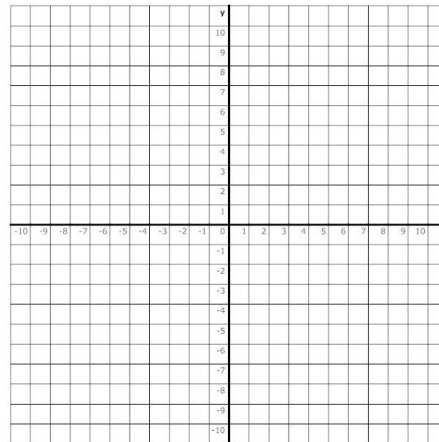


Graphing Logarithms (Assignment 35)

1. Make tables of values for two functions: $y = 2^x$ and $y = \log_2 x$, then plot them on the graph. Also plot the identity function with a dashed line.

x	2^x

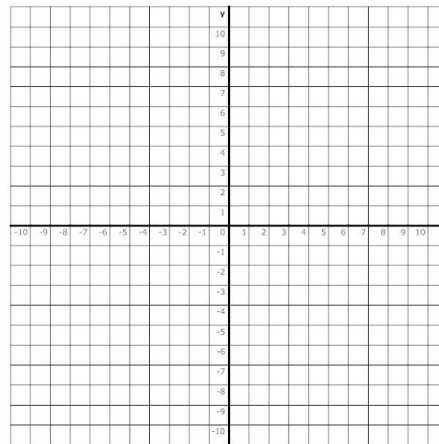
x	$\log_2 x$



2. Make tables of values for two functions: $y = \left(\frac{1}{3}\right)^x$ and $y = \log_{\frac{1}{3}} x$, then plot them on the graph. Also plot the identity function with a dashed line.

x	$\left(\frac{1}{3}\right)^x$

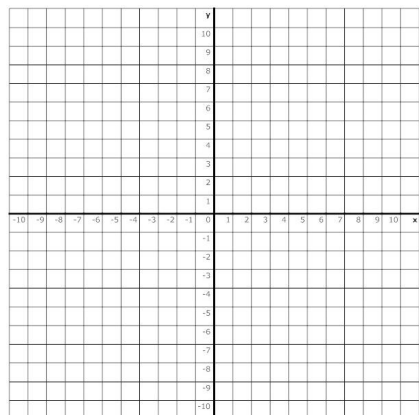
x	$\log_{\frac{1}{3}} x$



Make a table of values and graph each function. Then state the domain and range.

3. $f(x) = \log_3 x$

x	$f(x)$

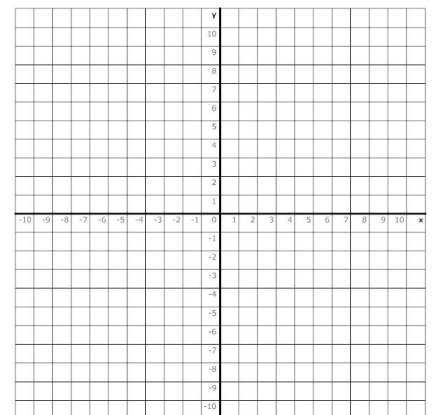


Domain:

Range:

4. $g(x) = \log_{\frac{1}{2}} x$

x	$g(x)$



Domain:

Range:

Evaluate each expression. Some expressions are undefined.

1. $\log_3 9$

2. $\log_2 16$

3. $\log_5 \frac{1}{5}$

4. $\log_2 2$

5. $\log_e e$

6. $\log_7 1$

7. $\log_5 -5$

8. $\log_3 \frac{1}{27}$

9. $\log_{\frac{1}{2}} \frac{1}{4}$

10. $\log_{\frac{1}{2}} 4$

11. $\log_{\pi} \pi^5$

12. $\log_2 64$

13. $\log_7 \sqrt{7}$

14. $\log_5 125$

15. $\log_{\frac{1}{6}} 6$

16. $\log_8 2$

17. $\log_0 5$

18. $\log_{\frac{1}{2}} \frac{1}{32}$

19. $\log_6 36$

20. $\log_{x^3} x^6$

21. $\log_8 \frac{1}{64}$

22. $\log_{10} 10000$

23. $\log_4 64$

24. $\log_3 -9$

25. $\log_a a^b$

26. $\log_{25} 5$

27. $\log_{3^w} 3^{5w}$

28. $\log_1 7$

29. $\log_{\beta} \beta$

30. $\log_{16} 2$