

# Assignment 6242

modified

Name \_\_\_\_\_

① Condense Using Log Properties

a)  $\log(7) + x \log(3)$       b)  $\ln(m) - \ln(n) - \ln(p)$

② Expand Using Log Properties

a)  $\ln\left(\frac{9x}{y}\right)$

b)  $\log(mn)^3$

c)  $\log 7(2x-3)^2$

③ Determine the value in a bank account 20 years later of an initial investment of \$4,000 assuming an annual interest rate of 6.5% and with monthly compounding.

repeat if compounding continuously. [Use  $F = P \cdot e^{rt}$ ]

④ How long would it take to double your money with continuous compounding and an annual interest rate of 7%? (Use  $F = Pe^{rt}$ ) Hint: make up any amount of \$ to start with.

⑤ Solve the equation

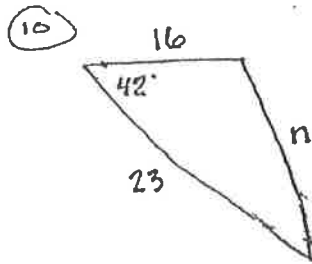
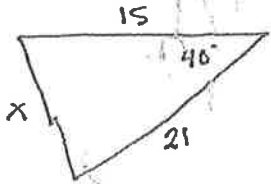
$$\ln(4r^2) = 3$$

⑥ Solve  $e^n = 5$

7 Solve  $2e^{x-5} = 80$

8  $5 \ln x - \ln x^3 = 10$  solve

9 From Geometry



Use your reference sheet !!!

11 An exponential function with an asymptote  $y = 30$  passes through two points:  $(2, 36.4)$  and  $(6, 32.62144)$ . Determine the equation.