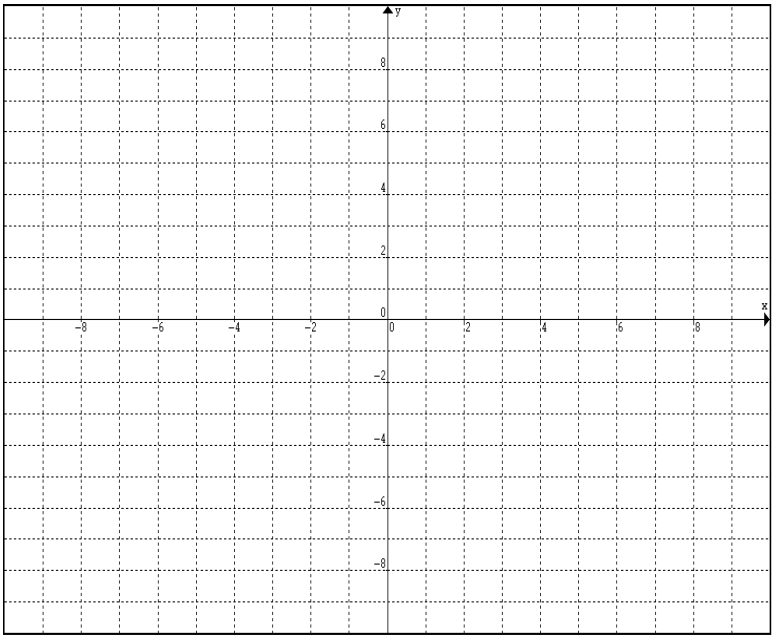
Graphing Quadratic Functions

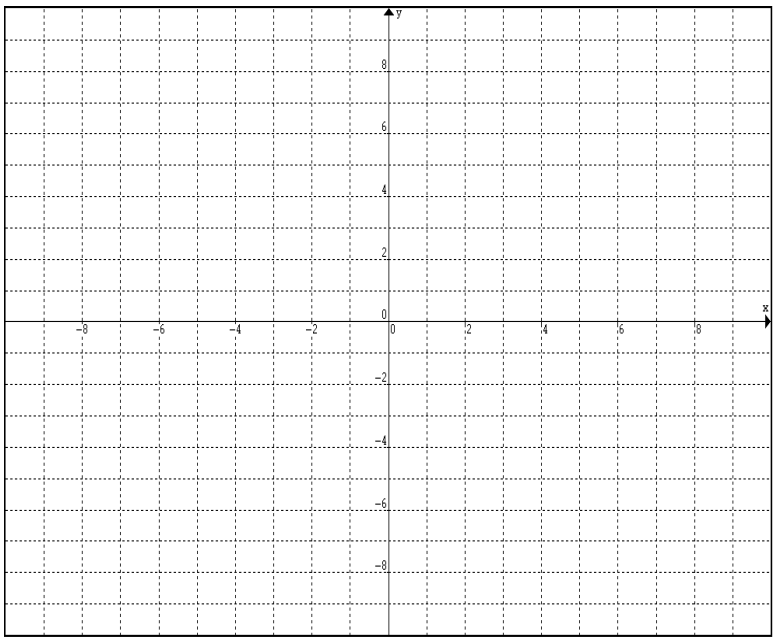
1. $f(x) = x^2$

Vertex =
y-intercept : *x*-intercept:



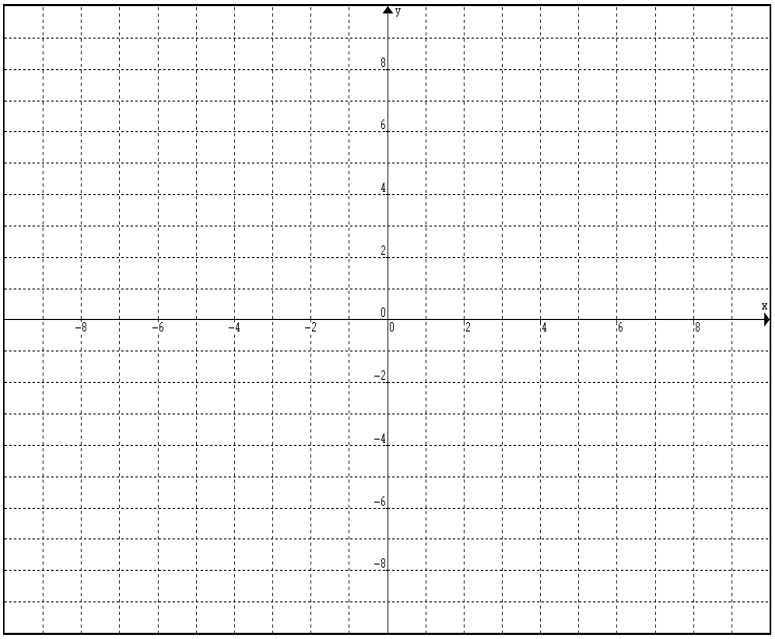
2. $f(x) = x^2 + 5$

Vertex =
y-intercept : *x*-intercept:



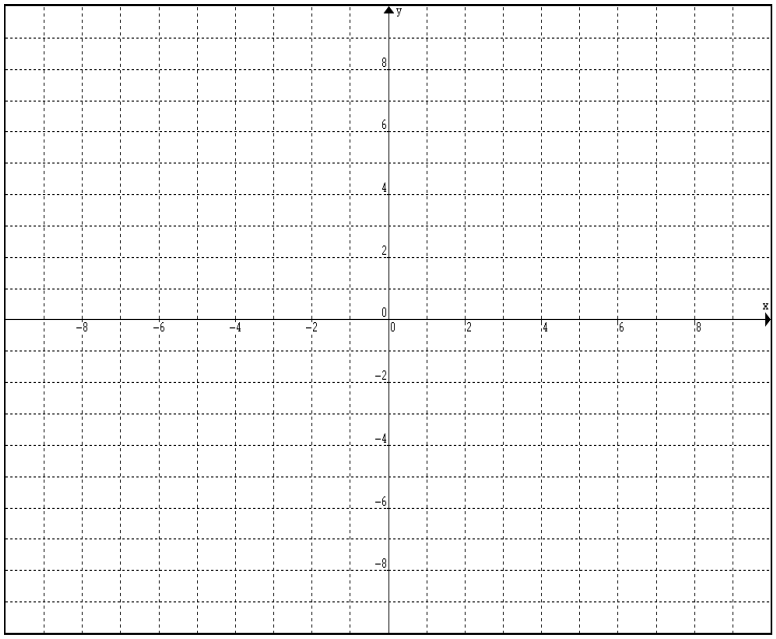
3. $f(x) = (x+3)^2$

Vertex =
y-intercept : *x*-intercept:



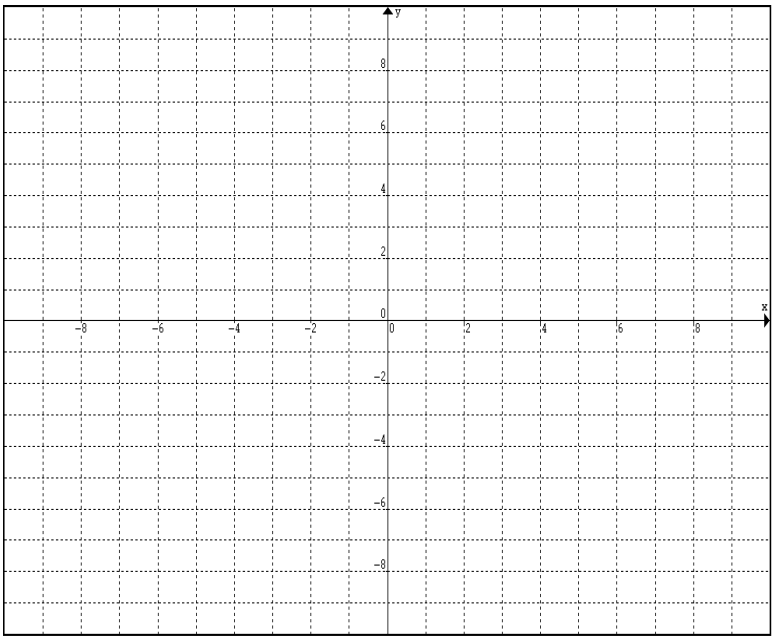
4. $f(x) = (x-4)^2 - 3$

Vertex =
y-intercept : *x*-intercept:



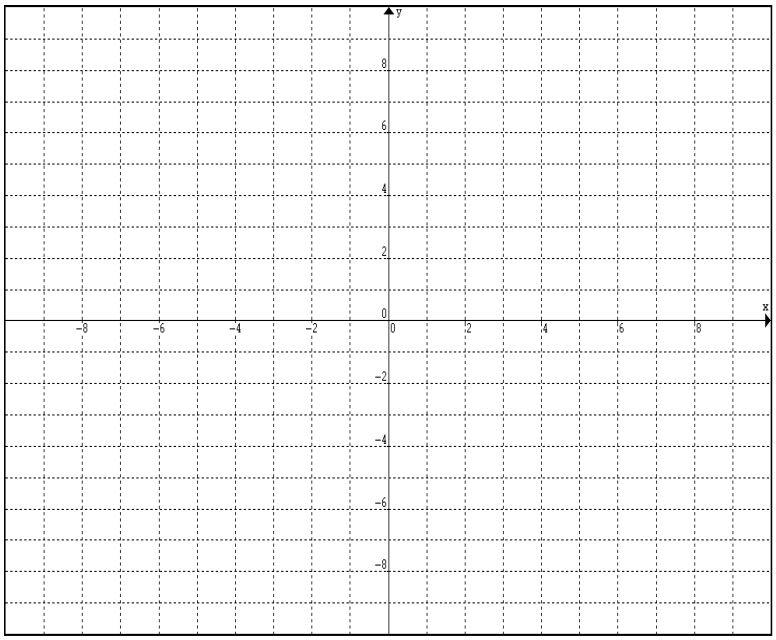
5. $f(x) = -x^2$

Vertex =
y-intercept : *x*-intercept:



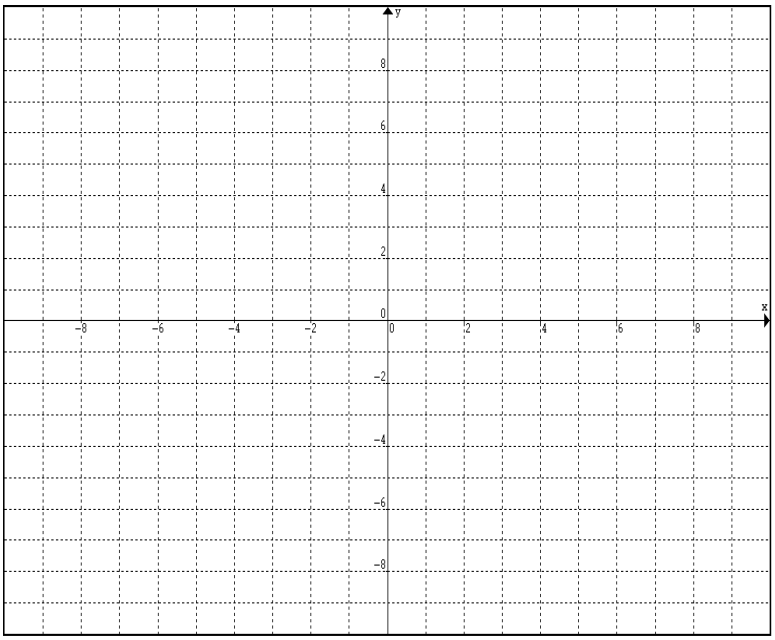
6. $f(x) = -x^2 + 4$

Vertex =
y-intercept : *x*-intercept:



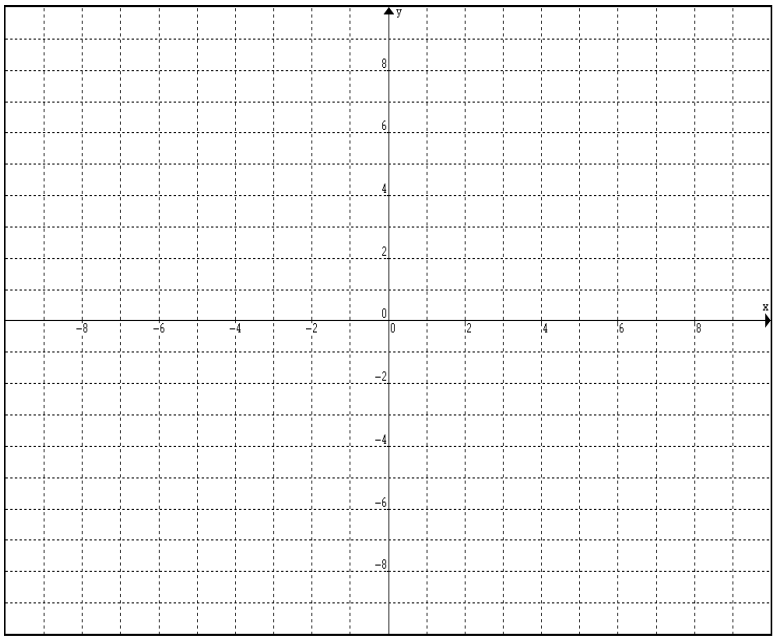
7. $f(x) = -(x+3)^2$

Vertex =
y-intercept : *x*-intercept:



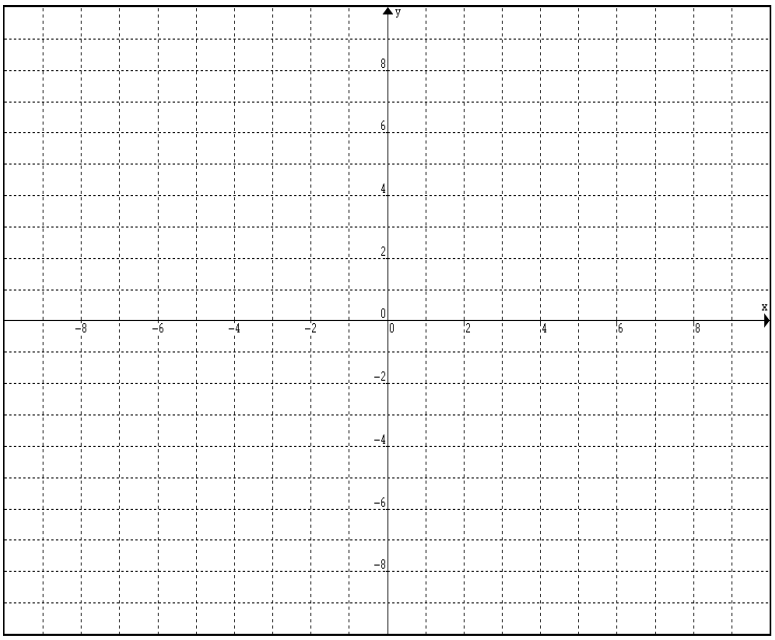
8. $f(x) = -(x-1)^2 - 3$

Vertex =
y-intercept : *x*-intercept:



