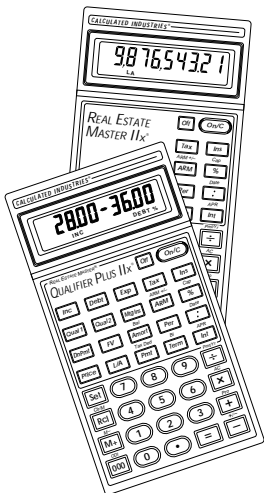# REAL ESTATE MASTER IIx®
QUALIFIER PLUS IIx®

For the Real Estate Professional

User's Guide

CALCULATED INDUSTRIES®

Putting answers at your fingertips since 1978

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INTRODUCING
REAL ESTATE MASTER IIx® AND
QUALIFIER PLUS IIx®

Created specifically for residential real estate professionals, the enhanced *Real Estate Master IIx* and the *Qualifier Plus IIx* are the simplest calculators ever made for residential real estate financing. With the press of a few buttons, they solve hundreds of real estate problems.

- 3–way Mortgage Qualifying
- Instant P&I and PITI Payments
- Loan/Mortgage Amounts
- Tax and Insurance Capabilities
- Interest Rates & Terms
- Built–in Sales Price and Down Payment
- Complete Amortization
- Remaining Balances/Balloon Payments
- Bi–weekly Loans
- ARM's with Lifetime Cap
- Date Math Functions
- Future Value and Appreciation
- Yields/Prices on Trust Deeds & Notes
- Loan Start Month Other than January

KEY DEFINITIONS

[+] [–] [x] [÷] [=]
Arithmetic operation keys.

[0] – [9] [000] and [•]
Digits used for keying in numbers.

[Off]
Turns all power off. The Memory and most financial registers are cleared.

[On/C]
When off, turns power on. When on, first press clears the last entry. Second press clears temporary registers.

[%]
Four-function (+, –, x, ÷) percent key.

[M+]
Adds displayed value to Memory. Pressing [Set] [M+] will subtract the displayed value from Memory. See *Memory Functions*.

[Rcl]
Recalls and displays the contents of the Memory or financial registers.

[Set]
Used with other keys to set or activate the function printed above the key on your calculator's face. When used, a small boxed "**S**" appears on the display.

[Dn Pmt]
Down Payment: Enters (in either Percent or Dollars) or calculates a Down Payment based on the entries of Loan Amount (or equivalent mortgage components) and Sales Price. A second press toggles the entered down payment from dollar figure to percent or vice versa. *Note: any entered numerical value under 100 is assumed to be a "percent down payment."*

[Price]
Sales Price: Enters or calculates a Sales Price based on the Loan Amount and Down Payment. *Note: Entered Sales Price values will not normally change.*

[L/A]
Loan Amount: Enters or solves for the initial loan amount or present value of a financial problem.

[Pmt]
Payment: Enters or solves for the periodic principal and interest (P&I) payment. Pressing twice calculates PITI (including property tax, insurance, mortgage insurance and expenses, if entered).

[Term]
Enters or solves for the number of years. A second press gives number of periods.

[Int]
Interest: Enters or solves for the annual interest rate. Press twice for the periodic rate. (Stored permanently, until changed)

[Per]
Period: Specifies a mortgage component (Term/Interest) or amortization/remaining balance value as "per period" rather than "per year." For example, 360 [Per] [Term] enters 360 periods.

[FV]
Future Value: Enters or solves for the future value of a financial problem.

[Amort]
Amortization: Finds total interest, principal and remaining balance. First press enters or shows range of periods. Second press shows total interest for period range. Third press shows total principal for range, and final press gives remaining balance at end of range.

[:]
Colon: Used to specify a range for amortization or to separate ARM Interest: Term and Qualifying Income: Debt ratio entries. Also used to separate values in a date entry.

[ARM]
Adjustable Rate Mortgage: Calculates payment and re-amortizes fully or partially amortized Adjustable Rate Mortgage based on the inputs of both Interest Adjustment and Term Adjustment, which are separated by the Colon [:] key. For example, an ARM which adjusts 1% every year is entered as

1 [:] 1[ARM]. Pressing [Set] [ARM] adjusts the rate up or down to show future payments. (ARM rates are stored permanently.)

