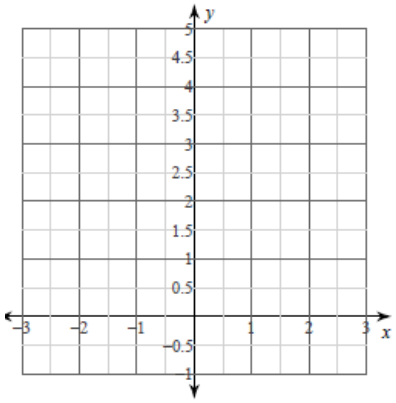
Solving Quadratic Inequalities by Graphing

- Use Solid line for : Use Dashed Line for:

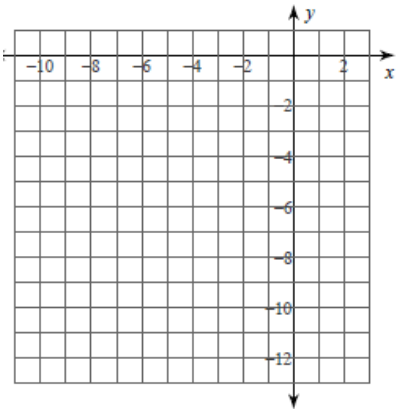
TO Graph:
1) Graph the quadratic.
2) Draw using solid or dashed line
3) Shade correct side (use a test point)

Examples:

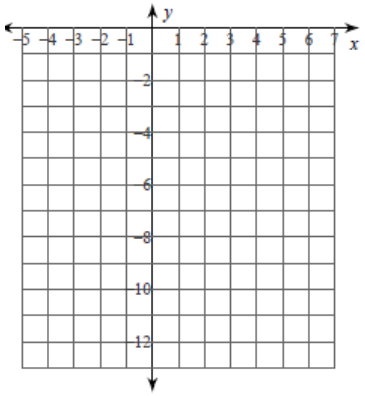
1) $y > x^2$



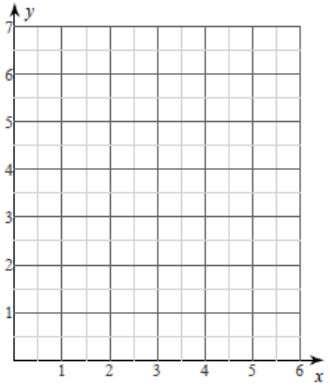
2) $y \geq -3x^2$



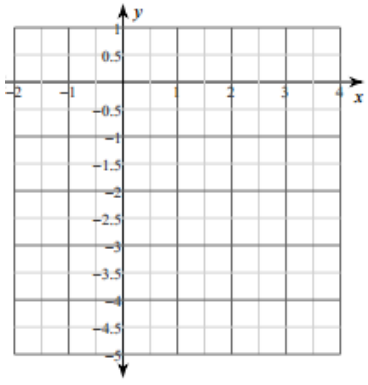
3) $y < -2x^2 - 8x - 12$



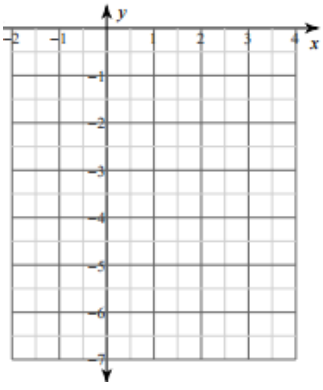
4) $y \leq x^2 - 6x + 11$



5) $y \leq -x^2$



6) $y > -x^2 + 4x - 6$



Determine whether the ordered pair is a solution of the inequality. Show your work then answer yes or no.

7. $y < x^2 - 2x + 4$, (1,2)

8. $y > 2x^2 + x - 5$, (– 2, 1)

9. $y \leq -2x^2 + 5x + 6$, (4, – 4)

Match the inequality with its graph.

10. $y \geq -x^2 + 4x - 3$

11. $y \leq -x^2 - 4x - 3$

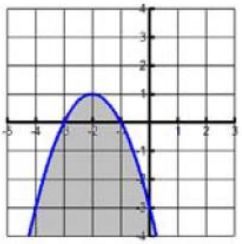
12. $y \leq x^2 + 2x - 3$

13. $y < x^2 - 4x + 3$

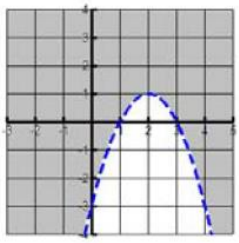
14. $y > -x^2 + 4x - 3$

15. $y > x^2 - 2x - 3$

A.



B.



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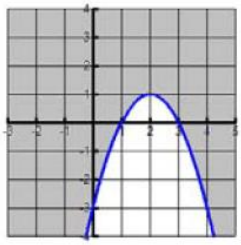
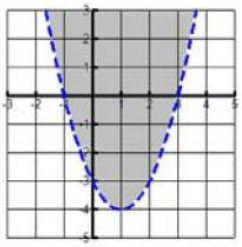
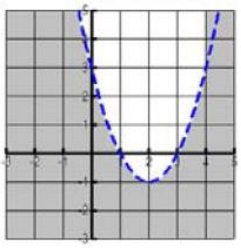


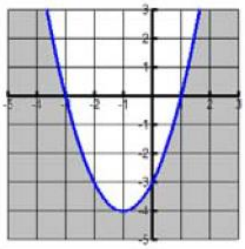
D.



E.

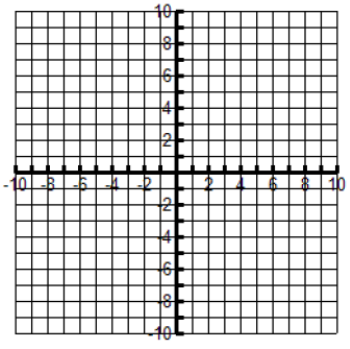


F.

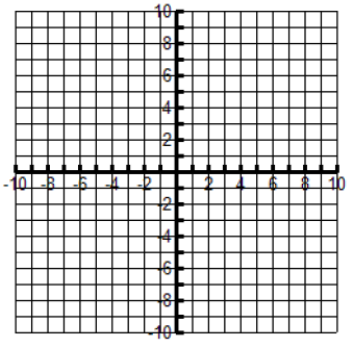


Graph each quadratic inequality.

16. $y \leq x^2 - 6x + 8$



17. $y \leq -x^2 + 6x - 7$



18. $y > 2x^2 - 4x - 6$