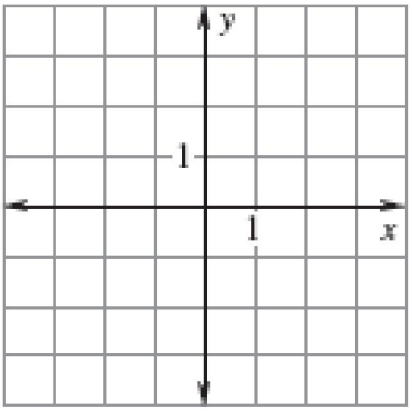
Algebra II B
8.4 worksheet 2 Name _____

Write the equation in logarithmic form.			
1. $3^4 = 81$	2. $7^0 = 1$	3. $8^{-2} = \frac{1}{64}$	4. $36^{\frac{1}{2}} = 6$
Write the equation in exponential form.			
5. $\log_2 8 = 3$	6. $\log_8 2 = \frac{1}{3}$	7. $\log_6 \frac{1}{6} = -1$	8. $\log_\pi 1 = 0$

Evaluate each expression.		
9. $\log_3 81$	10. $\log_5 125$	11. $\log_2 256$
12. $\log_7 \frac{1}{49}$	13. $\log_7 1$	14. $\log_{1/2} 8$
15. $\log_9 3$	16. $\log_{81} 81$	17. $\log_3 3^{9x}$
18. $4^{\log_4 12}$	19. $3^{\log_3 3^4}$	20. $\log_2 4^5$

Graph the following Logarithmic functions.

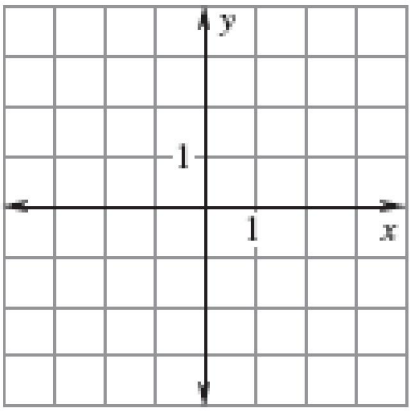
21. $y = log_2(x)$



Equation of the Vertical Asymptote:_____

Domain:_____Range_____

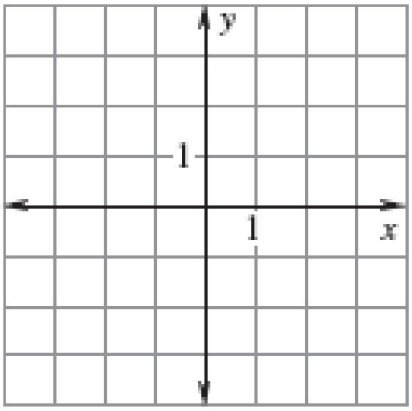
22. $y = log_2(x) + 2$



Equation of the Vertical Asymptote:_____

Domain:_____Range_____

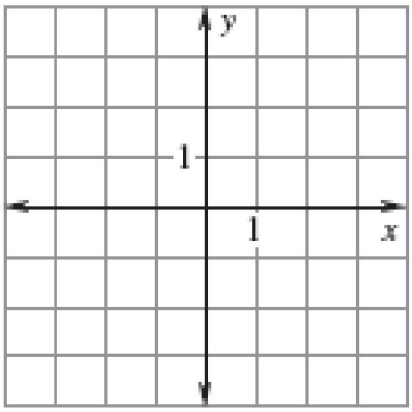
23. $y = log_2(x - 3) + 1$



Equation of the Vertical Asymptote:_____

Domain:_____Range_____

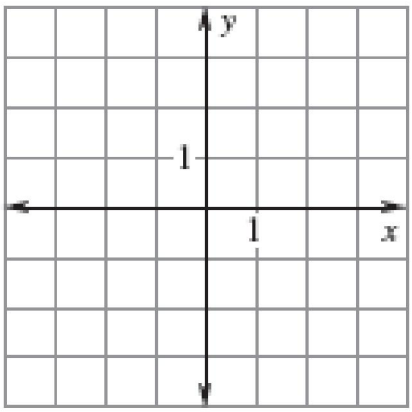
24. $y = log_2(x + 2) - 3$



Equation of the Vertical Asymptote:_____

Domain:_____Range_____

25. $y = \frac{1}{3}log_3(x + 4) - 4$



Equation of the Vertical Asymptote:_____

Domain:_____Range_____