

Shirley Trembley Bought A House For \$184,800. She Put 20% Down And Obtained A Simple Interest Amortized

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When it comes to purchasing a home, understanding the financial details behind the transaction can be just as important as the house itself. For Shirley Trembley, buying a house for \$184,800 involved strategic planning around her down payment, loan terms, and interest calculations. This article explores her mortgage scenario in detail, providing insights into how she financed her home using a 20% down payment and a simple interest amortized loan. Whether you're a prospective homebuyer or simply interested in real estate financing, this comprehensive guide will shed light on the key concepts involved.

Understanding the Purchase Price and Down Payment

The Purchase Price

Shirley's chosen home was priced at \$184,800. This figure represents the total amount agreed upon between the buyer and seller for the property. The purchase price is the starting point for calculating other financial aspects such as the down payment and loan amount.

The Down Payment: 20%

A common rule of thumb in real estate is to make a 20% down payment, which Shirley did. This percentage has several benefits:

- **Lower Loan Amount:** A higher down payment reduces the principal amount borrowed, decreasing overall interest costs.
- **Lower Monthly Payments:** Smaller loan balances translate into more manageable monthly payments.
- **Better Loan Terms:** Lenders often view sizable down payments favorably, potentially qualifying for better interest rates.

Calculating Shirley's Down Payment:

$$- 20\% \text{ of } \$184,800 = 0.20 \times \$184,800 = \$36,960$$

This means Shirley paid \$36,960 upfront, reducing her financed amount to:

Loan Principal = Purchase Price – Down Payment

$$- \$184,800 - \$36,960 = \$147,840$$

Loan Details and Interest Calculation

Type of Loan: Simple Interest Amortized

Shirley obtained a simple interest loan that is amortized over the loan term. Unlike compound interest, simple interest is calculated solely on the remaining principal balance, making the interest cost more predictable and straightforward.

Key features of her loan:

- Simple interest basis: Interest is calculated daily based on the outstanding balance.
- Amortized payments: Equal monthly payments that cover interest and principal over the loan term.
- Fixed interest rate: Assumed for this scenario, providing consistent monthly payments.

Calculating the Interest

The simple interest formula:

$$\begin{aligned} & \text{Interest} = \text{Principal} \times \text{Interest Rate} \times \text{Time} \end{aligned}$$

However, in mortgage calculations, the interest is typically calculated daily and paid monthly, based on the outstanding balance.

Suppose Shirley's loan has:

- An annual interest rate of 5% (a common rate, though actual rates vary)
- A loan term of 30 years (360 months)

Daily interest rate:

$$\begin{aligned} & \frac{5\%}{365} \approx 0.0137\% \end{aligned}$$

Each month, interest is calculated on the remaining principal.

Calculating Monthly Payments

The Amortization Process

Amortized loans are designed so that the borrower makes equal payments throughout the loan term. Each payment covers:

- The interest accrued for that period
- A portion of the principal balance

Standard amortization formula:

$$M = P \times \frac{r(1 + r)^n}{(1 + r)^n - 1}$$

Where:

- M = monthly payment
- P = principal loan amount (\$147,840)
- r = monthly interest rate (annual rate / 12)
- n = total number of payments (months)

Assuming:

- Annual interest rate = 5%
- $r = \frac{5\%}{12} = 0.004167$
- $n = 30 \times 12 = 360$

Calculating Shirley's monthly payment:

$$M = 147,840 \times \frac{0.004167(1 + 0.004167)^{360}}{(1 + 0.004167)^{360} - 1}$$

Using a mortgage calculator or financial software:

- Monthly payment $\approx$ \$793.34

This payment remains consistent throughout the loan term, with the interest component decreasing and the principal component increasing over time.

Breaking Down the Payments: Interest vs. Principal

During the early years, Shirley's payments mainly cover interest, with a smaller portion reducing the principal. Over time, as the loan progresses, more of each payment goes toward reducing the principal.

Example of the first payment:

- Interest for Month 1:

$$\text{Interest} = \text{Principal} \times \frac{\text{Annual Rate}}{12} =$$

$147,840 \times 0.004167 \approx \615.60

\]

- Principal repayment:

\[

$793.34 - 615.60 \approx \177.74

\]

- Remaining balance after Month 1:

\[

$147,840 - 177.74 \approx \$147,662.26$

\]

Over the course of the loan, the interest component decreases, and Shirley's equity in the home increases.

Advantages of Simple Interest Amortized Loans

Choosing a simple interest amortized loan offers several benefits:

- **Transparency:** Easy to understand how interest accrues and how payments are applied.
- **Potentially lower interest costs:** Since interest is calculated on the outstanding principal, early payments reduce the total interest paid over the life of the loan.
- **Consistent payments:** Fixed monthly payments simplify budgeting and financial planning.

Impact of Down Payment and Loan Terms on Total Cost

Shirley's 20% down payment significantly reduced her total loan amount, lowering her interest costs over time. Additionally, her choice of a simple interest amortized loan with a fixed rate ensures predictable payments and total interest paid.