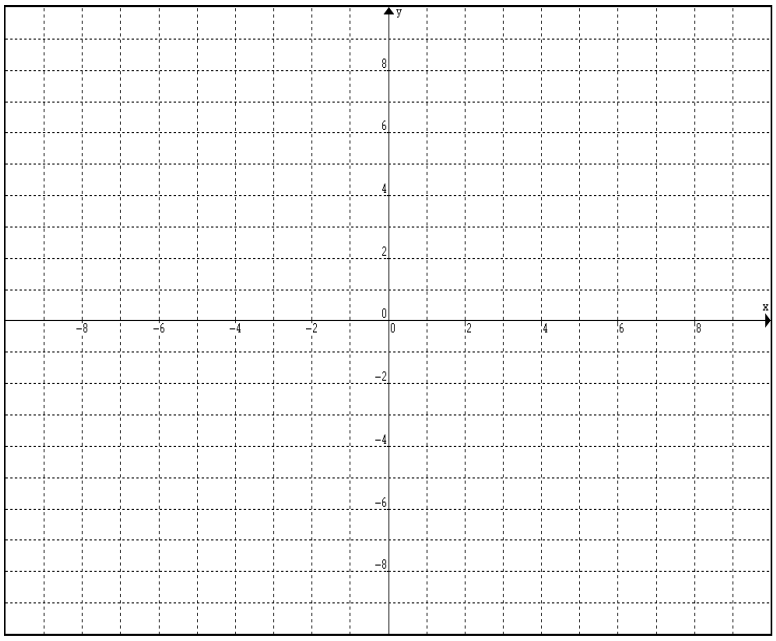
9. $f(x) = 2x^2$

Vertex =
y-intercept : *x*-intercept:



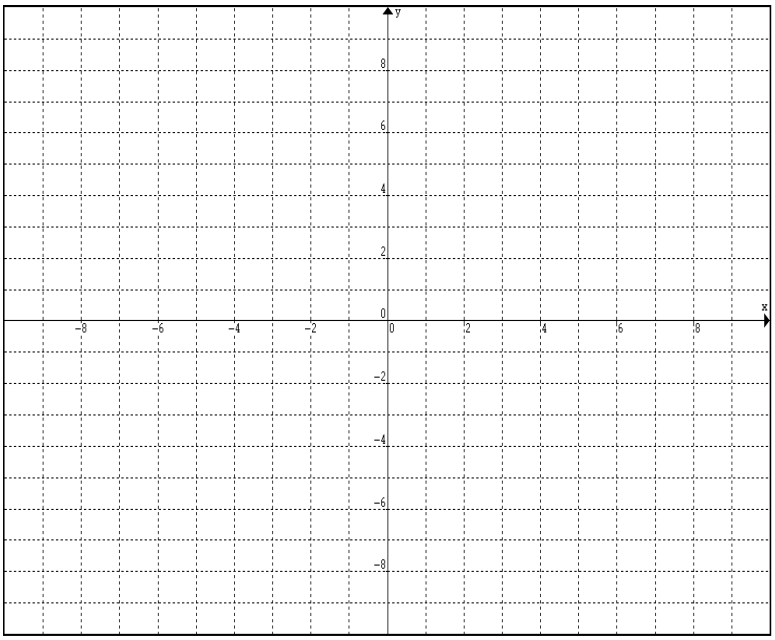
10. $f(x) = -2x^2$

Vertex =
y-intercept : *x*-intercept:



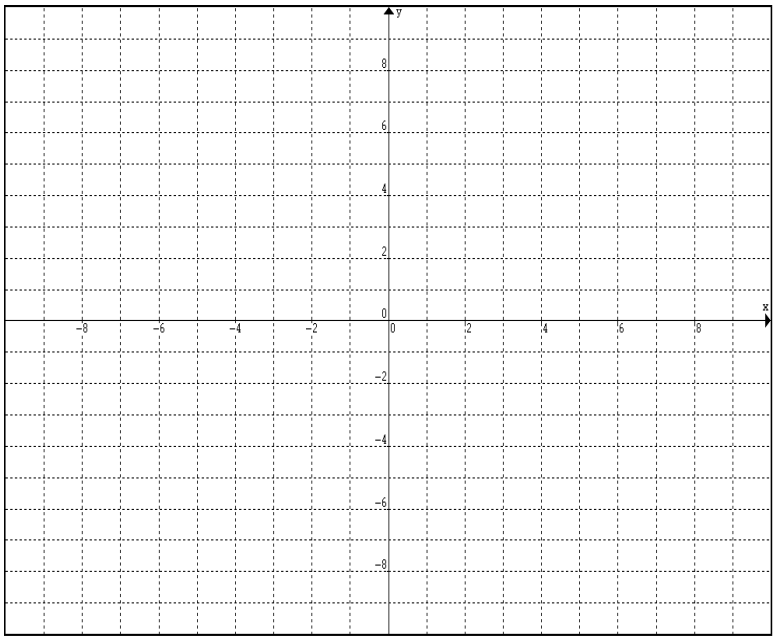
11. $f(x) = 2(x+3)^2 - 6$

Vertex =
y-intercept : *x*-intercept:



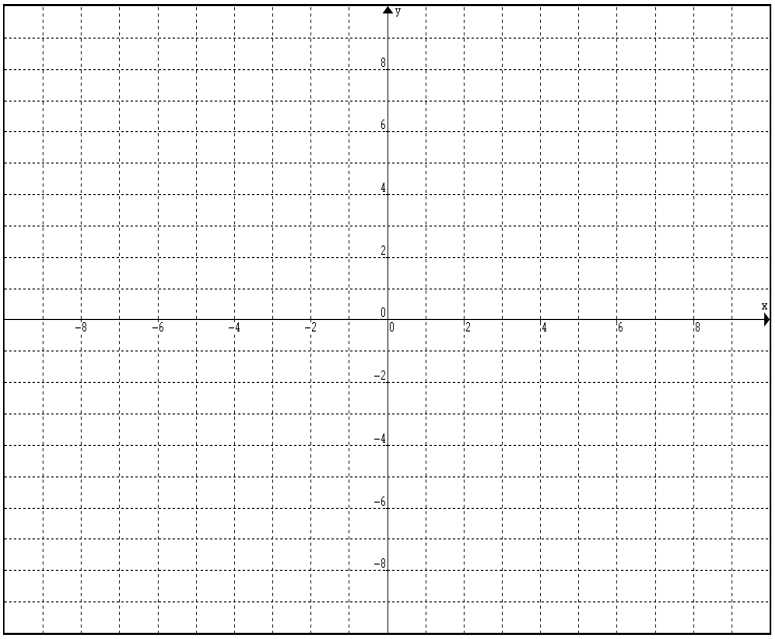
12. $f(x) = -2(x-1)^2 - 2$

Vertex =
y-intercept : *x*-intercept:



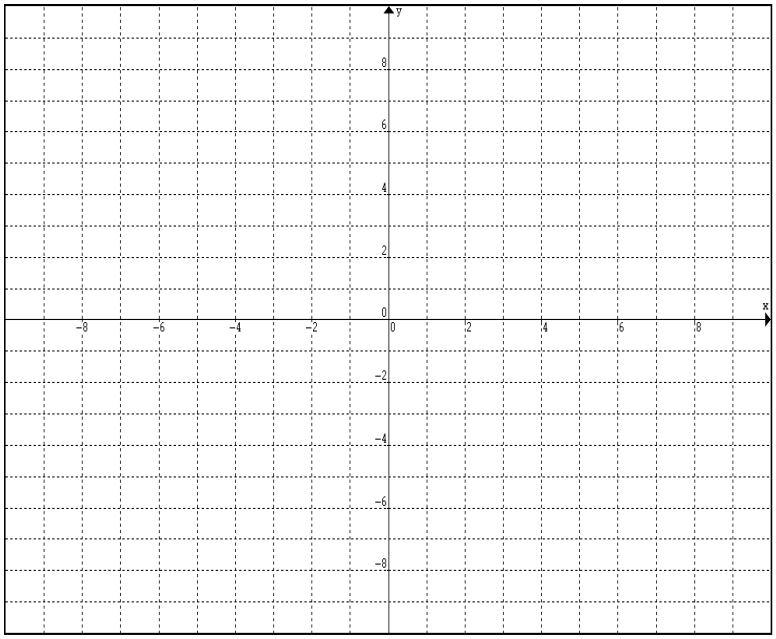
13. $f(x) = x^2 + 4x - 5$

Vertex =
y-intercept : *x*-intercept:



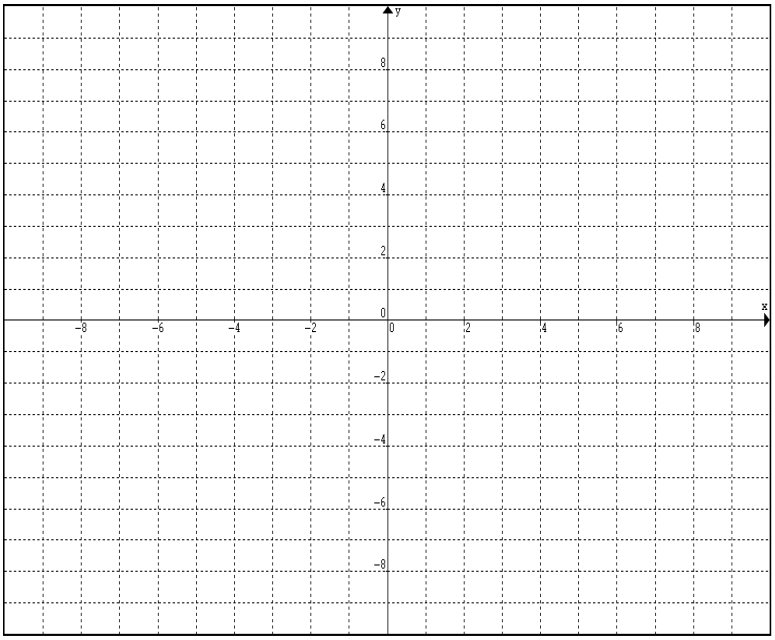
14. $f(x) = x^2 + 6x + 2$

Vertex =
y-intercept : *x*-intercept:



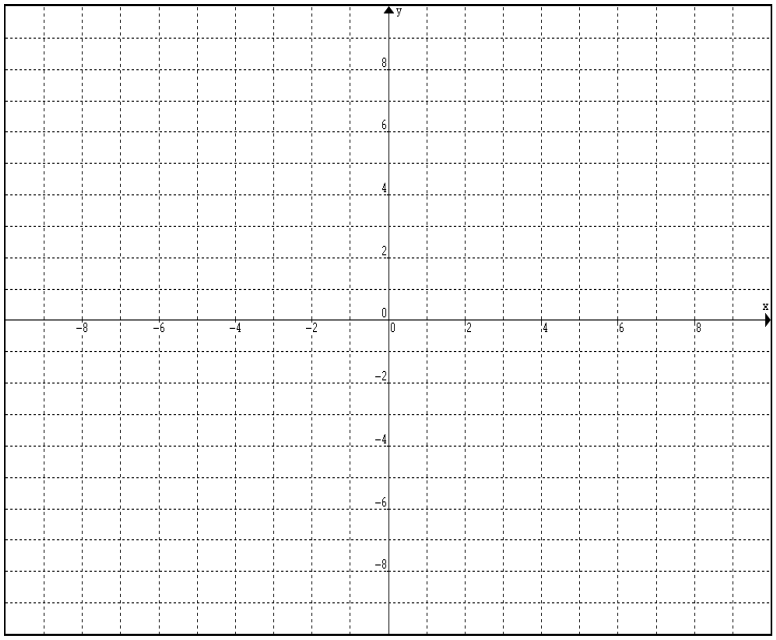
15. $f(x) = x^2 + 4x + 7$

Vertex =
y-intercept : *x*-intercept:



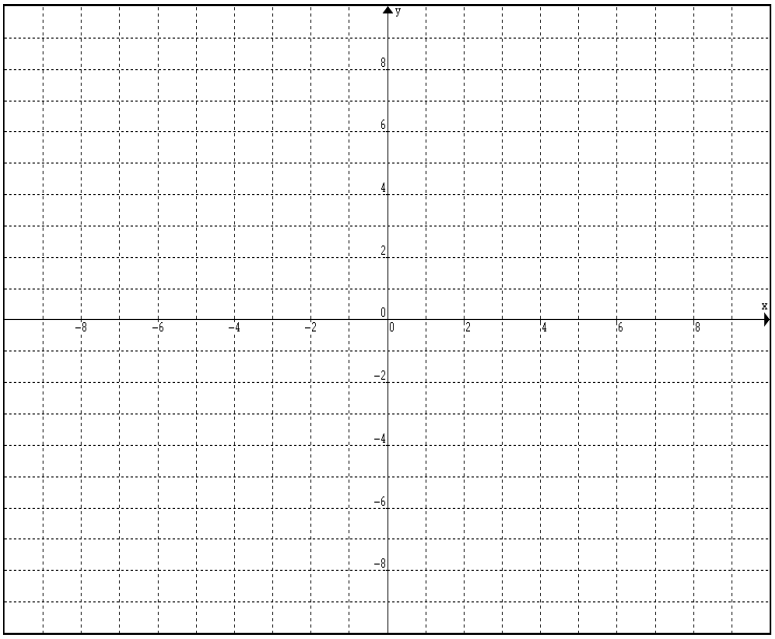
16. $f(x) = x^2 - 6x + 2$

Vertex =
y-intercept : *x*-intercept:



