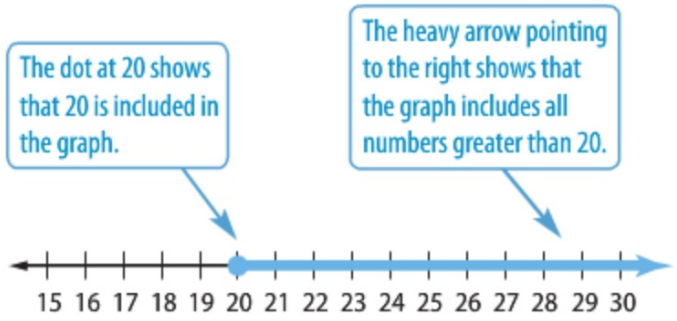
ReadingMath

set-builder notation

$\{x \mid x \geq 20\}$ is read *the set of all numbers x such that x is greater than or equal to 20.*

$\{x \mid x \geq 20\}$.

x=
x>



What are the 3 options?

ConceptSummary Phrases for Inequalities

$<$	$>$	$\leq$	$\geq$
less than fewer than	greater than more than	at most, no more than, less than or equal to	at least, no less than, greater than or equal to

Whiteboards

Solve each inequality. Then graph the solution set on a number line.

1. $x - 3 > 7$

2. $5 \geq 7 + y$

3.

5.

7.

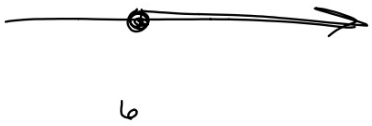
ICE WS

Define a variable, write an inequality, and solve each problem. Check your solution.

9. Twice a number increased by 4 is at least 10 more than the number.

10. n = a number

$$2n + 4 \geq n + 10$$
$$-n \quad -4 \qquad -n \quad -4$$
$$n \geq 6$$



$2 \cdot 9 + 4 \geq 9 + 10$

$22 \geq 19$

24. $2a \leq -4 + a$

$-a \quad -a$

27.

$a \leq -4$

25. $z + 4 \geq 2z$

$-z \quad -z$

$4 \geq z$

26. $w - 5 \leq 2w$

ICe