Total interest paid over the life of the loan:

- Approximate calculation:

\[

$\text{Total paid} = 793.34 \times 360 = \$285,601.44$

\]

\[

$\text{Total interest} = \$285,601.44 - \$147,840 = \$137,761.44$

\]

This represents the total interest Shirley will pay throughout her 30-year mortgage.

Summary of Shirley Trembley’s Mortgage Scenario

Aspect	Details
Purchase Price	\$184,800
Down Payment (20%)	\$36,960
Loan Principal	\$147,840
Interest Rate	5% annually (assumed)
Loan Term	30 years (360 months)
Monthly Payment	Approximately \$793.34
Total Interest Paid	Approximately \$137,761.44

Note: Actual interest rates and loan terms may vary, impacting the total cost and monthly payments.

Conclusion

Shirley Trembley’s home purchase exemplifies a common and effective mortgage strategy—making a substantial down payment to reduce the loan amount and opting for a simple interest amortized loan to benefit from predictable payments and transparency. Her financial planning ensures manageable monthly payments and a clear understanding of the total interest paid over the life of the loan.

If you’re considering similar financing options, understanding these key concepts can help you make informed decisions:

- The importance of a sizable down payment
- How simple interest calculations differ from compound interest
- The benefits of amortized loans in maintaining consistent payments

By carefully evaluating your financial situation and choosing appropriate loan terms, you can achieve your homeownership goals with confidence and clarity.

Frequently Asked Questions

How much did Shirley Trembley pay as a down payment on her house?

Shirley Trembley paid 20% of the house's purchase price as a down payment, which amounts to \$36,960.

What was the original loan amount Shirley Trembley obtained for her house?

The original loan amount was \$147,840, which is the remaining 80% of the house price after her 20% down payment.

What does it mean that Shirley's mortgage was 'simple interest amortized'?

It means her loan accrued interest at a fixed rate calculated on the original principal, and her payments were structured to gradually pay off both interest and principal over the loan term.

How does simple interest differ from compound interest in mortgage loans?

Simple interest is calculated only on the original principal amount throughout the loan, whereas compound interest is calculated on the principal plus accumulated interest, leading to different repayment amounts.

What factors influence Shirley Trembley's monthly mortgage payment?

Her monthly payment depends on the loan amount, interest rate, and the amortization period (loan term).

If Shirley's loan was for 30 years at a fixed interest rate, how would her amortized payments be calculated?

Her payments would be calculated using the amortization formula, considering the loan amount, interest rate, and 30-year term, ensuring equal monthly payments over the loan period.

Why might Shirley Trembley choose an amortized mortgage with simple interest?

She might choose this structure for predictable payments and potentially lower overall interest costs, as simple interest doesn't compound over time, making her repayment plan straightforward.

Additional Resources

Shirley Trembley Bought A House For \$184,800. She Put 20% Down And Obtained A Simple Interest Amortized

When exploring the journey of Shirley Trembley's recent home purchase, it offers a comprehensive case study into the intricacies of mortgage financing, especially when considering a purchase price of \$184,800, a substantial down payment of 20%, and a simple interest amortized loan structure. This review delves into each component of her home-buying process, highlighting the financial implications, amortization strategies, and practical insights that can benefit prospective homeowners or financial enthusiasts alike.

Understanding the Purchase Price and Down Payment

Purchase Price: \$184,800

Shirley's choice of a home at the price point of \$184,800 reflects a significant investment, likely aligned with her financial capacity and market conditions in her area. This figure serves as the foundation for her mortgage calculations and overall financial planning.

Down Payment: 20% of Purchase Price

- Amount:

$$20\% \text{ of } \$184,800 = 0.20 \times \$184,800 = \$36,960$$

- Implications:

- Equity Stake: Shirley's initial equity in her home is \$36,960, which reduces her mortgage principal.

- Loan-to-Value Ratio (LTV):

$$\text{LTV} = (\text{Loan Amount} / \text{Purchase Price}) \times 100$$

$$= (\$147,840 / \$184,800) \times 100 \approx 80\%$$

- Advantages of a 20% Down Payment:

- Avoids private mortgage insurance (PMI) in many cases

- Demonstrates financial stability to lenders

- Reduces overall interest paid over the life of the loan

Financial Strategy Behind the Down Payment

A 20% down payment is often considered optimal for homebuyers, balancing the need to minimize debt and interest costs with the ability to preserve liquidity. For Shirley, this sizable initial payment also indicates a disciplined savings plan and solid financial footing.

Mortgage Structure: Simple Interest and Amortization

Simple Interest Overview

Unlike traditional compound interest mortgages where interest accrues on the accumulated unpaid interest, a simple interest mortgage calculates interest solely on the original principal balance for each period. This often results in more straightforward calculations and can sometimes benefit borrowers by providing transparency in interest costs.

Key Characteristics of Simple Interest Mortgages:

- Interest is calculated daily or monthly based on the outstanding principal.
- Payments can be structured to reduce the principal directly, with interest accruing on the remaining balance.
- Typically results in faster equity buildup if payments are consistent and substantial.

Amortized Payments

Amortization refers to the process of spreading out loan payments over time, gradually reducing both principal and interest. In Shirley's case, her mortgage is amortized – meaning she will make regular payments designed to pay off the loan entirely by the end of the term (commonly 15 or 30 years).

