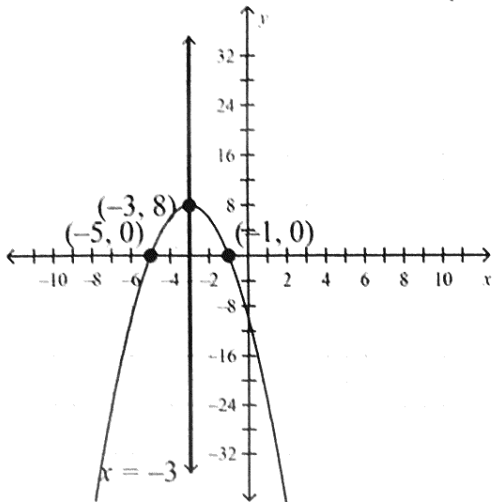
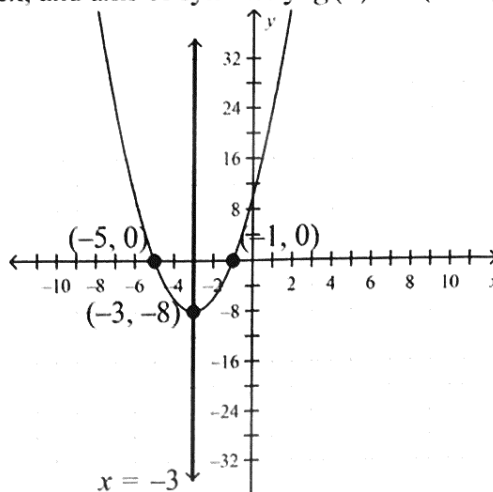


4. Graph the function and label the x-intercept(s), vertex, and axis of symmetry: $g(x) = 2(x - 5)(x - 1)$

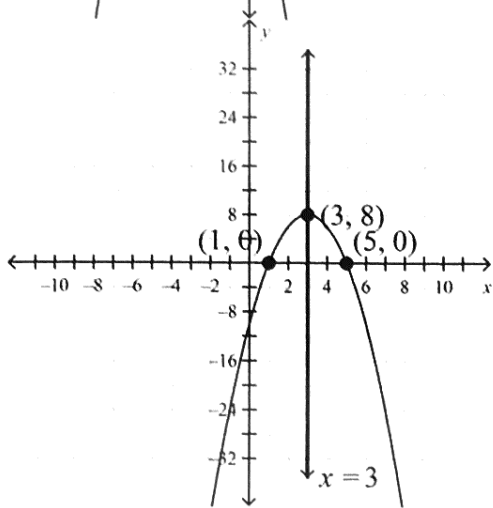
A.



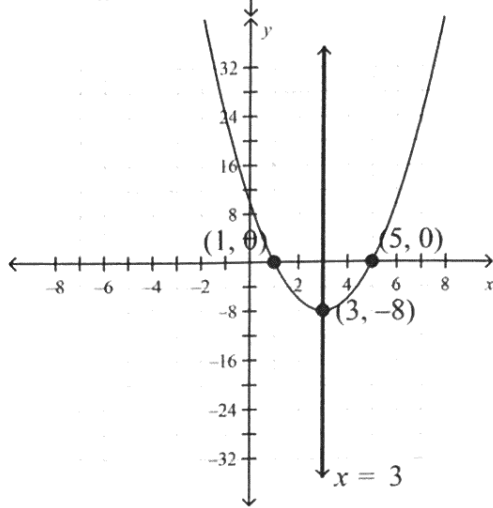
C.



B.



D.



5. Solve the equation: $2(x + 9)^2 - 3 = 2$

A. $x = -9 \pm \frac{\sqrt{10}}{2}$

B. $x = -19$ and $x = 1$

C. $x = 9 \pm \frac{\sqrt{10}}{2}$

D. $x = -9 \pm \sqrt{10}$

11. Solve the inequality: $x^2 + 10x > -16$

A. $x < -8$ or $x > -2$

B. $2 < x < 8$

C. $-8 < x < -2$

D. $x < 2$ or $x > 8$

12. Write a function g whose graph represents the indicated transformation of the graph of f : $f(x) = -2x + 8$; translation 3 units left

13. Write a function g whose graph represents the indicated transformation of the graph of f : $f(x) = |x|$; a translation 4 units to the right followed by a reflection in the x -axis

14. Let the graph of g be a horizontal shrink by a factor of $\frac{1}{2}$, followed by a translation 3 units down of the graph of $f(x) = |x|$. Write a rule for g .

15. Let g be a reflection in the x -axis and a vertical stretch by a factor of 3, followed by a translation 4 units down and 1 unit right of the graph of $f(x) = |x|$. Write a rule for g .

