

HW 51

AZ

1-6 on next page

7. PF: $y = \log_6 x$
left 1

$$f(x) = \log_6(x+1)$$

8. PF: $y = \log_2 x$
flipped over y
up 3

$$f(x) = -\log_2 x + 3$$

9. PF: $y = \log x$
right 2
down 3

$$f(x) = \log(x-2) - 3$$

10. $\log 10,000,000 = x$

$$10^x = 10,000,000$$

$$10^x = 10^7$$

$$\boxed{x=7}$$

11. $\log_2 64 = x$

$$2^x = 64$$

$$2^x = 2^6$$

$$\boxed{x=6}$$

12. $\log_3 \frac{1}{27} = x$

$$3^x = \frac{1}{27}$$

$$3^x = 3^{-3}$$

$$\boxed{x=-3}$$

13. $\log_4 64 = x$

$$4^x = 64$$

$$4^x = 4^3$$

$$\boxed{x=3}$$

14. $\log_6 1 = x$

$$6^x = 1$$

$$\boxed{x=0}$$

15. $\log_{16} 4 = x$

$$16^x = 4$$

$$4^{\frac{1}{2}x} = 4^1$$

$$\boxed{x=\frac{1}{2}}$$

16. $(x-3)^{-1/3} = (\frac{1}{8})^{-1/3}$

$$\boxed{x=2}$$

17. $\log_4 x = -1$

$$4^{-1} = x$$

$$\boxed{\frac{1}{4} = x}$$

18. $x^{1/2} = 3$

$$\boxed{x=9}$$