## Solving and Graphing Inequalities Notes

| Inequality Symbols |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| $<$ | $>$ | $\leq$ | $\geq$ |  |
|  |  |  |  |  |
|  |  |  |  |  |

Write in symbols.

Your quiz score is $92 \%$.
Your age is less than 19 years.

The most it will cost is $\$ 30$.
You can have at least 3 of my Skittles.

What's the difference between solving equations and inequalities?
$-2=\mathrm{n}-4 \quad-2>\mathrm{n}-4$

Solve and describe in words.
$2 y-5<7$
$-4.2 m>6.3$

Solve.

$$
\underline{a} \leq 12
$$

$5 x-3>12$
$x+5 \geq 3$

## Graphing Inequalities

There are three pieces to graphing:

1. Number Line $\longleftrightarrow$
2. Dot

| Sign | Dot |
| :---: | :---: |
| < and <br> $>$ |  |
| $\leq$ and $\geq$ |  |

3. Shading


Graph.
$x>-2$

$$
x \leq 1
$$


$-x-11 \geq 23$

$$
-6+5 x<19
$$



Do you think you can write the inequality from the graph?


