Geometry—Algebra Review HW #_____ Name_____

A24R

Per_____ Col_____

****Do problems 1-24 on your own paper.****

Write answers in slope-intercept form.

1. Use slope-intercept form to write the equation of a line with slope 6 that passes through (-2, -4).
2. Use slope-intercept form to write the equation of a line that is perpendicular to $y = \frac{3}{7}x+4$ and passes through (-9, 5).
3. Use point-slope form to write the equation of a line that is parallel to $y = \frac{2}{5}x+1$ and passes through (15, 7).
4. Use point-slope form to write the equation of a line that passes through (2, -1) and (4, -7).

****Copy down problems and simplify. Show work.****

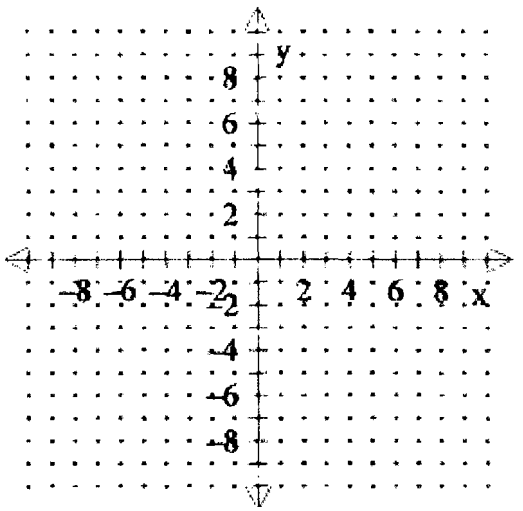
5. $\left(\frac{-2x^3y^4}{6x^5y}\right)^2$
6. $\frac{(3x^2y^{-2})^{-3}}{9x^4y^{-8}}$
7. $\frac{4x^7y^3}{18x^2y^5}\cdot\frac{12x^{-3}y}{x^2y^6}$
8. $-3x^3(8x^2+9x-14)$
9. $(7x-5)(4x+9)$
10. $(4x-3)(9x-6)$
11. $(9x^2-8)(9x^2+8)$
12. $(4x-7)^2$
13. $(2x-5)(6x^3-4x^2+3)$

****Copy down problems and factor completely. Show work.****

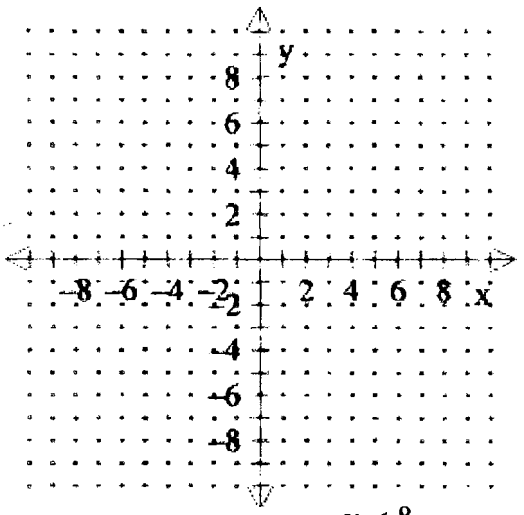
14. x^3-15x^2+36x
15. $2x^2+4x-96$
16. $8x^2-2x-3$
17. $35x^2+125x-60$
18. $6x^2-23x+20$
19. $100x^2-9$
20. $225x^3-121x$
21. $50x^5-8x^3$
22. $x^2+12x+36$
23. $3x^2-42x+147$
24. $16x^3+40x^2+25x$

****Graph these problems on this page.****

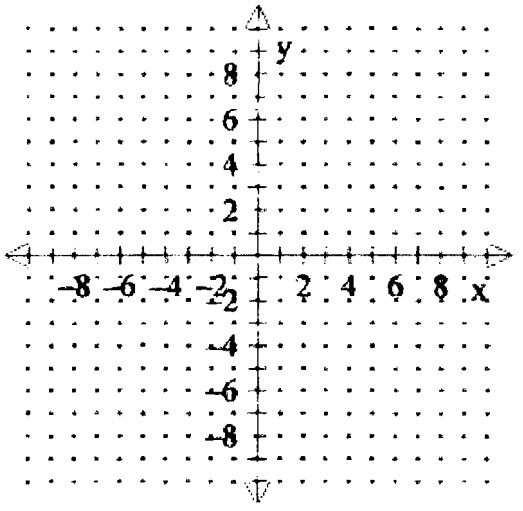
25. Graph the system $\begin{aligned} 3x - y &= 3 \\ x + 2y &= -2 \end{aligned}$ to find the point of intersection. Check.



26. Graph $6x - 2y \leq -12$



27. Graph $4x + 5y < 20$



28. Graph the system $\begin{aligned} y &< 8 \\ 3x - 5y &\leq 15 \end{aligned}$ to find the area of intersection.