

## Exp/Log Worksheet

Name:

1. Make a function that describes how much to pay if the  $p =$  price and there is 8.25% tax.
2. Make a function that describes how much to pay if the  $p =$  price and  $t =$  tax.
3. Make a inverse function so given  $x$  dollars, and 8.25% tax, what is the most expensive price you can afford, and still have enough money to pay for the item with tax?
4. Make a inverse function so given  $x$  dollars, and tax  $t$ , what is the most expensive price you can afford, and still have enough money to pay for the tax?
5. A money market account pays an annual rate of 6%, compounded quarterly. This means every 3 months they will add  $\frac{6\%}{4}$  to your account. Construct a function that describes the value of the account after  $n$  quarters, given an inital (prinicipal) value of  $P$  dollars.
6. Did you come up with somthing similar to  $A_t = P\left(1 + \frac{r}{n}\right)^{nt}$ ? Does this make sense?
7. Can you make a function that will tell you how long it will take to earn  $A$  dollars, given principal  $P$ , an interest rate  $r$  compounded  $n$  times annually? (*Hint: just use the function above and solve for  $t$* ).