16. A racetrack charges \$85 for each seat in the lower section, \$50 for each seat in upper sections, and \$35 for field tickets. There are two times the amount of seats in the upper section as compared to the lower section. The revenue from selling all 19,500 seats is \$802,500. Write a system to represent the situation.

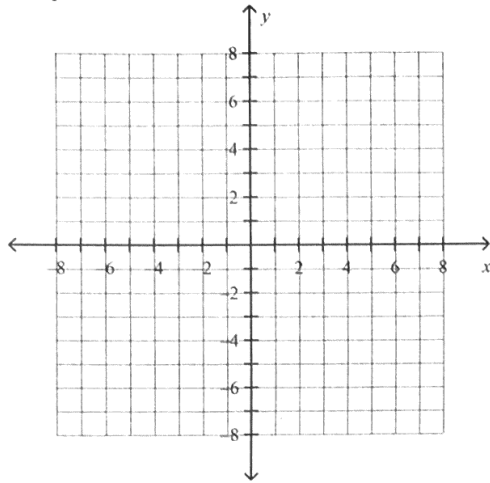
17. Solve the system:

$$3x + 5y + 4z = 13$$

$$5x + 2y + 3z = -9$$

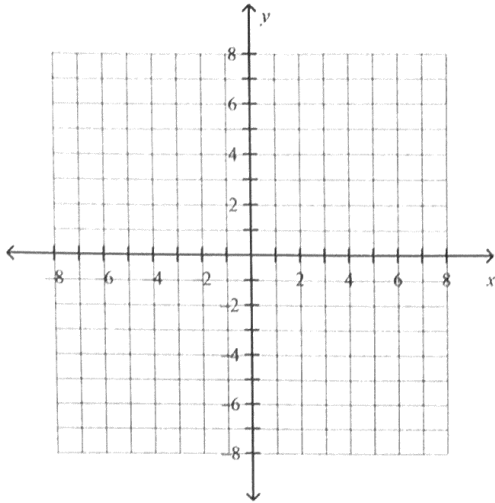
$$6x + 3y + 4z = -8$$

18. Graph the function and label the vertex and axis of symmetry: $g(x) = -4(x + 2)^2 + 5$



19. Write an equation of the parabola in intercept form that has x-intercepts of 5 and -4 and passes through $(-5, 1)$

20. Graph the function and label the vertex and axis of symmetry: $g(x) = -\frac{1}{2}x^2 - 3x + 2$



21. Find the zero(s) of the function: $h(x) = 2x^2 - 24x + 54$

22. Solve the equation: $-3x + 2 = -4x^2$

23. Solve the equation: $p^2 - 5p = 0$

24. Solve the equation: $x^2 + 4x + 11 = 0$

25. Perform the operation and write the answer in standard form: $(-6 + 15i) + (12 - 4i)$

26. Perform the operation and write the answer in standard form: $(6 + 4i)^2$

27. Solve the system:

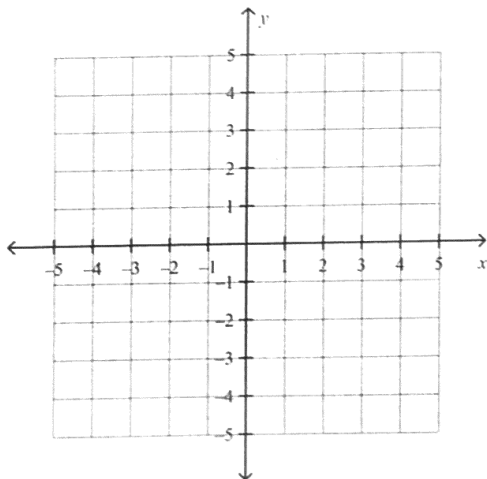
$$y = x^2 - 2x + 9$$

$$y = 2x + 5$$

28. Graph the system of quadratic inequalities:

$$y \geq -3x^2$$

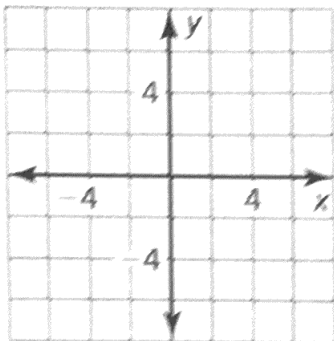
$$y < x^2 - 2$$



29. Graph the system of quadratic inequalities:

$$y + x^2 \leq 2$$

$$y - x^2 - 2x + 6 > 0$$



30. Solve the inequality: $x^2 + 11x + 24 > 0$