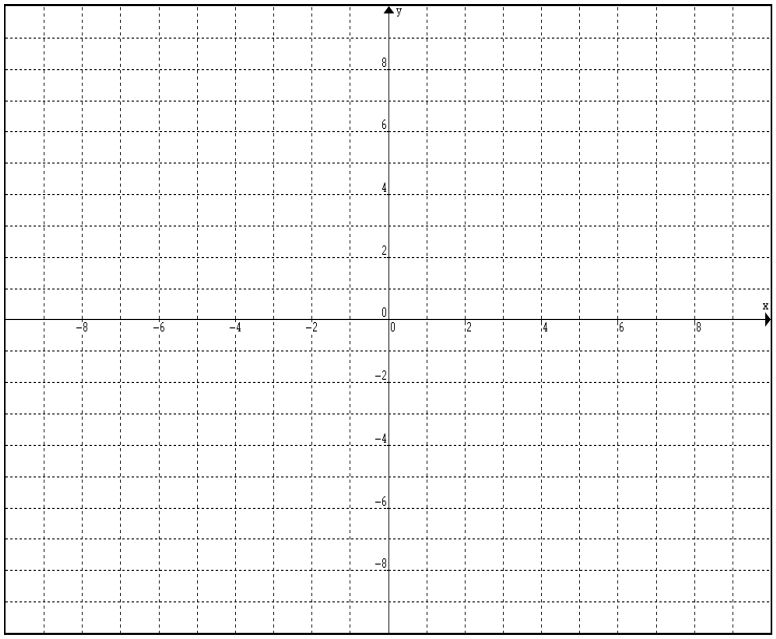
17. $f(x) = -x^2 + 6x - 2$

Vertex =
y-intercept : *x*-intercept:



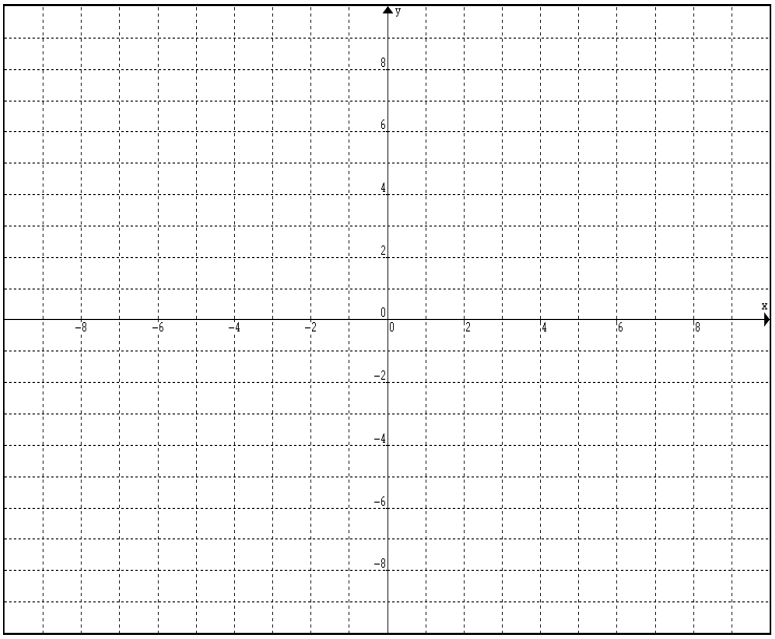
18. $f(x) = -x^2 - 4x - 7$

Vertex =
y-intercept : *x*-intercept:



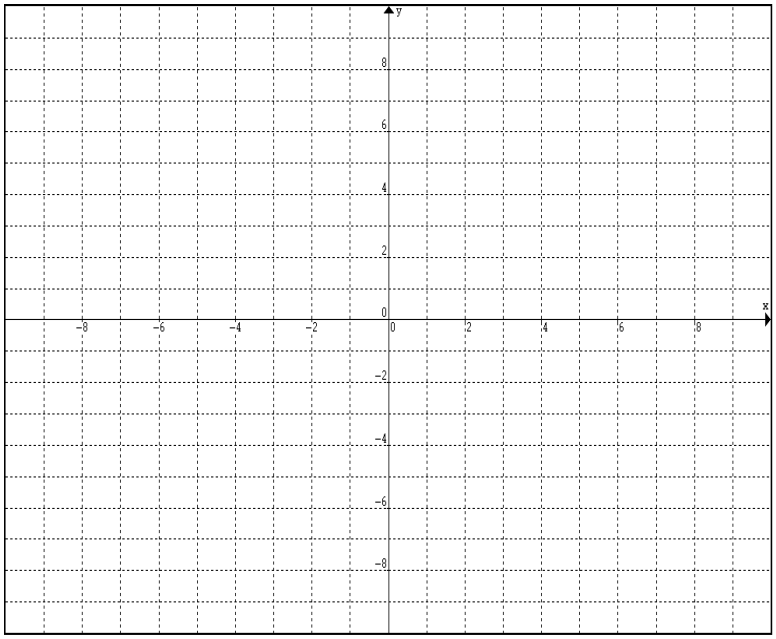
19. $f(x) = -x^2 - 6x - 3$

Vertex =
y-intercept : *x*-intercept:



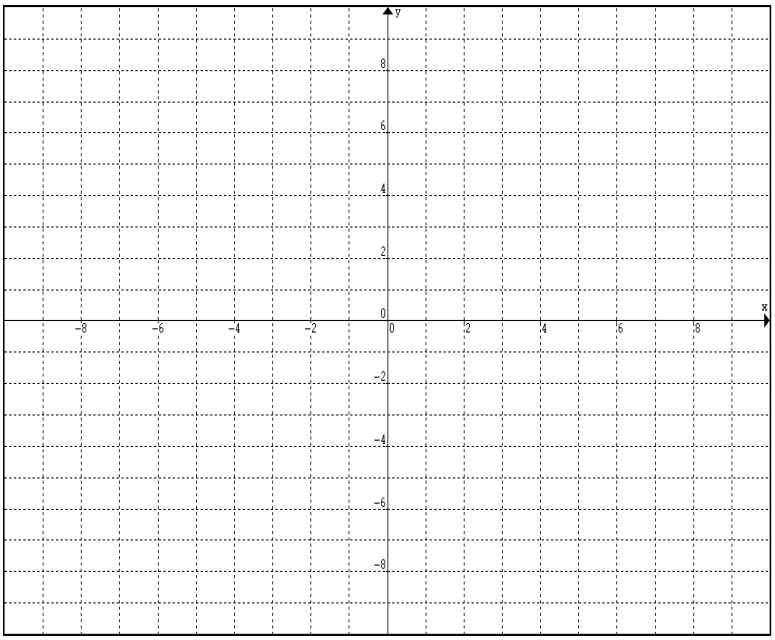
20. $f(x) = -x^2 + 4x + 4$

Vertex =
y-intercept : *x*-intercept:



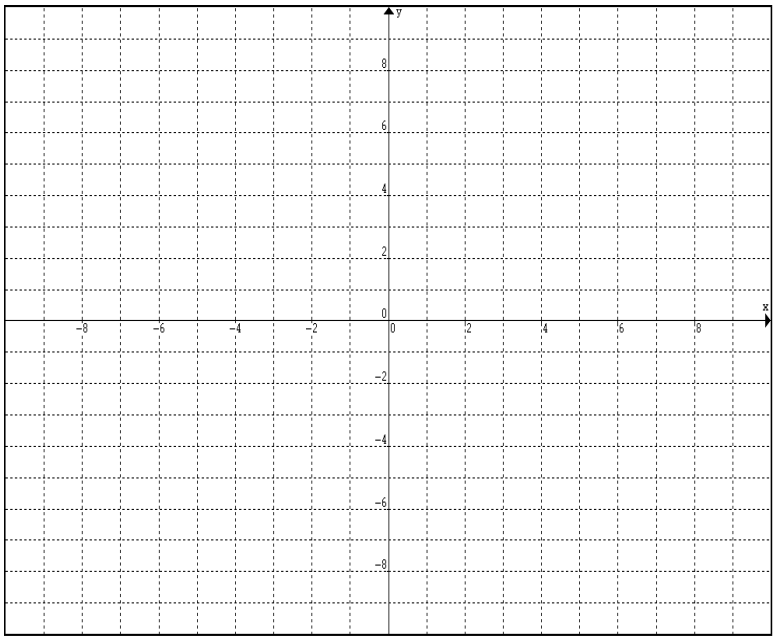
21. $f(x) = 2x^2 - 12x + 9$

Vertex =
y-intercept : *x*-intercept:



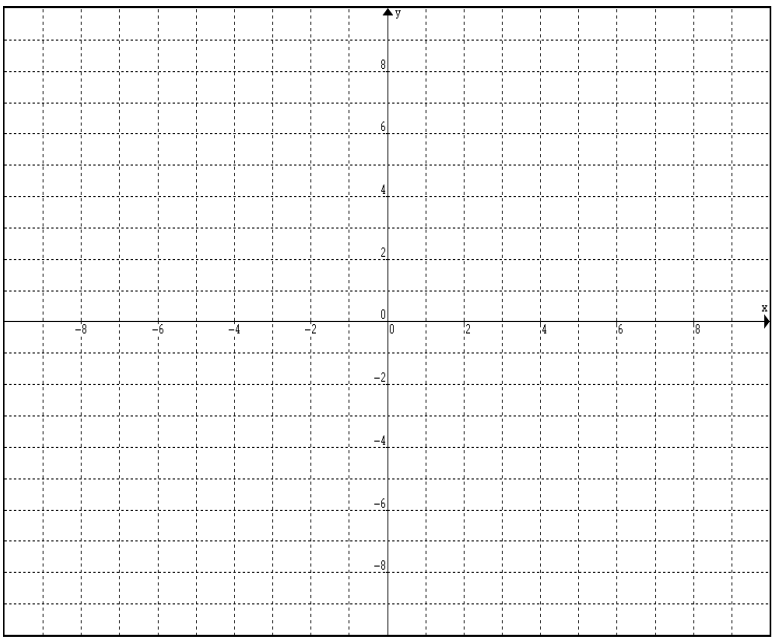
22. $f(x) = 3x^2 + 12x + 4$

Vertex =
y-intercept : *x*-intercept:



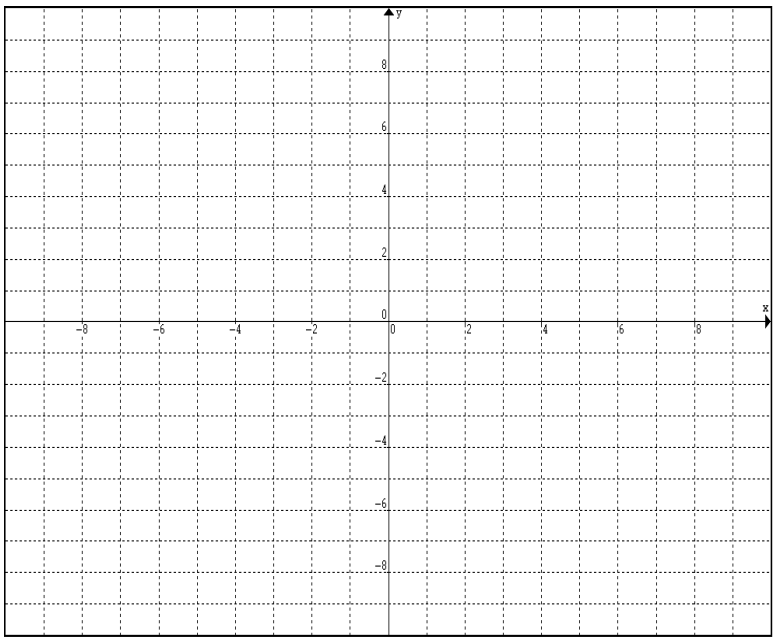
23. $f(x) = 4x^2 - 8x + 2$

Vertex =
y-intercept : *x*-intercept:



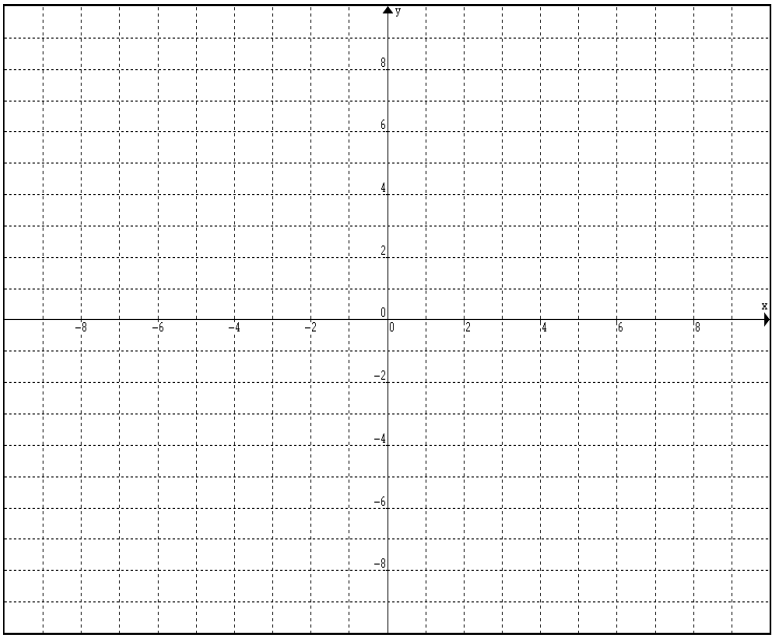
24. $f(x) = 2x^2 + 8x + 2$

Vertex =
y-intercept : *x*-intercept:



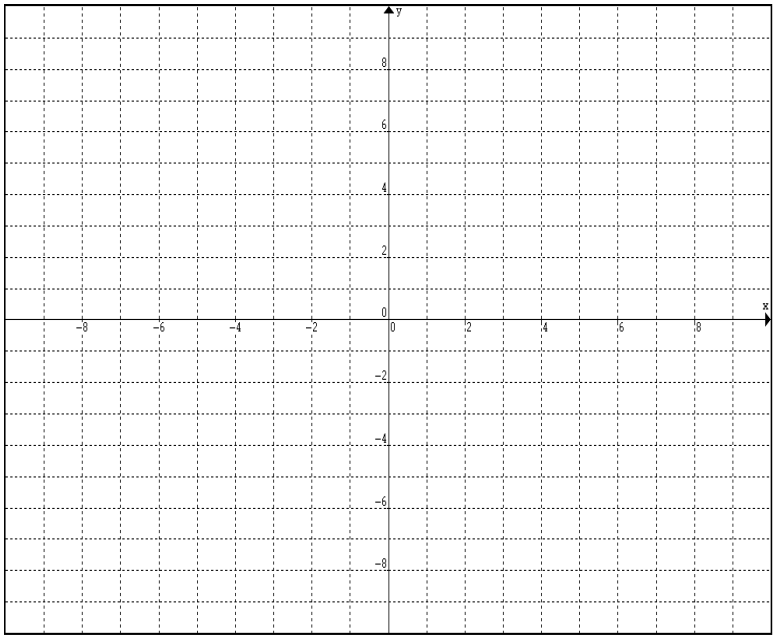
25. $f(x) = -2x^2 + 12x - 10$

Vertex =
y-intercept : *x*-intercept:



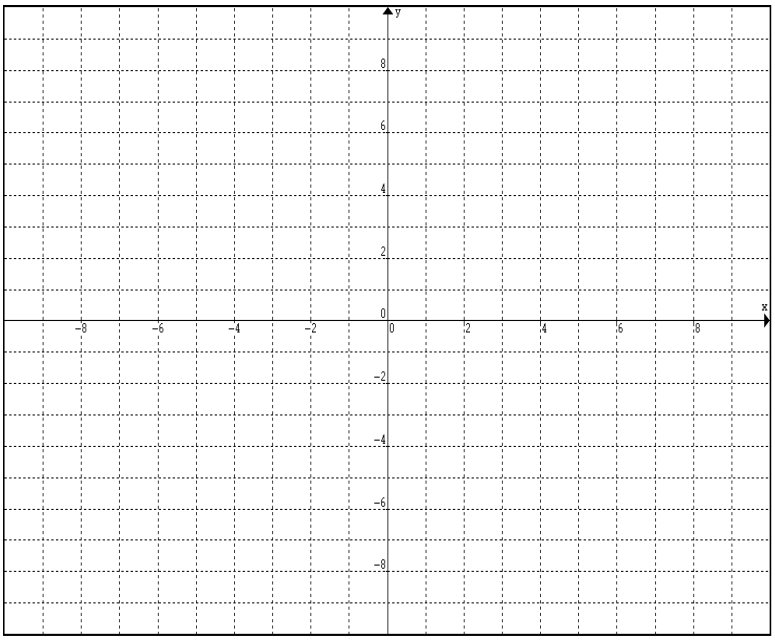
26. $f(x) = -3x^2 - 12x - 5$

Vertex =
y-intercept : *x*-intercept:



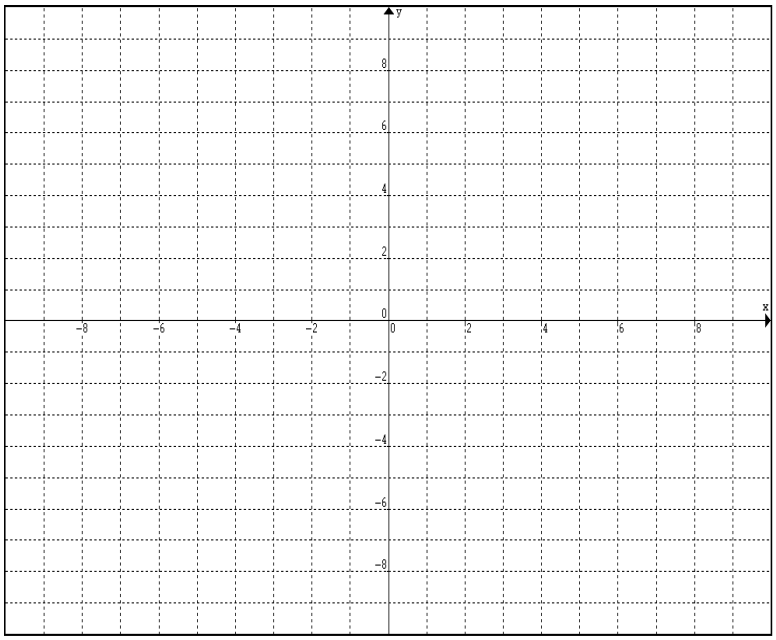
27. $f(x) = -3x^2 + 12x - 2$

Vertex =
y-intercept : *x*-intercept:



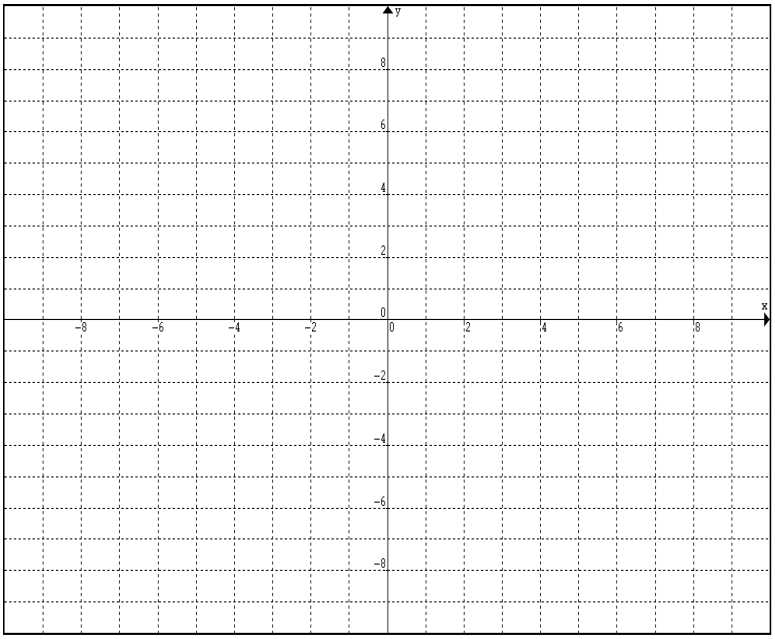
28. $f(x) = -4x^2 - 8x + 3$

Vertex =
y-intercept : *x*-intercept:



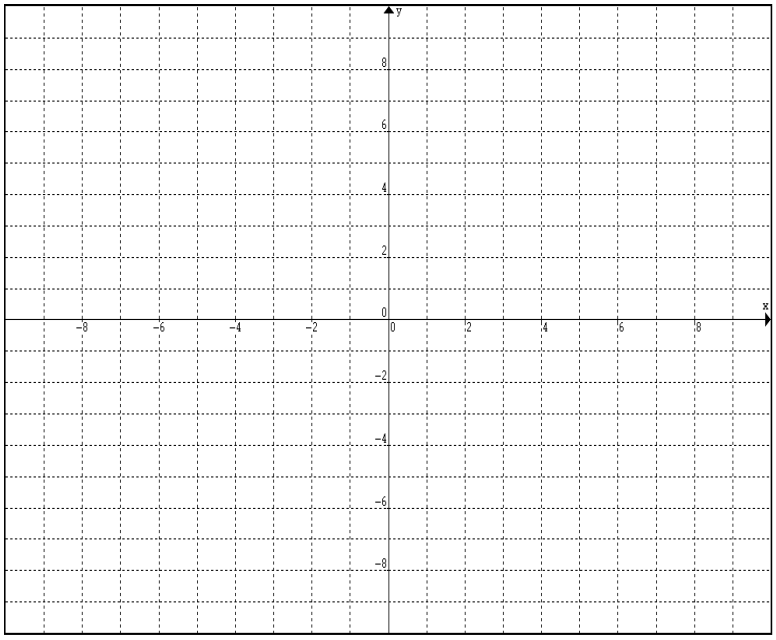
29. $f(x) = 2x^2 - 8x + 10$

Vertex =
y-intercept : *x*-intercept:



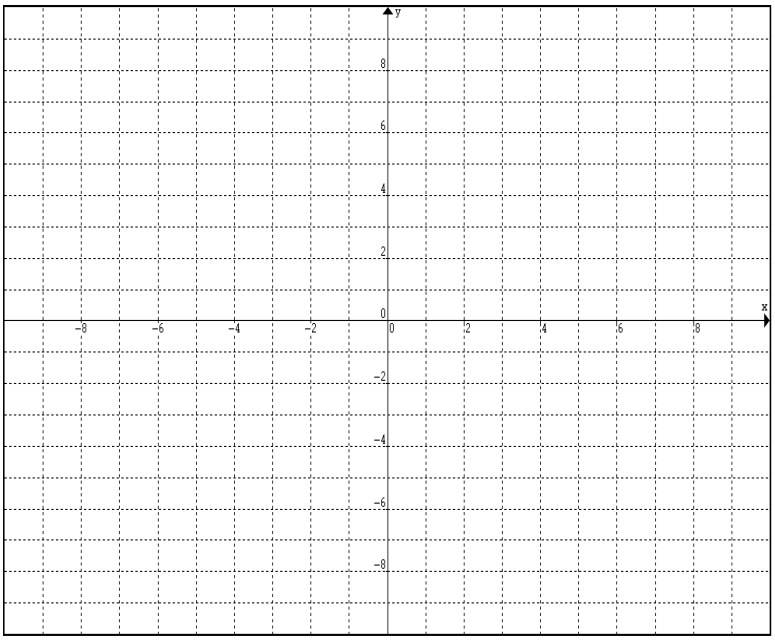
30. $f(x) = -3x^2 - 6x - 7$

Vertex =
y-intercept : *x*-intercept:



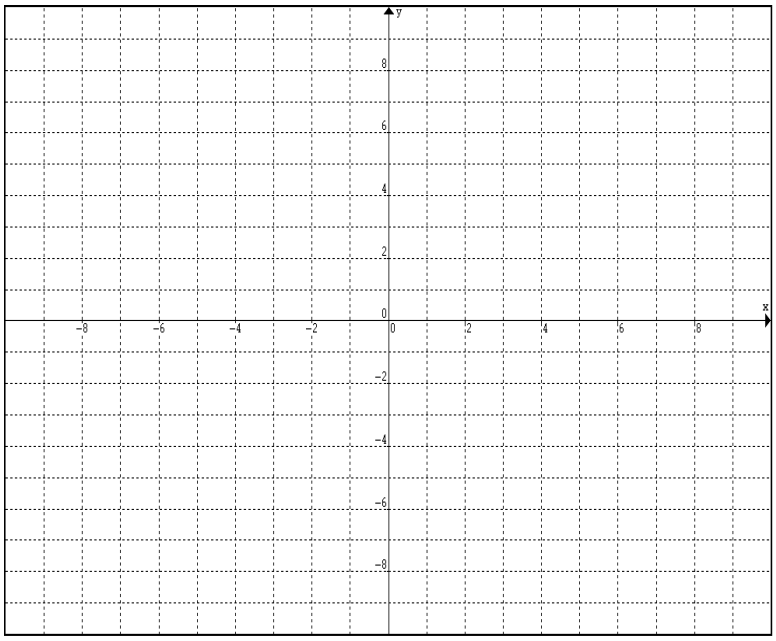
31. $f(x) = -2x^2 + 8x - 8$

Vertex =
y-intercept : *x*-intercept:



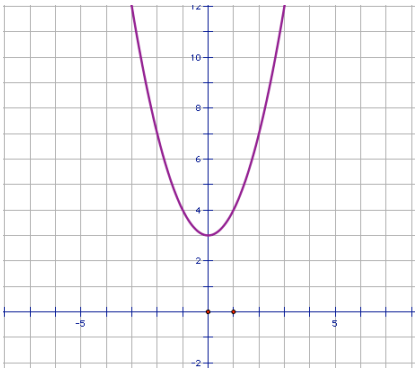
32. $f(x) = 3x^2 + 6x + 3$

Vertex =
y-intercept : *x*-intercept:

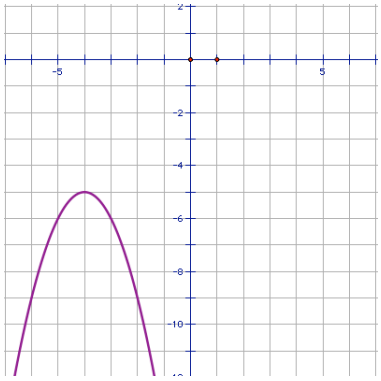


Write an equation of each graph below in the form $f(x) = a(x-h)^2 + k$**.**

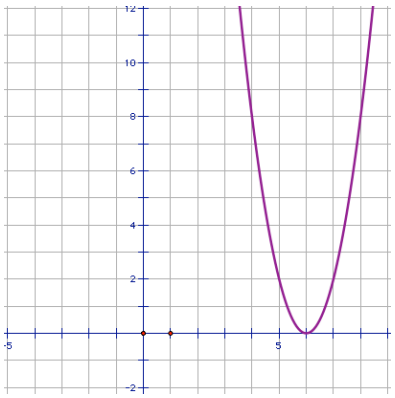
33. $f(x) =$ _____



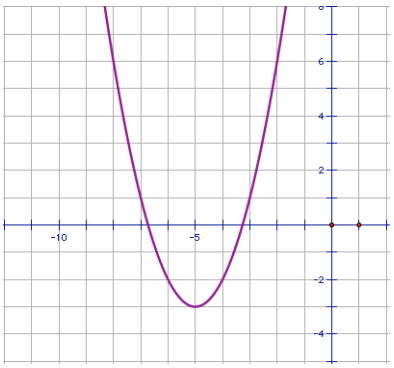
34. $f(x) =$ _____



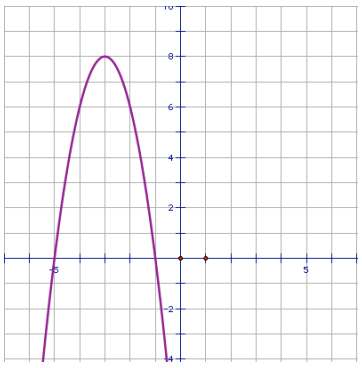
35. $f(x) =$ _____



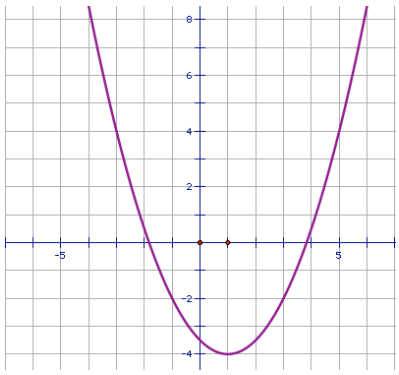
36. $f(x) =$ _____



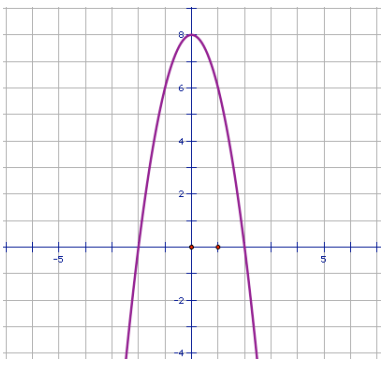
37. $f(x) =$ _____



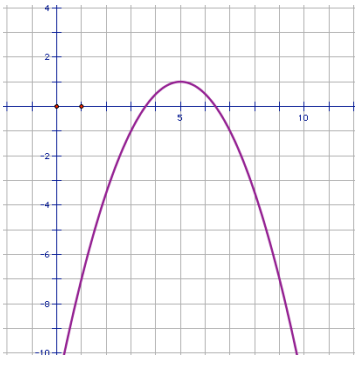
38. $f(x) =$ _____



39. $f(x) =$ _____



40. $f(x) =$ _____



41. $f(x) =$ _____