3.2-> SOLVING INEQUALITIES USING ADDITION & SUBTRACTION

Equivalent inequalities:

Inequalities with the same solutions.

*You can __add__ or __subtract__ the __same__ __value__ to __each__ __side__ of an inequality, just like you did with equations.

Addition Examples: Graph the Solution:

1. $y + 5 < -7$
$$\underline{-5 \ \ -5}$$
$$y < -12$$

2. $t + 3 \geq 8$
$$\underline{-3 \ -3}$$
$$t \geq 5$$
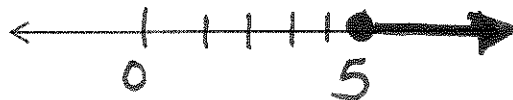
3. $x + 1 \leq -2$
$-1 \quad -1$
_____
$x \leq -3$
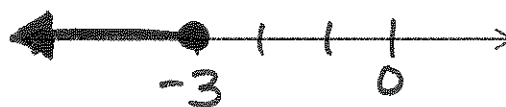
Subtraction Examples:

Graph the Solution:

4. $x - 3 < 5$
$+3 \quad +3$
_____
$x < 8$

5. $m - 6 < -4$
$+6 \quad +6$
_____
$m < 2$
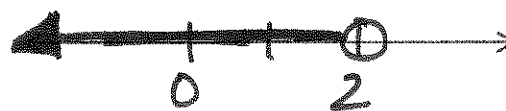
6. $y - 5 \leq -2$
$+5 \quad +5$
_____
$y \leq 3$
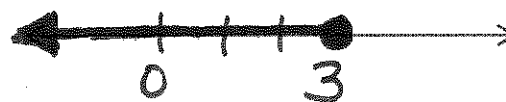
NOTE: If you are unsure which direction to shade, check a number!
(0 is easy to test).