SOLVING INEQUALITIES
using Addition & Subtraction

You can solve inequalities in the same way you solve equations. Use inverse operations to get the variable by itself.

Addition Property of Inequality

When you add the same number to each side of an inequality, the inequality remains true.

Solve x – 4 < -1.

x – 4 < – 1
+ 4 **+ 4**
x < 3

Addition property of Inequality.

Subtraction Property of Inequality

When you subtract the same number from each side of an inequality, the inequality remains true.

Solve 12 ≤ y + 16.

12 ≤ y + 16
-16 **-16**
- 4 ≤ y

Subtraction Property of Inequality.

⇒practice

Solve each inequality.

1. $x + 7 \geq 19$

$x \geq 12$

2. $t - 5 < -7$

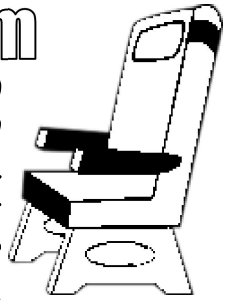
$x < -2$

3. $1.4 < z - 3.6$

$5 < z$

⇒word problem

The school auditorium seats 350 students. There are 309 students already seated. Write and solve an inequality that represents the additional number of students that can be seated.



309 + $s \leq 350$;
$s \leq 41$;
At most 41 more students can be seated.