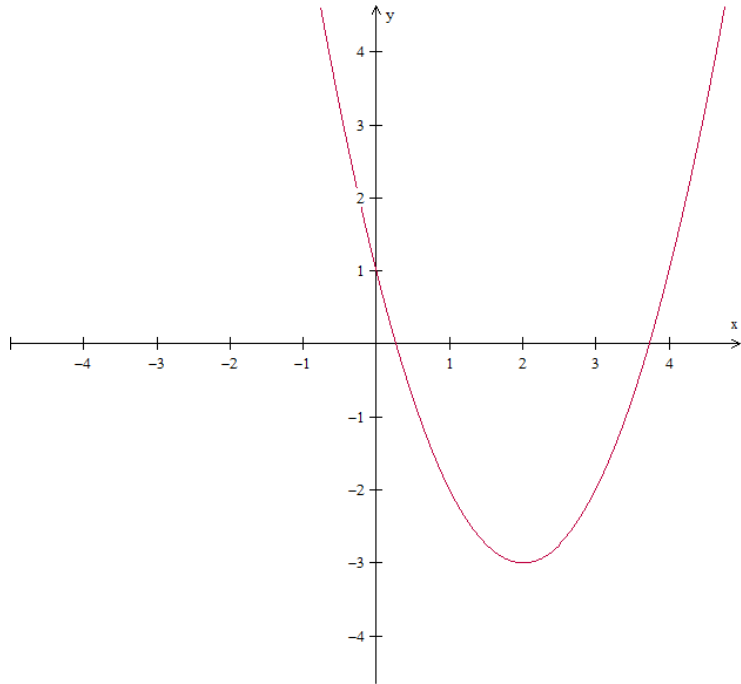


## Homework: Quadratic Functions

In Problems 1-4, the graph of a quadratic function is given. Write the function's equation, selecting from the given functions

1.



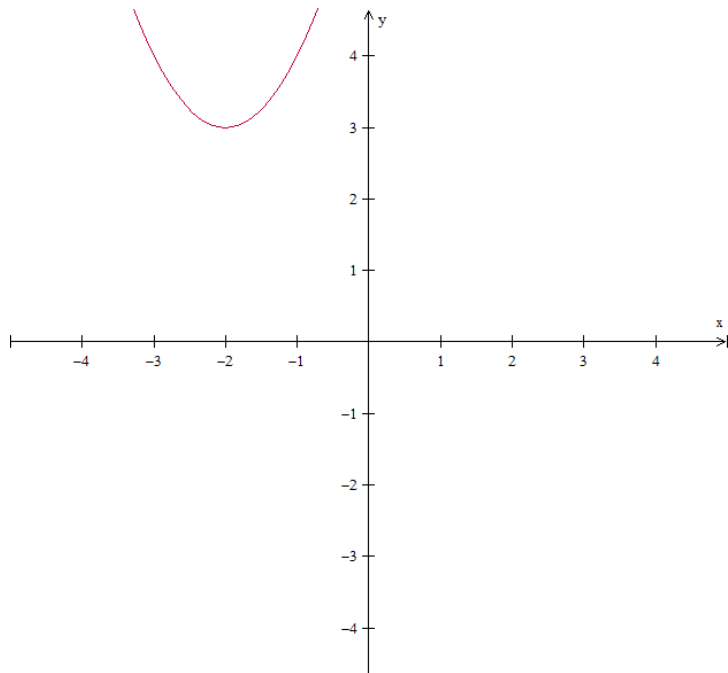
$$f(x) = (x + 2)^2 - 3$$

$$g(x) = (x + 2)^2 + 3$$

$$h(x) = (x - 2)^2 - 3$$

$$j(x) = (x - 2)^2 + 3$$

2.



