

Name \_\_\_\_\_

Geometry

Summer Review Packet

Complete each problem. Label answers when appropriate. Show your work.

1. Solve:  $7x - 8(x + 3) = 1$

2. Solve:  $4n - (-5 - n) = -3(n + 1)$

3. Solve:  $-x + \frac{3}{4} = -\frac{2}{3}x - \frac{5}{4}$

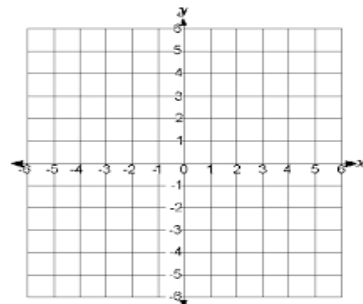
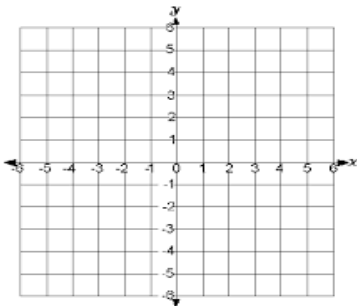
4. Solve for  $b$ :  $2b - 1 = 6a - (b + 5)$

5. Draw and label an example of the four different kinds of slope.

6. Determine the slope of the line passing through the points  $(-3, 3)$ ,  $(1, 1)$ .

7. Graph the line:  $-6x + 3y = -18$

8. Graph the line:  $y = -\frac{2}{3}x + 4$



9. Given:  $y = \frac{1}{3}x + 4$ , a. write a line that is parallel to the given line \_\_\_\_\_  
b. write a line that is perpendicular to the given line \_\_\_\_\_

10. What are the 2 pieces of information that you need to have in order to write the equation of a line?

11. Write the equation of the line in slope-intercept form when  $m = -\frac{2}{5}$  with a point  $(0, 6)$ .

12. Write the equation of the line that passes through  $(-8, -2)$  and has a slope of  $m = 3$ .

13. Simplify:  $x^2y^3 \cdot x^6y$

14. Simplify:  $(4m^3)^2$

15. Solve the system of equations:  $\begin{cases} y = -x + 11 \\ 3x - y = 5 \end{cases}$

16. Simplify:  $(5x^2 - 2x - 1) - (3x^2 - 5x + 7)$

17. Simplify:  $5x(2x^2 - 3x + 1)$

18. Simplify:  $(x + 1)(2x - 3)$

19. Simplify:  $(x - 3)^2$

20. Factor with GCF:  $12x^3 + 4x$

21. Factor difference of squares:  $x^2 - 16$

22. Factor the trinomial:  $x^2 - 8x - 20$

23. Factor the trinomial:  $2x^2 - 13x + 15$

24. Solve by factoring:  $4x^2 - 12x = 0$

25. Solve by factoring:  $3x^2 + 5x - 2 = 0$