Name: _____

Algebra I Assessment for Pre AP Geometry

1. Evaluate $-3b^2 + 2ab$ when a = 5 and b = -2.

2. Simplify 5(x + 4) - (2x + 6).

3. Simplify the expression 2(x + 1) - 3(3x + 6).

4. Simplify the expression $\frac{2}{3}(3x-15y)+(9y-11x)$.

5. Simplify the expression (5n – 2)3n – (5n – 2)(n – 1).

6. Determine the solution for $\frac{1}{2}$(4x - 8) = 8.

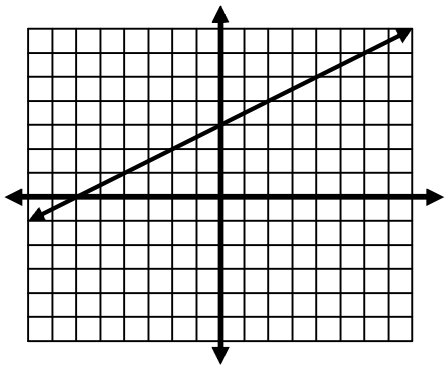
7. Find the solution for 3x - 2 = 6x + 7.

8. Solve 3(1 - x) - (3 + x) = 8 for x.

9. Solve for x: $5 \leq \frac{1}{2}x - 1 \leq 8$.

10. Solve for y in terms of x. 2y – 4x = 14.

11. Which linear function best describes the graph?



12. Which function includes the data set {(2, 4), (6, 6), (12, 9)}?

A) $y = \frac{x}{2} + 3$

C) $y = 2x$

B) $y = 2x - 9$

D) $y = \frac{x}{2}$

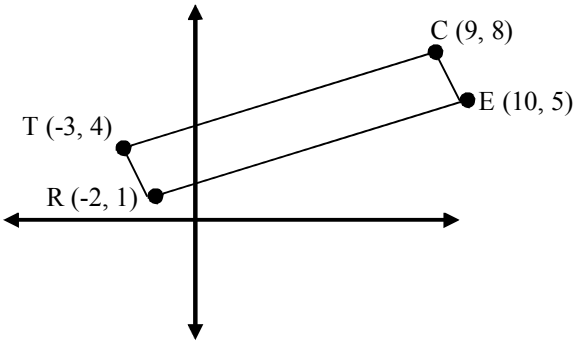
13. Find the slope for the line that passes through (1, 7) and (10, 15).

14. Find the y-intercept of the equation $3x + 2y = 12$.

15. Write the equation of the line passing through the points (6, -7) and (10, -7).

16. Write the equation of a vertical line that passes through the point (10, -5).

17. Is line RE parallel to line TC?



18. Write the equation of a line that has a y-intercept of 2 and a slope of 4.

19. Write the equation of a line that is parallel to $y = 10x - 6$ and has a y-intercept of 1.

20. Write the equation of a line that is perpendicular to $2y = x + 16$ and passes through (1, -5).

21. Write the equation of a line that where $b = 2$ and is perpendicular to the line containing (-4, 6) and (1, 11).

22. Write an equation of a line whose slope is zero.

Solve the following systems.

23. $5x + y = 6$
$-5x + 3y = -22$

24. $-5x + y = -1$
$-3x + y = 1$

25. $6x - 7y = 25$
$3x + 16y = -7$

26. $y = -2x - 1$
$-4x - 2y = -5$

Factor the following.

27. $x^2 + 18x + 45$

28. $x^2 - 10x - 24$

29. $x^2 + 25x + 100$

30. $6x^2 - 7x - 5$

31. $4x^2 + 25x - 21$

32. If the perimeter of the rectangle is 134, find the value of a.