Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Problem Set 5.5***

**1) Write each equation in exponential form.**

a) log264 = 6 b) c) log(0.01) = -2

**2) Write each equation in logarithmic form.**

a) 25 = 32 b) c) 10-1 = 0.1

**3) Evaluate the logarithmic expression.**

a) log28 b) log6216 c) log77

d) log5 e) f) ln(1)

**4) Solve for x.**

a) log6x = 2 b) log16x = -1 c) logx64 = 3

**5) Expand the expression using the properties of logarithms.**

a) log6(3x) b)

c) log(xy4) d)

**6) Condense the expression using the properties of logarithms.**

a) b) 2

c) 3 d) ln(5) + ln(x) – ln(y)

**7) Condense the left side of the equation. Then solve for x.**

a) b)