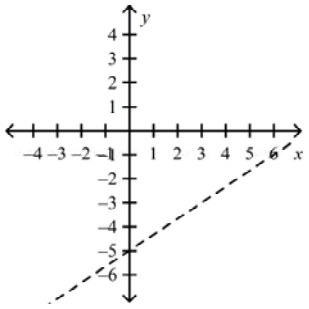
Name: _____ **Class:** _____ **Date:** _____ **ID: A**

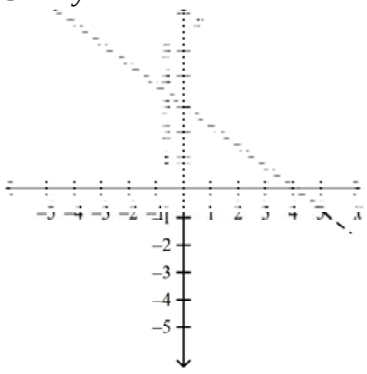
Graphing Inequalities

The graph for the inequalities are started for you. You need to [1] decide if the line/curve needs to be dotted (leave it alone) or solid (make the line solid); [2] shade the correct side of the line/curve.

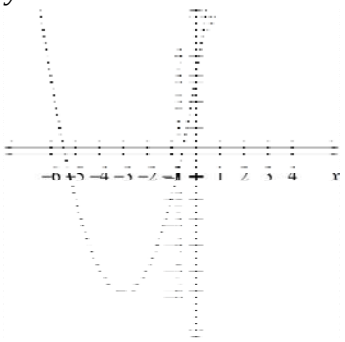
1. $y > \frac{2}{3}x - 5$



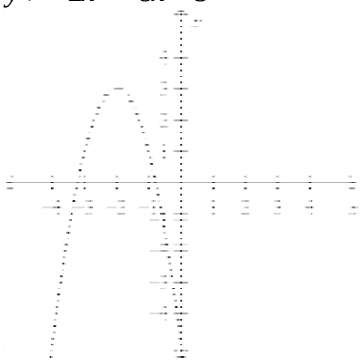
2. $3x + 4y \le 12$



3. $y \le x^2 + 6x + 3$

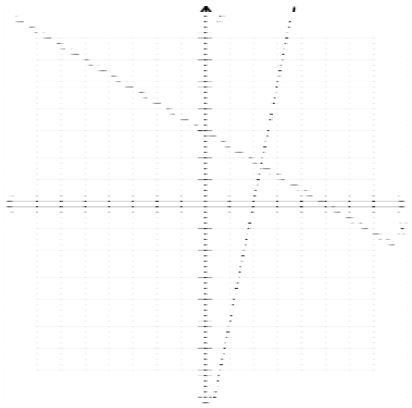


4. $y > -2x^2 - 8x - 5$

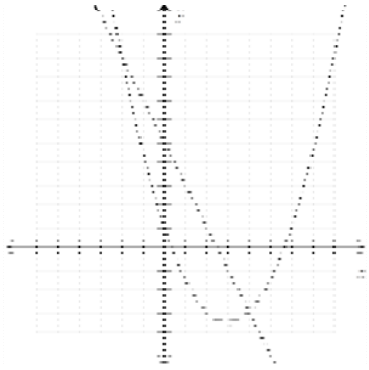


Complete the shading <u>lightly</u> for both graphs. Then shade the overlapping region <u>darker</u> to represent the final answer.

5. $5x - y < 10$
   $3x + 5y \le 15$



6. $y \ge \frac{1}{2}x^2 - 3x + 1$
   $y < -2x + 5$



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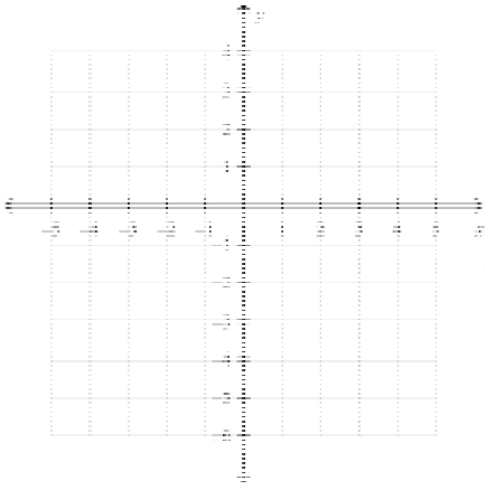
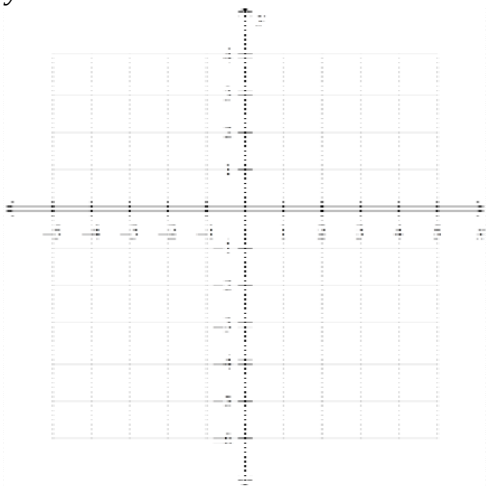
Graph and shade each inequality. Then shade the overlapping region <u>darker</u> to indicate the final answer region.

7. $y > -(x-2)^2 + 3$
   $y < \frac{3}{2}x - 4$



8. $y \geq 2(x+1)^2 - 5$
   $y \leq x^2$



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9. Is (3, 4) an answer to the system of inequalities below? Show work to support your answer.
   $y > 2x - 3$
   $y < \frac{2}{3}x + 4$