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

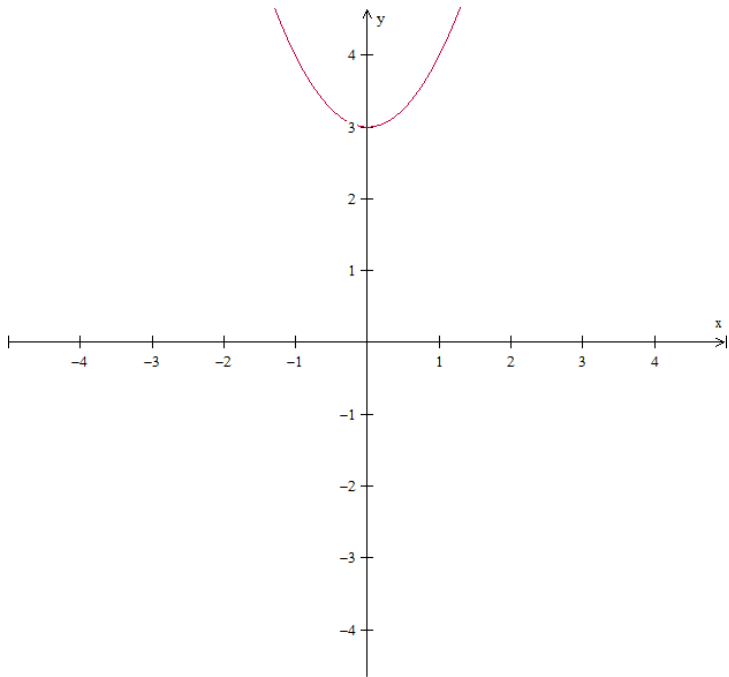
$$g(x) = (x + 2)^2 + 3$$

$$h(x) = (x - 2)^2 - 3$$

$$j(x) = (x - 2)^2 + 3$$

Homework: Quadratic Functions

3.



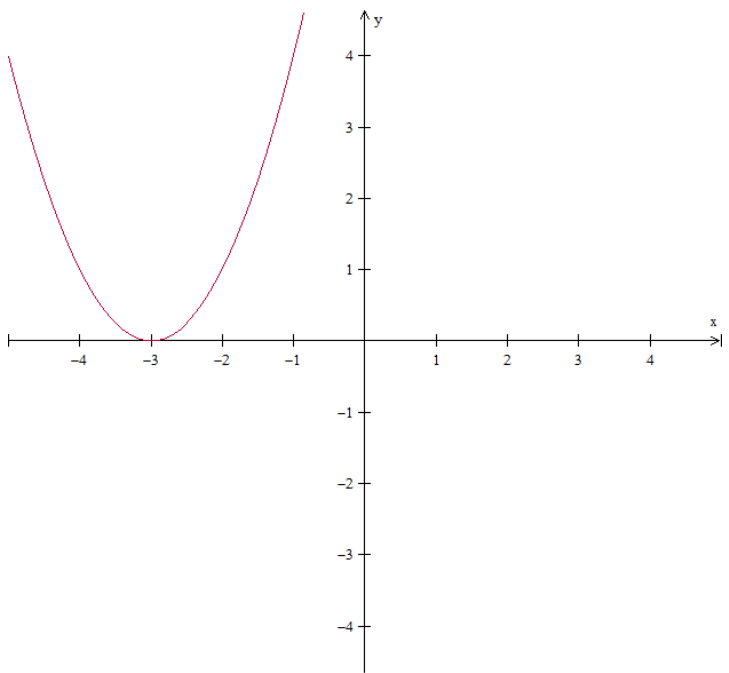
$$f(x) = (x + 3)^2$$

$$g(x) = (x - 3)^2$$

$$h(x) = x^2 - 3$$

$$j(x) = x^2 + 3$$

4.



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

$$g(x) = (x - 3)^2$$

$$h(x) = x^2 - 3$$

$$j(x) = x^2 + 3$$

### Homework: Quadratic Functions

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In Problems 5-8, find the coordinates of the vertex for the parabola defined by the given quadratic function

5. $f(x) = 3(x-1)^2 + 4$	6. $f(x) = -4(x+2)^2 - 3$
7. $f(x) = 2x^2 - 16x + 1$	8. $f(x) = -2x^2 + 4x - 3$

In Problems 9-19, find the vertex, axis of symmetry, min or max, and the graph of the function

9. $f(x) = (x+3)^2 - 5$	10. $f(x) = (x+1)^2 - 2$
11. $f(x) = (x+2)^2$	12. $f(x) = -(x+4)^2 + 2$
13. $f(x) = 1 - (x+2)^2$	14. $f(x) = x^2 + 6x + 8$
15. $f(x) = x^2 + 5x - 2$	16. $f(x) = 3x^2 - 2x + 1$
17. $f(x) = x^2 + 4x + 2$	18. $f(x) = 2x^2 - 8x + 1$
19. $f(x) = -3x^2 - x + 2$	

In Problems 20-22, find the minimum or maximum value of the function

20. $f(x) = 5x^2 - 15x + 2$	21. $f(x) = x^2 - 7x + 3$
22. $f(x) = 8x^2 - 8x$	