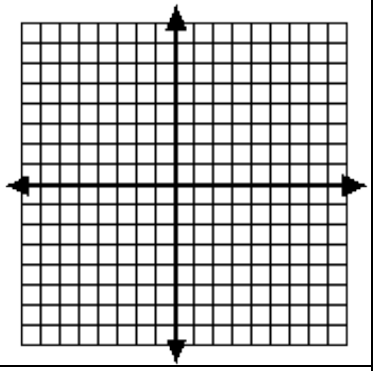
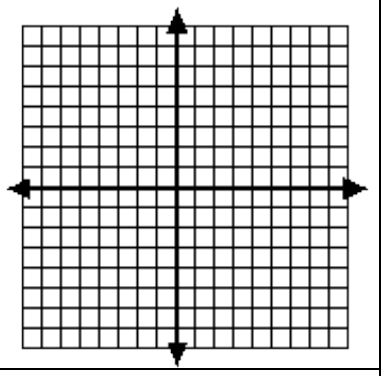
Algebra 2 **Name: _____**
3.2 Homework

Solve each system of inequalities by graphing.

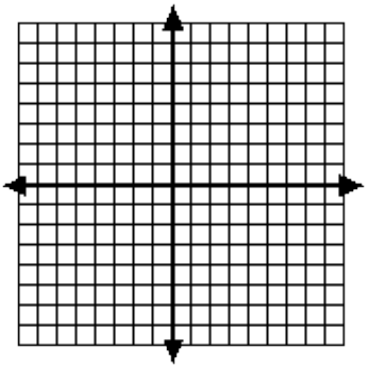
1. $x > -3$
$y \leq 4$



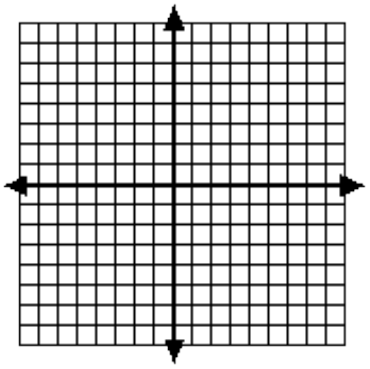
2. $y < -4x$
$y \geq 3x - 2$



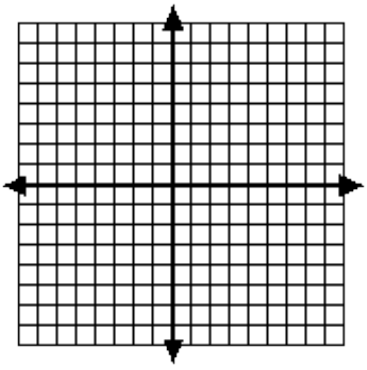
3. $y < -2x + 3$
$y \geq x - 2$



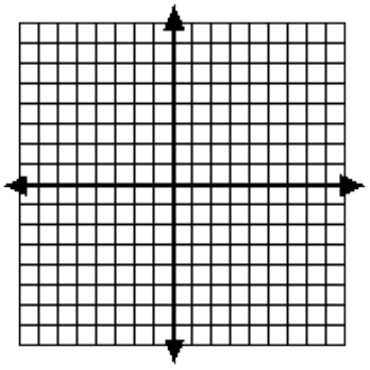
4. $y < -x - 2$
$2y \geq 3x + 6$



5. $3y > 4x$
$2x - 3y \geq -6$



6. $y \geq 2x - 2$
$2x + 3y \geq 6$
$y < 4$



7. During a family trip, you share the driving with your dad. At most, you are allowed to drive for three hours. While driving, your maximum speed is 55 miles per hour. Write a system of inequalities describing the possible number of hours, *t,* and distance, *d,* you may drive.

Is it possible for you to have driven 160 miles? Explain.

8. For an upcoming event, a 250 seat arena is selling tickets for $25 and $15. At least 100 tickets must be priced at $15 and total sales need to exceed $1,000 to make a profit. Let x represent the number of tickets priced at $25 and y represent the number of tickets priced at $15. Write a system of inequalities that shows the possible combinations of ticket sales in order to make a profit. Then graph the system.