

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

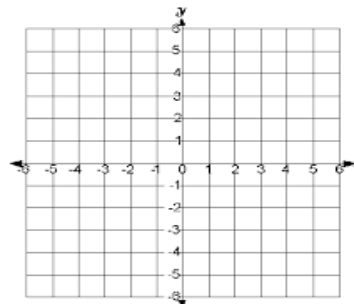
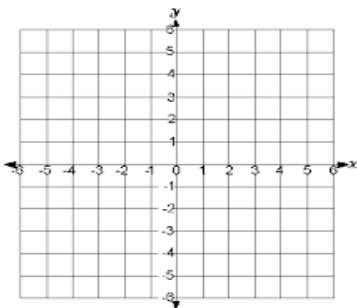
4. Solve for b : $2b - 1 = 6a - (b + 5)$

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. Simplify: $3\sqrt{8x^3y^4z^5}$

25. Simplify: $4x\sqrt{27x^4y^6z^9}$