

Solve the quadratic by factoring.

1. $2x^2 + 5x - 3 = 0$

2. $3x^2 - 18x = 0$

3. $5x^2 - 2x - 6 = -3x^2 + 6x$

4. $5x^2 = 35x$

Write a quadratic function whose graph has the given characteristics.

5. Vertex (3 , -2)
Point (7 , 6)

6. x-intercepts: -4 and 1
Point (-3 , -4)

7. x-intercepts: - 3 and - 2
Point (- 4 , - 6)

8. Vertex (-4 , - 2)
Point (- 3 , - 1)

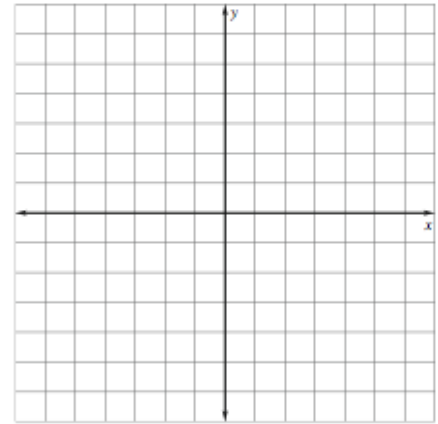
Graph the quadratic function and the line of symmetry. Identify the vertex and axis of symmetry.

9. $y = -2x^2 + 4x$

Axis of Symmetry: _____

Vertex: _____

x					
y					

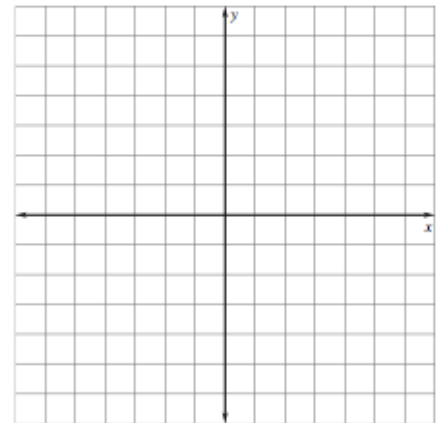


10. $y = -x^2 - 3$

Axis of Symmetry: _____

Vertex: _____

x					
y					

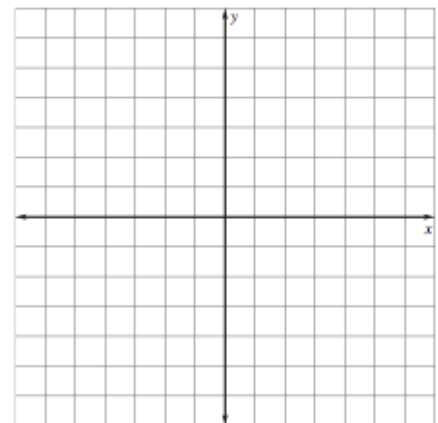


11. $y = (x+1)^2 + 3$

Axis of Symmetry: _____

Vertex: _____

x					
y					

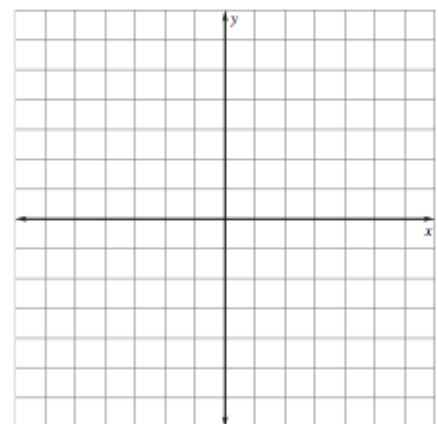


12. $y = -(x-3)(x+1)$

Axis of Symmetry: _____

Vertex: _____

x					
y					



Factor the polynomial completely.

13. $x^2 - 10x$

14. $81y^2 - 16x^2$

15. $2x^2 + 4x - 30$

16. $x^2 - x = 110$

17. $x^2 + x - 6$

18. $2x^2 + 16x$

Factor and solve.

19. $8x^4 = 6x^2 - 1$

20. $x^2 = 256$

21. $x^2 - 5x = 0$

22. $4x^2 + 4x = -1$

23. $x^2 - 2x - 15 = 0$

24. $18x^2 - 2 = 0$