1234 Rockhurst Lane
Prescott, AZ 86301

Independent Mathematical Contractors
00 Anystreet
Anytown, Anywhere 00000

Dear IMC:

I am helping a client buy a home in Northern Arizona. 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 property:

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.



My client has agreed to purchase the home for $180,000 + 5000T where T is your team number. My client is looking at several possible loans but is confused by all of the differences.

1. Should the loan be a 30 year fixed term or 15 year fixed term?
2. Should she make a down payment of 5%, 10% or 20%?
3. Should she pay discount points or not?

I would like you and your team to examine at least one of these questions by finding several loans to compare. In looking at the loans, I would like you to point out the differences with regard to the loan payment, the mortgage payment, cash needed at closing, and the total cost of the loan. As a team, decide which you think is most important for my client and recommend one of the loans on this basis.

The total mortgage payment will include mortgage insurance, property tax escrow and property insurance. Assume 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.

You should document your work as you have done other projects. Make sure your documentation includes:

- The information on rate, points, and fees for each loan used in the comparison.
- A table of the key information calculated for each loan such as loan amount, loan payment, the mortgage payment, cash needed at closing, and the total cost of the loan.
- The first and last year's amortization schedule for the loan your team recommends.

Since my client's trust in the finance industry is not high, explain all steps in your calculation and verify all numbers where possible. Matching numbers in Sheets, 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