

1234 Rockhurst Lane  
Oakland, IL 61943

Independent Mathematical Contractors  
00 Anystreet  
Anytown, Anystate 00000

Dear IMC:

I am buying a vacation home on a lake in Northern Illinois. I am in the process of determining if I can afford this house. I am enlisting you to help me decide this based on your expertise in mathematics.

Here is the listing for the cabin I have contracted to buy:

### LAKESHORE COTTAGE ON BEAUTIFUL LAKE!!

Time for outdoor fun on beautiful bay overlooking lake and mountains. Swimming, boating, fishing and mountain biking opportunities abound! This 1 bedroom cottage was totally renovated in 2000. Includes a terrific great room with stone fireplace, kitchen, full bath, new paint, new roof, and refinished wood flooring. Plus 136' of lakeside land available for common recreational use.  
**Offered at: \$129,500**



I have been preapproved for a loan with the terms described below:

Term / Type	APR	Rate	Points	Maximum LTV	Maximum Loan Amount
30 year Fixed	7.258%	7.125%	1.0%	95%	275,000

I will use this loan to purchase the cabin and I will not consider any other loan offers.

I am prepared to pay the asking price if I can afford this cabin. However, if the asking price falls outside of my budget, I'll need to know what I should offer in order to accommodate my finances.

I have saved \$12,000 for this purchase. However \$3500 of that amount is needed to pay for prorations, taxes, legal costs, inspections, appraisal fees, utility hook ups, mortgage insurance prepayments and other charges.

Based on my review of my family's finances, I feel I can afford a maximum of  $\$1050 + T$  dollars per month in total house payments where T is the total number of letters in your first, middle and last names. The total house payment will include mortgage insurance, property tax escrow and property insurance. Assume that mortgage insurance costs \$75 per month and that home insurance costs \$600 per year. My research shows that the property tax rate is \$1.93 per hundred dollars and properties are appraised at 86% of market value.

I need you to determine the most I can pay for this cabin and still stay within my cash on hand and my maximum monthly payment. This will enable me to negotiate with the seller better. For the price you calculate, an amortization schedule for the first and last 12 months of the loan. Present your amortization schedule in a technical memo that includes

- the basic information in the problem,
- a table of the final information regarding the loan including taxes, insurance payments, down payment, cost of points, total interest paid, and the total cost of the loan,
- the first and last year's amortization schedule,
- all text double spaced,
- well organized and labeled computations supporting your analysis.

Since this is my money that I am putting into this cabin and my trust in the finance industry is not high, explain all steps in your calculation and verify all numbers where possible. Matching numbers in Excel, on your calculator, from hand calculations or from an Internet calculator are all acceptable. However, keep in mind that some sources and calculators are more reliable than others.

Thanks in advance,  
Penney Pinscher