12-6: Graphing Inequalities in Two Variables Notes

**Graphing One-Variable Linear Inequalities – OLD STUFF!**

Inequality Symbols:

Check the following solutions for $x < 6$:

- $x = 8$
- $x = -4$
- $x = 0$
- $x = 6$
- $x = 25$

One variable means one ____________________________, but, while an equation means __________________

one solution, an inequality means more than one ____________________. Visually, a one-dimensional solution

would be graphed on a ___________________ _________.

The graphical solution for the example $x < 6$ is:

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Check the following solutions for $y \geq 3$:

- $y = 3$
- $y = -4$
- $y = -3$
- $y = 0$
- $y = -25$

The graphical solution for the example $y \geq 3$ is:

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**Graphing Two-Variable Linear Inequalities – NEW STUFF!**

Check the following solutions for the 2-variable inequality $y > x + 4$ (note how the solutions look different):

- $(2, -9)$
- $(-3, 1)$
- $(0, 2)$
- $(-1, 3)$

Visually, a two-dimensional solution would be graphed on a “_________________ ___________ _______,”

which we call a ___________________ ___________ with an x-axis and a y-axis.

Inequality Symbols:
The graphical solution for the example $y > x + 4$ is:

The graphical solution for the example $y \geq \frac{1}{2}x - 2$ is:

The graphical solution for the example $y \leq 3x$ is:

The graphical solution for the example $y < \frac{3}{4}x - 1$ is:

Shading Check:

Shading Check:

Shading Check:

Shading Check: