**Chapter 12: Modeling with Linear Systems**

**Lesson 12.2: Graphing Systems of Linear Inequalities**

A **system of linear inequalities** consists of two or more linear inequalities that have the same variables. The **solutions of a system of linear inequalities** are all the ordered pairs that make all the inequalities in the system true.

**Example 1:**

$$\left\{\begin{array}{c}x+3y >3\\-x+y \leq 6\end{array}\right.$$

Step 1: Find the x and y intercepts for each of the following equations.

Step 2: Graph and shape in the appropriate regions to fullfill each inequaltiey

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**Example 2:**

$$\left\{\begin{array}{c}y>x-2\\y\leq x+4\end{array}\right.$$

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**Example 3:**

$$\left\{\begin{array}{c}y<4x-3\\y>4x+2\end{array}\right.$$

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