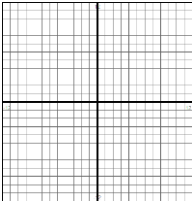


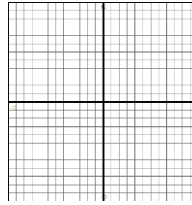
Chapter 2 Review B

Describe the transformation of $f(x) = x^2$ represented by g . Then graph each function.

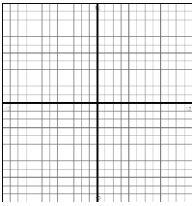
1. $g(x) = -x^2 + 4x + 5$



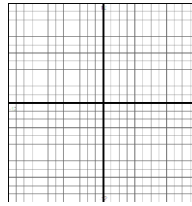
2. $g(x) = \frac{1}{4}(x - 4)^2 + 2$



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



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



5. The graph of g is a translation 5 units down, followed by a vertical stretch of 2 of the graph $f(x) = x^2$. Write a rule for g .
6. The graph of g is a translation 2 unit left and 3 units up, followed by a reflection across the x -axis of the graph $f(x) = x^2 + 1$. Write a rule for g .
7. The graph of g is a translation 6 units left, followed by a vertical stretch of 2 of the graph $f(x) = (x + 2)^2 - 3$. Write a rule for g .
8. The graph of g is a translation 4 units left and 5 units up, followed by a reflection across the x -axis of the graph $f(x) = (x - 1)^2 + 4$. Write a rule for g .
9. The graph of g is a translation 7 units right, 6 units up, followed by a vertical shrink of $\frac{1}{2}$ of the graph $f(x) = 2(x + 2)^2 - 2$. Write a rule for g .
10. The graph of g is a translation 5 units right and 2 units up, vertical stretch of 2, followed by a reflection across the x -axis of the graph $f(x) = -3(x - 2)^2 + 8$. Write a rule for g .

Find the vertex, the axis of symmetry, the minimum value or maximum value of the function, and the domain and range of the function.

11. $f(x) = -3(x + 1)^2 - 4$

Vertex: _____ AS: _____

Min or Max: _____

Domain: _____ Range: _____

12. $h(x) = 2x^2 + 8x - 7$

Vertex: _____ AS: _____

Min or Max: _____

Domain: _____ Range: _____

13. $f(x) = 3x^2 + 12x - 7$

Vertex: _____ AS: _____

Min or Max: _____

Domain: _____ Range: _____

14. $h(x) = 3(x + 2)^2 + 5$

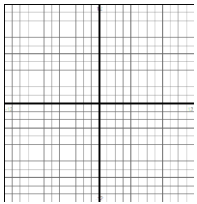
Vertex: _____ AS: _____

Min or Max: _____

Domain: _____ Range: _____

Graph the function.

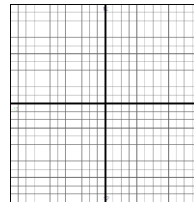
15. $f(x) = -(x + 4)(x - 2)$



x-intercepts: _____

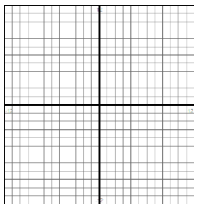
Vertex: _____ AS: _____

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



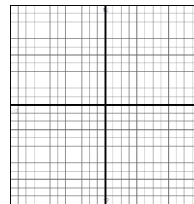
Vertex: _____ AS: _____

17. $f(x) = (x - 5)(x + 1)$



Vertex: _____ AS: _____

18. $f(x) = 3x^2 + 18x + 16$



x-intercepts: _____

Vertex: _____ AS: _____

Write the equation of the quadratic with the given characteristics for #19-26.

19. passes through $(-3,4)$ and has a vertex $(-2,3)$

20. x -intercepts: -3 and 4 ; passes through $(-1,2)$

21. x -intercepts: -3 and 3 ; passes through $(0,-6)$

22. passes through $(1,3)$ and has a vertex $(2,-4)$

23. passes through $(3,11)$ and has a vertex $(1,3)$

24. x -intercepts: -3 and 1 ; passes through $(2,7)$

25. x -intercepts: 4 and -2 ; passes through $(2,5)$

26. passes through $(-2,8)$ and has a vertex $(-4,5)$