## Pg. 34-35 Solving Inequalities Section: 2.8

Warm up: Draw the number line and graph the inequality.
$x<4$
$x \geq 4$


## Learning Targets

I CAN solve and graph inequalities
I CAN graph a two-variable inequality and determine where its solution(s)are located.

Graph the boundary line:




* Use a dashed line because the inequality is greater than.


Choose a test point, ( 0,0 ). Substitute $\mathrm{x}=0$ and $y=0$ into $y>3 x-1$
$0>3(0)-1$
$0>-1 \quad$ since $0>-1$ is true, shade the half plane that includes
 $(0,0)$.

## Steps to Graphing Inequalities:

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1. Isolate the $y$, if necessary.

2. Determine whether it is a dashed or solid line.
3. Graph the dashed or solid line.
4. Find a test point.

- Must be coordinates that do not touch the line.

5. If the test point turns out to be true, shade that half plane. If not, shade the other half.

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## Solid $y=m x+b$



Note:
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Inequality symbol flips, if you multiply or divide by a negative number

## Homework: Graphing Linear Inequalities Worksheet.