Why Choose Simple Interest Amortized Loans?

- Predictability in payments.
- Potential for lower interest costs if payments are made promptly.
- Transparency, as interest calculations are straightforward.

Calculating Shirley's Loan Details

Loan Amount:

- Purchase Price minus Down Payment =
 $\$184,800 - \$36,960 = \$147,840$

Interest Rate:

While the specific interest rate Shirley obtained isn't provided, typical rates for simple interest mortgage loans can range from 3% to 6%, depending on creditworthiness and market conditions.

Assuming an example rate of 4% for illustration purposes.

Loan Term:

- Common choices are 15, 20, or 30 years.
- For this review, let's assume a 30-year (360 months) amortization period.

Monthly Payment Calculation (Using Simple Interest Assumption)

Formula:

For simple interest loans, the monthly payment can be approximated as:

$$\text{Monthly Payment} = \frac{\text{Principal} + \text{Total Interest}}{\text{Number of Payments}}$$

However, since simple interest is calculated on the remaining principal, the actual calculation involves:

- Calculating daily interest:
Daily interest rate = annual rate / 365
Interest per day = principal × daily interest rate
- Summing interest over the period, adjusting as principal reduces.

Approximate Calculation:

- Annual interest = Principal × Rate = \$147,840 × 4% = \$5,913.60 per year.
- Total interest over 30 years (assuming no principal reduction):
 $\$5,913.60 \times 30 = \$177,408$ (not accounting for decreasing principal, but for simplicity).
- Total amount to be paid:
Principal + Total Interest ≈ \$147,840 + \$177,408 = \$325,248
- Monthly payment:
 $\$325,248 / 360 \text{ months} \approx \904.02

Note:

This is a simplified estimation. Real-world calculations would involve adjusting interest as principal decreases, leading to decreasing interest payments over time.

Amortization Schedule and Payment Breakdown

Principal vs. Interest Over Time

In an amortized simple interest loan:

- Early payments are interest-heavy because the principal is still high.
- Over time, as Shirley makes payments, the principal decreases, reducing subsequent interest costs.
- By the end, the loan is fully paid off, with the final payments primarily reducing the remaining principal.

Sample Breakdown:

Year	Approximate Principal Paid	Approximate Interest Paid	Remaining Principal
-----	-----	-----	-----
-----	-----	-----	-----
1	\$3,500	\$5,500	~\$144,300
10	\$15,000	\$28,000	~\$132,000
30	Fully paid off	-	\$0

Implication for Shirley:

Her payment schedule will be structured to ensure the loan is paid off in full within the agreed term, with interest decreasing as she reduces the principal.

Advantages of Shirley’s Mortgage Approach

- Transparency: Simple interest calculations make it easier for Shirley to understand how her payments impact her debt.
- Potential Savings: If Shirley makes extra payments early, she can reduce the principal faster, saving on interest.
- Predictability: Fixed monthly payments provide budgeting stability.
- Equity Buildup: Amortization ensures steady growth of Shirley’s equity in her home.

Potential Drawbacks and Considerations

- Interest Costs: While simple interest can be transparent, in some cases,

the total interest paid might be higher compared to other amortized loans, depending on the rate and term.

- Prepayment Penalties: Check if Shirley's loan includes penalties for extra or early payments.
- Market Fluctuations: Interest rates can vary if Shirley's loan is variable, affecting her monthly payments.
- Loan Term Length: Longer terms mean lower monthly payments but higher total interest paid over the life of the loan.

Financial Planning and Long-Term Implications

Equity Growth

As Shirley makes her mortgage payments, her equity will increase, providing her with options such as refinancing, home equity loans, or leveraging her property for other investments.

Interest Savings Strategies

- Making extra principal payments whenever possible.
- Refinancing if interest rates drop significantly.
- Maintaining consistent payments to avoid accruing additional interest.

Insurance and Taxes

- Property Taxes: Typically paid annually or semi-annually, often included in escrow.
- Homeowners Insurance: Protects Shirley's investment, also often escrowed.
- Private Mortgage Insurance (PMI): Usually avoided with a 20% down payment, but worth confirming.

Final Thoughts and Practical Takeaways

Shirley Trembley's decision to purchase her home for \$184,800 with a 20% down payment and a simple interest amortized mortgage exemplifies a balanced approach to homeownership financing. It reflects prudent planning, clear understanding of the financial commitments involved, and an emphasis on transparency and manageable payments.

For prospective buyers, her scenario underscores several important lessons:

- The significance of sizable down payments in reducing overall interest and

avoiding additional costs like PMI.

- The benefits of understanding the type of interest (simple vs. compound) to anticipate the actual cost of borrowing.
- The importance of selecting an amortization schedule that aligns with long-term financial goals.
- The value of early and consistent mortgage payments to accelerate equity building and minimize interest costs.

In conclusion, Shirley's home purchase illustrates a thoughtful application of mortgage principles, combining affordability with financial clarity. Whether you're a first-time buyer or a seasoned investor, understanding the mechanics behind her loan setup provides valuable insights into effective home financing strategies.

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