

How Expensive is a Mortgage?

Directions: Read the following case study. Study the chart, summary and conclusions, then answer questions 1-7.

Shelly and Keith Zak want to purchase a home that costs \$200,000 and have saved \$20,000 for a down payment. They will have to borrow the remaining \$180,000. After visiting several different institutions who offer mortgages, they decided to go with a bank that charges an interest rate of 4%. Now they have to decide if they will take the loan out for 15 or 30 years. If they take the loan for 15 years, they will have a bigger monthly payment to make but will pay less in interest, actually a considerable amount less. Using a mortgage calculator (<http://www.mortgagecalculator.org/>), they discovered the following:

Amount Borrowed	Length of the Loan	Interest Rate	Monthly Payment	Total Interest Paid	Total Paid to Bank (principal + interest)
\$180,000	15 years	4%	\$1,331.44	\$59,658.89	\$239,658.89
\$180,000	30 years	4%	\$859.35	\$129,365.11	\$309,365.11

Summary

- If the loan is taken for 15 years, Shelly and Keith will have paid the bank \$180,000 (principal or the amount borrowed) plus \$59,658.89 in interest for a total of \$239,658.89.
- If the loan is taken for 30 years, Shelly and Keith will have paid the bank \$180,000 (principal) plus \$129,365.11 in interest for a total of \$309,365.11.
- It would cost \$69,706.22 **more** to take the loan out for 30 years as opposed to 15.

Conclusions

- Mortgage loans are expensive
- The longer the loan, the more you pay.

Answer the questions below.

1. If the interest rate is higher, will they pay more or less in interest? **more**
2. If the interest rate is lower, will they pay more or less in interest? **less**
3. If they borrow more money, will they pay more or less in interest? **more**

4. If they borrow less money, will they pay more or less in interest? **less**

5. Visit <http://www.mortgagecalculator.org/>

Enter home value **\$200,000**
Enter credit profile **good**
Enter loan amount **\$180,000**
Choose **new purchase** for loan purpose
Enter an interest rate of **5%**
Enter **30 years** for the term of the loan.
Leave the **start date** as it is
Enter **0** for property tax and PMI
Calculate

Now, complete the chart below

Amount Borrowed	Length of the Loan	Interest Rate	Monthly Payment	Total Interest Paid	Total Paid to Bank (principal + interest)
\$180,000	30 years	5%	\$966.28	\$167,860.41	\$347,860.41

6. What is the total interest paid? **\$167,860.41**

7. How does it compare to 4%? **At 5% the total interest paid is \$38,495.30 more than at 4%**