You are thinking about buying a house. To determine if this is feasible, you need to perform some calculations. Make sure to show all of your work, especially how the formulas are set up. You need to write something down for every part of each question.

___ 1) Use this page as a coversheet, and attach it to your project.   Please do not write in the blanks beside the numbers. Make sure your name is on the top of the page.

You need to save for a down payment. To find out how much you can save, you need to gather some income and savings information.

___/3 2a) What is your **gross annual income**? Every year, the U.S. Department of Housing and Urban Development (HUD) publishes the median family incomes (MFI) for various areas around the country. A chart with the latest HUD figures is attached. Let's assume that you have graduated and you have just landed a really good job. However, since you have little to no experience, your income may be lower than average, so let's choose 80% Median Income. Pick your family size and use the income listed in the chart. (Remember, if you pick a larger family size, you will need to choose a larger house to accommodate your family, so don't just pick a family size because it has a higher income figure). Make sure to indicate your family size.

___/3 2b) You need to calculate your **net annual income**. To keep things simple, we will say that taxes will be 25% of your gross income. So, Gross Income – (0.25 × Gross Income) = Net Annual Income.

___/3 2c) Suppose you decide to save 10% of your **net monthly income**. Find this amount.

___/6 2d) If you invest this money in an account that compounds monthly with an APR of 2.5%, how much will you have saved *i)* after 1 year? *ii)* after 3 years?

Before you buy a house, you need to determine what you can afford.

___/4 3) The bank will not approve your mortgage loan if your monthly payment is greater than 28% of your **gross monthly income**. Find the maximum amount you can pay each month for your mortgage. Give a calculation to show that you can afford your mortgage.

Now we get to the fun part. Happy house hunting!

___/6 4) Find a house on the market. Remember that you need to have enough space for the entire family (that does not mean that every child must have his/her own room, but you can't put grandma in with the kids! Just be reasonable.) Print or cut out the advertisement to attach to your project.

___/3 5) Determine your down payment. For this project, select an amount that is 10% of the price of the home.

___/3 6) Did your savings plan save enough for the down payment after 3 years? If not, then decide how you will adjust your savings plan either by extending the time you are saving or by increasing the amount each month to ensure you have enough for the down payment.

___/4 7) How much of the house must be financed, i.e., after you make your down payment (see #5), how much of the cost of the house is still unpaid? This is your loan amount.

___/6 8) Find the rates of two fixed mortgages, one with a term of 30 years, and one with a term of 15 years. Some lenders quote two different rates. Choose the rate labeled APR. Once you have found your rates, print out documentation of where you found your rates to attach to your project. Circle, highlight, or otherwise indicate the rate you choose. (Note: Rates on some websites change daily. Print out your documentation on the same day you choose the rate to make your calculations.)

___   9) For the loan with the 30 year term, find the following:

___/6   9a) Calculate the monthly payment. (Show your work. You may NOT use an online mortgage calculator. This applies to #10a as well!)

___/4   9b) Calculate the total amount paid for the loan.

___/4   9c) Calculate the total interest paid for the loan.

___   10) For the loan with the 15 year term, find the following:

___/6   10a) Calculate the monthly payment.

___/4   10b) Calculate the total amount paid for the loan.

___/4   10c) Calculate the total interest paid for the loan.

BUT…the mortgage is not the only monthly cost you need to consider. You will also have to pay property taxes and homeowner's insurance for your house.

___/5 11) The property taxes should be stated on the real estate listing of the house. If not, try googling your property address to find another listing for the same property, or you can try calling the realtor. Divide the amount of property taxes by 12 to get your monthly tax payment.

___/5 12) There are a number of things, such as size, age, number of stories, and location that can affect the cost of homeowner's insurance, but valuation of the home for insurance purposes usually runs between $80 - $100 per square foot. To calculate a rough estimate, divide the purchase price (not the loan amount!) of the home by 1000 and multiply by $4. This gives you the annual premium. Divide by 12 to get your monthly insurance payment.

___/4   13a) What is the total monthly payment on the 30 year loan, including taxes and insurance?

___/4   13b) Is the monthly payment on the loan with the 30 year term within your budget? If not, adjust your down payment, or find a cheaper house. If you have to adjust your down payment, determine how you will adjust your savings plan. If you need a cheaper house, print out the advertisement for the new house and calculate the new monthly payment.

___/4   14a) What is the total monthly payment on the 15 year loan, including taxes and insurance?

___/4   14b) Is the monthly payment on the loan with the 15 year term within your budget? If not, adjust your down payment, find a cheaper house, or choose the 30 year term. If you choose to adjust your down payment or find another house, then adjust your savings plan or find the new monthly payment, respectively.

___/5   15) Write a paragraph where you determine which loan is better for your financial position. Explain your reasons for making your decision. You should address each of the following points. Which monthly payment will be easier to make? Which loan costs less in the long run? Which loan will allow you to get the better house?

NOTE: Up to 10 points may be deducted for work that is messy, disorganized, or difficult to read. Your project should contain:
1)   This coversheet
2)   Documentation showing where you found your interest rates.
3)   Documentation showing the details of the house(s) you are looking to buy.
4)   Your work showing all of your calculations, including the formulas used to calculate each amount. Write down each formula you use and **then** show the formula with all of the variables filled in with the appropriate values. This should also contain your paragraph about your decision.

REMEMBER TO READ ALL INSTRUCTIONS CAREFULLY. IF YOU HAVE ANY QUESTIONS, OR SOMETHING IS NOT CLEAR TO YOU, ASK!

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2012 HOME Program Income Limits by Household Size
Effective Date: February 9, 2012

FY 2012 Area Median Family Income
For Travis County, Texas
$75,900 (4-person household)
MSA: Austin, Round Rock, San Marcos, TX

Median Income Limit	1 Person Household	2 Person Household	3 Person Household	4 Person Household	5 Person Household	6 Person Household	7 Person Household	8 Person Household
20%	$10,650	$12,150	$13,650	$15,200	$16,400	$17,600	$18,850	$20,050
* 30%	$15,950	$18,200	$20,500	$22,750	$24,600	$26,400	$28,250	$30,050
*30% AMI is denoted by HUD as extremely low-income!								
40%	$21,250	$24,300	$27,300	$30,350	$32,800	$35,200	$37,650	$40,075
* 50%	$26,600	$30,400	$34,200	$37,950	$41,000	$44,050	$47,100	$50,100
*50% AMI is denoted by HUD as very low-income!								
* 60%	$31,920	$36,480	$41,040	$45,540	$49,200	$52,860	$56,520	$60,120
70%	$37,200	$42,500	$47,800	$53,150	$57,400	$61,650	$65,900	$70,150
* 80%	$42,500	$48,600	$54,550	$60,700	$65,600	$70,450	$75,300	$80,150
*80% AMI is denoted by HUD as low-income!								
100%	$53,150	$60,700	$68,300	$75,900	$82,000	$88,050	$94,100	$100,200
120%	$63,750	$72,850	$82,000	$91,100	$98,350	$105,650	$112,960	$120,250
140%	$74,400	$85,000	$95,650	$106,250	$114,750	$123,250	$131,750	$140,250

* Income limits provided by HUD: http://www.huduser.org/portal/datasets/il/il2012/2012summary.odn?inputname=METRO12420M12420*Austin-Round+Rock-San+Marcos%2C+TX+HUD+Metro+FMR+Area&selection_type=hmfa&stateid=48&statelabel=Texas&year=2012

◆ Other income limits have been calculated by NHCD based on the formula used by HUD

◆ HUD rounds to the nearest $50 dollars

❖ MFI Chart was expanded to include other percentages used by NHCD