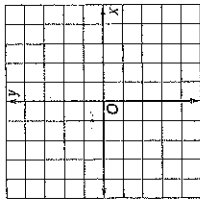


9-1 Skills Practice

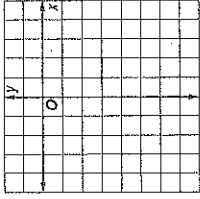
Graphing Quadratic Functions

Use a table of values to graph each function. State the domain and the range.

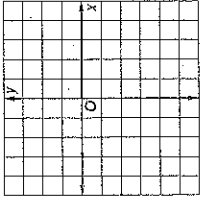
1. $y = x^2 - 4$



3. $y = x^2 - 2x - 6$



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



Find the vertex, the equation of the axis of symmetry, and the y-intercept.

4. $y = 2x^2 - 8x + 6$

6. $y = -3x^2 - 12x + 3$

Consider each equation.

- a. Determine whether the function has a *maximum* or a *minimum* value.
- b. State the maximum or minimum value.

c. What are the domain and range of the function?

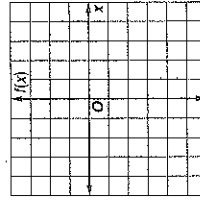
7. $y = 2x^2$

8. $y = x^2 - 2x - 5$

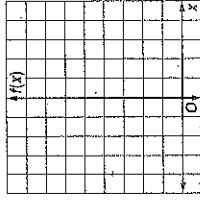
9. $y = -x^2 + 4x - 1$

Graph each function.

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



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

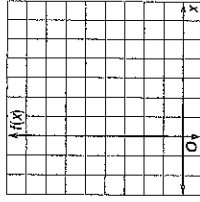


9-2 Skills Practice

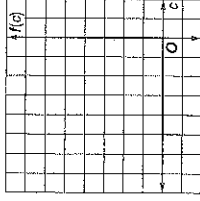
Solving Quadratic Equations by Graphing

Solve each equation by graphing.

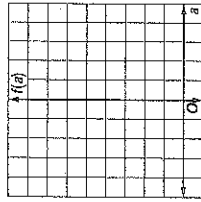
1. $x^2 - 2x + 3 = 0$



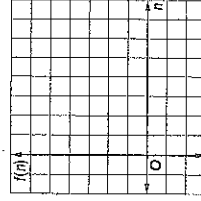
2. $c^2 + 6c + 8 = 0$



3. $a^2 - 2a = -1$

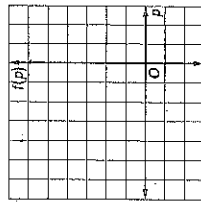


4. $n^2 - 7n = -10$

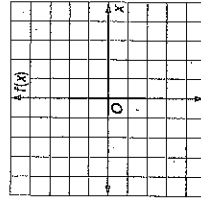


Solve each equation by graphing. If integral roots cannot be found, estimate the roots to the nearest tenth.

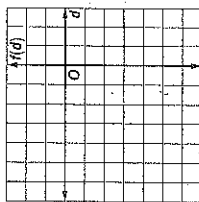
5. $p^2 + 4p + 2 = 0$



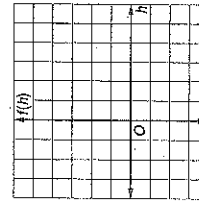
6. $x^2 + x - 3 = 0$



7. $d^2 + 6d = -3$



8. $h^2 + 1 = 4h$



Skills Practice

Transformations of Quadratic Functions

Describe how the graph of each function is related to the graph of $f(x) = x^2$.

1. $g(x) = x^2 + 2$

2. $h(x) = -1 + x^2$

3. $g(x) = x^2 - 8$

4. $h(x) = 7x^2$

5. $g(x) = \frac{1}{5}x^2$

6. $h(x) = -6x^2$

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

8. $h(x) = 5 - \frac{1}{2}x^2$

9. $g(x) = 4x^2 + 1$

9-4 Skills Practice

Solving Quadratic Equations by Completing the Square

Find the value of c that makes each trinomial a perfect square.

1. $x^2 + 6x + c$

2. $x^2 + 4x + c$

3. $x^2 - 14x + c$

4. $x^2 - 2x + c$

5. $x^2 - 18x + c$

6. $x^2 + 20x + c$

7. $x^2 + 5x + c$

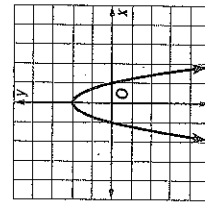
8. $x^2 - 70x + c$

9. $x^2 - 11x + c$

10. $x^2 + 9x + c$

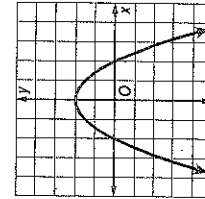
Match each equation to its graph.

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

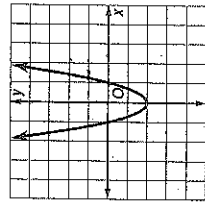


C.

11. $y = \frac{1}{2}x^2 - 2$



13. $y = -2x^2 + 2$



D.

Solve each equation by completing the square. Round to the nearest tenth if necessary.

11. $x^2 + 4x - 12 = 0$

12. $x^2 - 8x + 15 = 0$

13. $x^2 + 6x = 7$

14. $x^2 - 2x = 15$

15. $x^2 - 14x + 30 = 6$

16. $x^2 + 12x + 21 = 10$

17. $x^2 - 4x + 1 = 0$

18. $x^2 - 6x + 4 = 0$

19. $x^2 - 8x + 10 = 0$

20. $x^2 - 2x = 5$

21. $2x^2 + 20x = -2$

22. $0.5x^2 + 8x = -7$