[Ins]
Property Insurance: Stores and recalls annual property insurance as percent or dollar amount. Repeated presses toggle between percent and dollar values. Values of 10 or less are assumed to be annual percentages. Computed from the sales price. ***Note:*** *Tax & Insurance entered as dollar amounts remain fixed, even if sales price or loan amount are changed. However, if entered as a percent of sales price or loan amount, these items are automatically recalculated if sales price or loan amount are changed.*

[Tax]
Property Tax: Stores and recalls annual property tax in either percent or dollar amount. Repeated presses toggle between percent and dollar values. Values of 10 or less are assumed to be annual percentages. Computed from the sales price.

[Set] [÷]
Payments per Year: Sets the number of payment periods per year. Default is 12, for monthly. Any change to this setting is permanent until reset. To reset to 12 payments per year, press 12 [Set] [÷].

[Set] [x]
All Clear: Clears and resets the calculator to its default settings and values. *Use this with caution as it resets ratios, periods per year, etc. to default settings* (see *Default Settings* in Appendix).

[Set] [+]
Pro-Mode: Toggles the Pro–Mode setting "On" and "Off" (*default*). An advanced user feature, Pro-Mode changes Tax, Insurance, and on the Qualifier Plus IIx only, Mortgage Insurance to permanent entries. On the Qualifier Plus IIx only, Pro-Mode also changes the order that qualifying values are displayed when using the [Qual 1] and [Qual 2] keys, by showing the lower, or restrictive amount with the first press, the higher, or nonrestrictive amount with the second press, and the buyer's actual ratios with the third press. The fourth press displays the stored income and debt ratios.

[Set] [–]
Change Sign: Toggles the sign of a displayed value.

[Set] [%]
Lifetime Interest Cap (ARMs): Permanently sets the lifetime interest cap for ARMs by entering the maximum interest increase. Reset to 0 by pressing 0 [Set] [%].

[Set] [:]

Month Offset: Used to set the first month of payment for annual amortization if other than January.

[Set] [000]
Odd Days Interest: Calculates the pre-paid interest, or simple interest accumulated (based on a 360 day year) during the days before the first loan payment. Uses stored Interest value.

[Set] [Pmt]
Estimated After-Tax Payment: Calculates an estimated "after-tax" payment if loan variables and property taxes are entered. First enter a tax bracket, then press [Set] [Pmt] to display the annual tax deduction; second press displays the monthly tax deduction; third press displays the "after-tax" payment.

[Set] [Term]
Bi-Weekly Mortgage function: Converts between monthly and bi-weekly loans. A second press of [Term] while in bi-weekly mode, displays the total interest savings.

[Set] [Int]
Annual Percentage Rate (APR): Calculates APR (for fixed rates only), based on the entry of points and/or nonrecurring loan fees paid at initiation. Not used for ARM.

[Set] [ARM]
ARM Rate Increase/Decrease: Changes ARM function from increasing to decreasing rate.

[Set] [Amort]
Remaining Balance: Displays Remaining Balance when preceded by a single year or range of years (or individual payment or range of payments by using the [Per] key). Continue pressing [Amort] to see the Remaining Balance.

Qualifying Keys – "Plus" Model Only

[Qual 1]
A multifunction key which performs the following qualifying functions:

1. *Stores an Income:Debt Ratio:* (i.e. 28 [:] 39 [Qual 1]). The entered ratio will remain in storage until revised or reset. (defaults to 28%:36%.)

2. *Finds the Maximum Loan Amount* based on income and other entered values (interest, term, taxes, insurance, etc.) when loan amount is zero.

3. *Finds the Minimum Income Required* based on loan amount and other entered values when income is zero.

4. *Finds the Actual Income:Debt Ratio* based on loan amount, income and other entered values.

[Qual 2]
Stores additional (i.e., Government FHA/VA) Income and Debt ratios and operates same as the [Qual 1] key. Default Income and Debt ratios for this key are 29% and 41%, respectively.

[Inc]
Income: Enters the annual income for loan qualifying.

[Debt]
Enters long-term monthly debt payments.

[Exp]
Expense: Enters monthly housing expenses (i.e., homeowners' association dues, maintenance and utilities).

[Mtg Ins]
Mortgage Insurance: Stores and recalls annual mortgage insurance (i.e., Private Mortgage Insurance) in either percent or dollar amount. If entered as a dollar amount, a second press converts to annual percentage rate. If entered as a percentage, a second press shows the equivalent annual dollar amount. The number 10 or less is assumed to be an annual percentage. Computed from the loan amount. ***Note:*** *The calculator will remember the value as it was entered (i.e., a percent or dollar value.)*

OPERATING BASICS

Decimal Place Selection

You can use the **[Set]** key to permanently select the number of decimal places displayed. (Values are rounded using 5/4 rounding.) You may do this before or after finding an answer. Press **[Set]** followed by the number of decimal places you wish to display:

[Set] 3	0.000
[Set] 2	0.00 (Default)
[Set] 1	0.0
[Set] 0	0.
[Set] [•]	Floating Decimal

Note: *To return to the standard two decimal place setting, press **[Set] 2**.*

Basic Math

Both calculators use standard chaining logic. This means the first value is entered, then an operator, then the second value, then the Equal key to get your answer.

