

HW 68

p434

1. 0.16
2. 361.78
3. 0.34

10. L1
11. Over x-axis, U1
12. Over x-axis
13. Over x-axis, L2

$$21. 3^{-1(x-3)} = 3^2$$

$$-x+3=2$$

$$-x=-1$$

$$\boxed{x=1}$$

$$22. 3^{x+3} = 3^{-4}$$

$$x+3=-4$$

$$\boxed{x=-7}$$

$$23. 3x-5=7$$

$$3x=12$$

$$\boxed{x=4}$$

$$24. 8-2x=-3$$

$$-2x=-11$$

$$\boxed{x=11/2}$$

$$25. 2980.96$$

$$26. 1.87$$

$$33. A = 5000 \left(1 + \frac{0.03}{n}\right)^{10n}$$

$$n=1: A = \$6719.58$$

$$n=2: A = \$6734.28$$

$$n=4: A = \$6741.74$$

$$n=12: A = \$6746.77$$

$$n=365: A = \$6749.21$$

$$\text{Cont: } A = 5000 e^{0.03(10)} = \$6749.29$$

$$36. b) \$13,483.13$$

$$37. \log_3 27 = 3$$

$$38. \log_{25} 125 = 3/2$$

$$39. \log_{10} \ln 2.225 = 0.8$$

$$40. \ln 1 = 0$$

$$41. \log 1000 = x$$

$$10^x = 1000$$

$$\boxed{x=3}$$

$$42. \log_9 3 = x$$

$$9^x = 3$$

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

$$43. \log_2 1/4 = x$$

$$2^x = 1/4$$

$$2^x = 2^{-2}$$

$$\boxed{x=-2}$$

$$44. \log_3 1/81 = x$$

$$3^x = 1/81$$

$$\boxed{x=-4}$$

$$45. x+7=14$$

$$\boxed{x=7}$$

$$46. 3x-10=5$$

$$3x=15$$

$$\boxed{x=5}$$

$$47. x+9=4$$

$$\boxed{x=-5}$$

$$59. h = 116(\log(95)) - 176$$

$$\boxed{h = 53.4 \text{ in}}$$