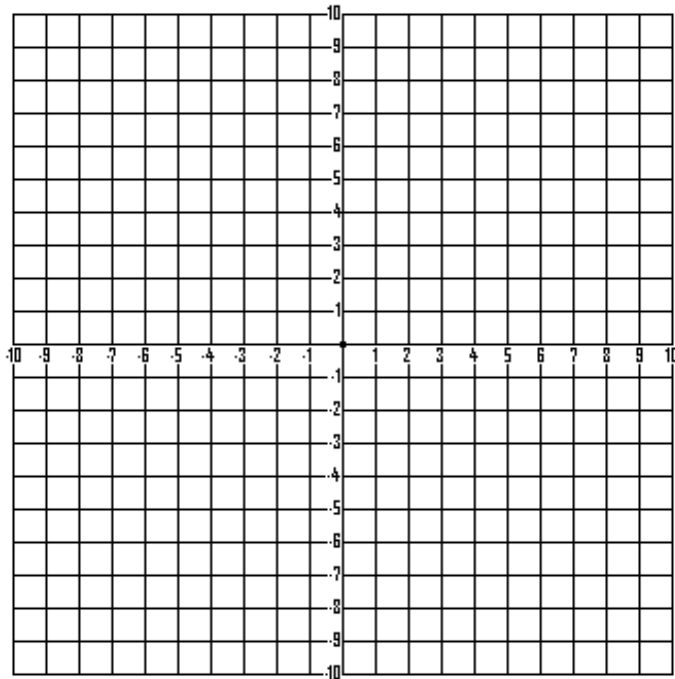


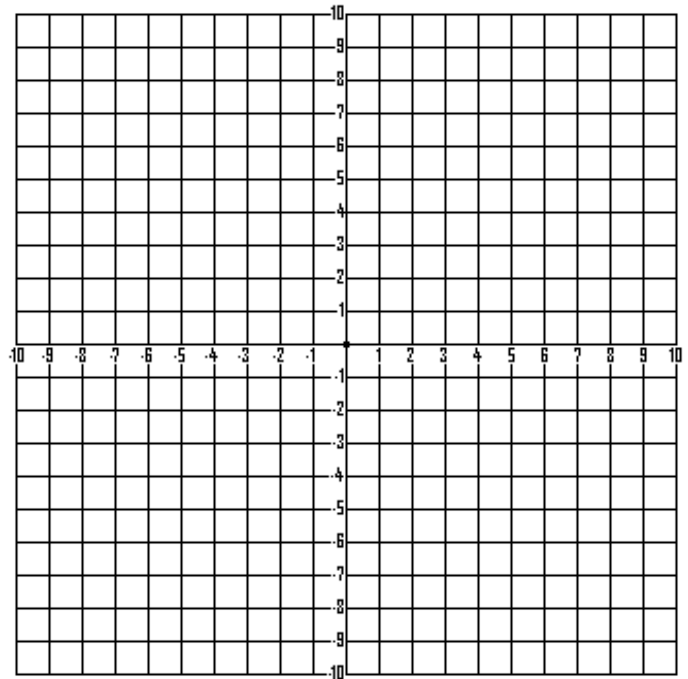
Math 3B – U5, L2 Test Review

Determine if the graph opens up or down and if it has a min or max. Find the vertex point, y-intercept and x- intercept. Then graph with all key points marked.

1. $y = -3(x - 1)^2 + 3$

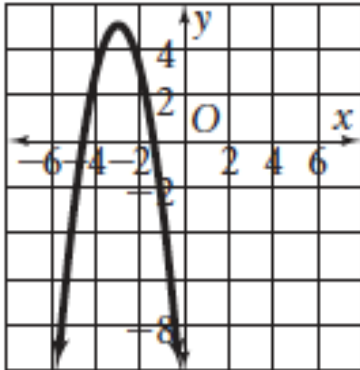


2. $y = -(x + 2)^2 - 4$

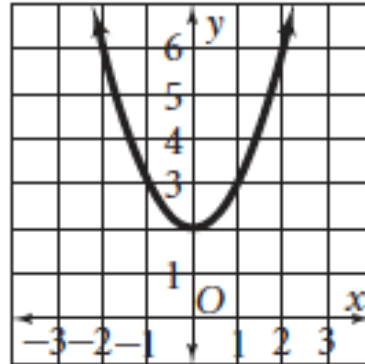


Write the equation of the parabola in vertex form.

3.



4.



Write each function in standard form.

5. $y = -2(x + 5)^2 - 3$

6. $y = (x - 1)^2 + 2$

7. $y = -3(x - 2)^2 + 4$

Name _____ Hour _____

Use quadratic formula to solve. Then describe how many and the type of solutions.

8. $4x^2 + 4x - 9 = 0$

9. $x^2 + 4x + 3 = 0$

10. $8x^2 + 6x = -5$

11. $2x^2 - 7x - 13 = -10$

Find the discriminant. Then describe how many and the type of solutions.

12. $6x^2 - 2x + 5 = 0$

13. $4x^2 + 20x = -25$

14. $x^2 + 4x + 5 = 0$

15. $2x^2 + 7x + 5 = -6$

Name _____ Hour _____

Simplify.

16. $(3 - i)(8 + i)$

17. $(1 + 4i)(3 + 6i)$

18. $(-7 - 4i)(-6 - 6i)$

19. $(6i)(4 + 6i)$

20. A firework is projected straight upward from ground level according to the function $h(t) = -16t^2 + 192t$, where h is the height in feet and t is the time in seconds. Find the time it takes for the firework to return to the ground?