A.	216	[+]	84	[=]	**300.00**
B.	216	[–]	16	[=]	**200.00**
C.	12	[x]	12	[=]	**144.00**
D.	144	[÷]	12	[=]	**12.00**

Percentage Calculations

The Percent **[%]** key is used to find a given percent of a number or for working add-on, discount or division percentage calculations.

A.	800 [x]	25	[%]	[=]	**200.00**
B.	250 [+]	10	[%]	[=]	**275.00**
C.	25 [–]	50	[%]	[=]	**12.50**
D.	200 [÷]	50	[%]	[=]	**400.00**

Memory Functions

Pressing the **[M+]** key adds the displayed value to Memory. **[Set] [M+]** subtracts the displayed value from Memory. **[Rcl] [M+]** recalls and displays the total value in Memory. **[Rcl] [Rcl]** displays and clears the Memory. **[Set] [Rcl]** clears Memory without clearing the display.

1. 355 [M+]
   [Rcl] [Rcl]   **355.00**

2. 355 [M+]
   255 [M+]
   745 [Set] [M+]
   [Rcl] [Rcl]   **– 135.00**

Note: [Set] [Rcl] [M+] may be used to replace any value in memory with the displayed value.

1. 355 [M+]   **355.00**

2. 500 [Set] [Rcl] [M+]   **500.00**
   [Rcl] [Rcl]   **500.00**

Date Function

Using the **[:]** key, you can quickly solve common real estate date problems: escrow or closing dates, listing expiration dates, and the number of days prepaid interest, etc. You enter a date as follows: Numerical Month **[:]**, Numerical Day **[:]** and Numerical Year.

The date function lets you: 1) add a number of days to a date to find a future date, 2) subtract a number of days from a date to find a past date, and, 3) subtract one date from another date to find the number of days in between.

Find the number of days to calculate prepaid interest due at closing, if the escrow closing date is 10/14/96 and the first payment is due 11/1/96.

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Enter 1st payment date:	
11 [:] 1 [:] 96	**11-1-96**
3. Subtract closing date to find number of days:	
[–] 10 [:] 14 [:] 96 [=]	**18.00**

Mortgages & Real Estate Loans

1. The financial functions; L/A, Pmt, Int, and Term, work like you would say them. For example, to find the payment on a $100,000 loan for 30 years at 10% interest, enter the three known variables and press the key for the unknown fourth variable: Payment.

2. Financial values may be entered in any order.

3. Values for Term and Interest are permanently stored in memory.

4. Always press **[On/C]** twice after completing a financial problem to ensure the financial registers are cleared.

5. When solving for a financial component, the word "run" displays.

6. Once an answer is calculated, for example, a payment, you can change any variable and recompute for a new answer without having to re-enter the other data.

Finding a Monthly Loan Payment

Find the monthly payment on a $95,500, 30 year loan at 7.75% annual interest.

Steps/Keystroke	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Enter loan amount:	
95,500 [L/A]	**95,500.00**
3. Enter term, interest and find the monthly payment:	
30 [Term]	**30.00**
7.75 [Int]	**7.75**
[Pmt]	"run" **684.17**

Finding a Term of a Loan

How long does it take to pay off a loan of $15,000 at 10% interest if you make payments of $181.01 each month?

Steps/Keystroke	Display
1. Clear calculator	
[On/C] [On/C]	**0.00**
2. Enter loan amount, interest, monthly payment, then find term in years:	
15,000 [L/A]	**15,000.00**
10 [Int]	**10.00**
181.01 [Pmt]	**181.01**
[Term]	"run" **11.78**
3. Find periodic term:	
[Term]	**141.35**

Finding the Interest Rate of a Loan

Find the interest rate on a $98,500 mortgage with a 30 year term and a monthly payment of $1,150.

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Enter loan amount, term, monthly payment and find annual interest and periodic rate:	
98,500 [L/A]	**98,500.00**
30 [Term]	**30.00**
1,150 [Pmt]	**1,150.00**
[Int]	"run" **13.78**
[Int]	**1.15**

Finding a Loan Amount

How much can you borrow if the current interest rate is 9.75% on a 30 year term and you can pay $950 each month?

