$$
\begin{aligned}
& \text { Name: } \\
& \text { MAT 050, Dream Job/Dream Home (adapted from Meredith Higgs, Middle TN State University) }
\end{aligned}
$$

Major:
The major you choose in college to some extent determines what types of careers and jobs will be open to you when you graduate.

What major do you plan to choose? If you are uncertain, list the top three:

For each major, list one-two possible careers you can enter with this major:

For each career, list one-two specific jobs that you will be able to apply for:

Where can you find one of the jobs you will be able to apply for? List at least two possible locations (state and city or region):

## Job:

Go to www.salary.com. Use the job titles and cities that you have chosen to enter into the search boxes. Select the jobs that most closely match your goals for 1-2 years after graduation and click on each job. Expand the job details to ensure that it is a job that you would want and would be qualified for 1-2 years after graduation (assuming that you have already held you first, entry-level job for 1-2 years and are now moving on to your "dream job"). View the salary info.

For each job and location, state the low end of the salary, the high end of the salary, and the median salary:
Job \& Location Low end of salary range $\quad$ High end of salary range $\quad$ Median salary

## Dream Home:

Use newspapers, brochures, or online listings to find a home using one of the possible locations listed above, that you feel you could afford with the job in that location. Attach the advertisement to this assignment.

Assume that you pay the listed price for the home and are required to pay a $20 \%$ down-payment. Ignore loan fees and etc.

1. How much is the $20 \%$ down-payment for the listed home?
2. How much must you finance?
3. Use the formula $P=L \cdot \frac{c(1+c)^{n}}{(1+c)^{n}-1}$

$$
\begin{aligned}
& \text { Where } \begin{aligned}
& P=\text { monthy payment } \\
& L=\text { amount of the loan } \\
& c=\text { monthly interest rate as a decimal (Use a search engine to find current } \\
& \quad \text { mortgage rates) (take the annual interest rate and divide by 12) }
\end{aligned} \\
& \quad n=\# \text { of months that you will be paying off the house }
\end{aligned}
$$ (\# years times twelve)

a. Find your monthly payments for a 30-year mortgage.
b. Find your monthly payments for a 15 -year mortgage.
c. Verify your calculations using an online mortgage payment calculator. State the online results here:
4. Calculate how much you will pay, in total, for your house, including the down payment and all monthly payments, for the 30-year mortgage.
5. Calculate how much you will pay, in total, for your house, including the down payment and all monthly payments, for the 15 -year mortgage.

Assume that your take-home pay is approximately $75 \%$ of your gross pay (pay before taxes).

1. Calculate your monthly take-home pay.
2. Optional: Use an online calculator to determine more accurately how much your take-home pay will be.
3. Use the assumption that you should not spend more than $25 \%$ of your monthly take-home pay on your mortgage (this is only one recommendation for what \% of your income should go to your mortgage, and doesn't include homeowner's insurance, property taxes, or PMI). What is $25 \%$ of your monthly take-home pay? Can you afford the mortgage payments for the home you have chosen?

## MAT 050, Competencies Addressed in Dream Job/Dream Home Assignment:

I. a. Convert numbers in percent form to fractional or decimal form and vice versa.
g. Solve percent problems for base, rate, or amount (percentage).
h. Solve word problems involving percent using the percent formula or proportions.
II.b. Evaluate formulas for given values of the variables, including formulas with integer exponents, fractions, and decimals.

