

- Fill in the blank with either *solid* or *dashed*. Fill in the second blank with either *above* or *below*. State whether or not the boundary line belongs to the solution set.
 - The boundary of the graph of $y \leq -x + 2$ will be a _____ line, and the shading will be _____ the line.
 - The boundary of the graph of $y < -x + 2$ will be a _____ line, and the shading will be _____ the line.
 - The boundary of the graph of $y > -x + 2$ will be a _____ line, and the shading will be _____ the line.
 - The boundary of the graph of $y \geq -x + 2$ will be a _____ line, and the shading will be _____ the line.
- Graph each inequality in two variables.
 - $x + 4y \geq -3$
 - $x + 2y > 0$
 - $y \leq 4x$
- Graph each compound inequality in a system of coordinates.
 - $3x - y \geq 3$ and $y < 3$
 - $y > x - 1$ and $y < x + 3$
 - $|y| < 5$
 - $|x + 1| < 2$
 - $|x + 2y| \geq 6$
 - $x + 3 < y$ or $x > 3$
 - $3 - x < y + 2$ or $x > y + 5$
 - $x + y \leq 5$ and $x - y \leq 3$
 - $3x + 2y < 6$ or $x - 2y > 2$
 - $|x| < 2$ and $|y| < 3$
- Determine whether or not the solution set to each compound or absolute value inequality is the empty set.
 - $y > x$ and $x > 1$
 - $y \geq 3x$ and $y \leq 3x - 1$
 - $y \geq 3x$ or $y \leq 3x - 1$
 - $y < 2x$ or $y > 3x$
 - $y > 3$ and $y < 1$
 - $|x - 2y| \leq 0$
 - $|x - 2y| < -9$
 - $|2x + 3y| < 4$
- A furniture maker has a shop that can employ 12 workers for 40 hours per week at its maximum capacity. The shop makes tables and chairs. It takes 16 hours of labor to make a table and 8 hours of labor to make a chair. Graph the region that shows the possibilities for the number of tables and chairs that could be made in one week.
- In the above problem 5, add the condition that the number of chairs must be at least twice the number of tables and at most six times the number of tables. Graph the region showing the possibilities for the number of tables and chairs that could be made in one week.