Math 1000 - Chapter 8 Review   Name_____

***Notice…there are formulas on the bottom of this review sheet.

15 is what percent of 40?

72 is 41% of what?

Elijah ate 71% of his box of Raisin Bran. The box contains 28 ounces
when it is full. How many ounces of raisin bran did Elijah eat?

(A little tougher) Bernie lost 14% of his body weight and now
weighs 180.6 pounds.   What was his weight before the diet?

A friend of mine used to make $48,500 per year, and just received a
raise and now makes $51,000 per year. What is the percent of increase?

You invest $3,000 into an account that pays 7%, compounded
monthly. How much would the investment be worth in 40 years?

You invest $3,000 into an account that pays 7%, compounded
continuously. How much would the investment be worth in 40 years?

You invest $6,000 into an account that pays 6%, compounded
quarterly. How much would the investment be worth in 20 years?

You buy a house for $200,000 and make a down payment of $30,000
and need to finance the rest at a 5% annual interest rate. What would
your monthly payments be if you set it up for 15 years?

You buy a car for $13,000 and make a down payment of $1,000 and finance the rest at a 6% annual interest rate. What would your monthly payments be if you paid it off in 3 years?

Mandy borrowed $1,200 from her aunt. Her aunt charged simple interest at a 5% annual rate and asked to be paid back in 3 years. How much interest did Mandy have to pay?

You borrow $800 from a cousin and have to pay her back $1,016 in 3 years. If she is using simple interest, what interest rate is she charging?

Simple Interest: I = Prt (P is principal, r is the annual interest rate as a decimal, t is time in years)

Calculating the amount for compound interest paid n times per year: $A = P(1 + \frac{r}{n})^{nt}$

Calculating the amount for compounding continuously: $A = Pe^{rt}$

Calculating present value with compound interest, when you 'want' to have A dollars in the future:

$$P = \frac{A}{(1 + \frac{r}{n})^{nt}}$$

Loan Payment Formula (for homes, cars, etc.) You can also use the APPS on your Graphing Calculator.

$$PMT = \frac{P(\frac{r}{n})}{[1 - (1 + \frac{r}{n})^{-nt}]}$$