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Enter interest, term and monthly payment. Then find loan amount:	
9.75 [Int]	**9.75**
30 [Term]	**30.00**
950 [Pmt]	**950.00**
[L/A]	"run" **110,573.84**

Non-Monthly Loans & Payments Per Year (Pmt/Yr)

Most residential real estate loans are paid monthly. If paying a non-monthly loan, the number of payments per year must be changed by entering the number of payments per year then pressing **[Set] [÷]**. as shown in the following exercise:

Steps/Keystrokes	Display
1. Clear calculator [On/C] [On/C]	**0.00**
2. Enter number of payments per year: 4 [Set] [÷] (Pmt/Yr)	**4.00**

To recall the currently stored number of payments, press **[Rcl] [÷]**:

Steps/Keystrokes	Display
1. Clear calculator: [On/C] [On/C]	**0.00**
2. Recall number of payments per year: [Rcl] [÷] (*Pmt/Yr*)	**4.00**

IMPORTANT: Complete steps 1 and 2 below to return your calculator to 12 payments per year (default).

Steps/Keystrokes	Display
1. Clear calculator: [On/C] [On/C]	**0.00**
2. Enter # of payments per year: 12 [Set] [÷] (*Pmt/Yr*)	**12.00**

Finding a Quarterly Payment

Find the quarterly payment on a 10 year loan of $15,000 with an annual interest rate of 12%.

Steps/Keystrokes	Display
1. Clear calculator: [On/C] [On/C]	**0.00**
2. Set to 4 payments per year: 4 [Set] [÷] (Pmt/Yr)	**4.00**
3. Enter loan amount: 15,000 [L/A]	**15,000.00**
4. Enter term in years 10 [Term]	**10.00**
5. Enter annual interest: 12 [Int]	**12.00**
6. Find quarterly payment: [Pmt] "run"	**648.94**
7. Reset to 12 payments per year: 12 [Set] [÷] "run"	**12.00**

Sales Price/Down Payment

Review these pointers before working with Sales Price and Down Payments.

1. When using the **[Price]**, **[DnPmt]** and **[L/A]** keys, enter the two known values (i.e., Price and Down Payment), then solve for the third (i.e., Loan Amount), before calculating financial values.

2. If a Sales Price is entered, it remains constant until you enter a new Sales Price or precede a Down Payment or Loan Amount entry with **[Set]**.

Finding L/A Based on Sales Price & Down Pmt

Find the loan amount and dollar down payment if the Sales Price is $175,000 and you're putting 20% down.

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Enter sales price:	
175,000 [Price]	**175,000.00**
3. Enter down payment percent and find loan amount:	
20 [Dn Pmt]	**20.00**
[L/A]	**140,000.00**
4. Display down payment percent then find down payment amount:	
[Dn Pmt]	**20.00**
[Dn Pmt]	**35,000.00**

Finding Sales Price and Monthly Payment Based on L/A & Down Pmt

Find your maximum Sales Price if approved for a $125,000 loan with a 20% down. Find your monthly payment at 9% interest over 30 years.

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Enter loan amount:	
125,000 [L/A]	**125,000.00**
3. Enter down payment percent then find sales price:	
20 [Dn Pmt]	**20.00**
[Price]	**156,250.00**
4. Enter term and interest, then find monthly payment:	
30 [Term]	**30.00**
9 [Int]	**9.00**
[Pmt]	"run" **1,005.78**

Taxes & Insurance/PITI Payment

Your calculator will temporarily store Property Tax, Property Insurance and Mortgage Insurance (Qualifier Plus IIx only) rates to allow you to compute a PITI (Principal, Interest, Taxes & Insurance) payment as well as a regular P&I payment. These figures can be entered as dollar amounts or percentages. If entered as percentages, the Sales Price or Loan Amount can be changed and tax and insurance will recalculate

automatically. If entered as dollar amounts, they need to be re-entered with a change in Sales Price or Loan Amount to be correct. The number 10 or less is assumed to be an annual percentage. *Note: While in Pro-Mode, tax and insurance entries are permanent. Also, the PITI payment includes monthly expenses.*

IMPORTANT: Both Tax and (Property) Insurance rates are based on Sales Price. The Mortgage Insurance rate is based on the Loan Amount. If neither Sales Price nor Down Payment has been entered, the Sales Price defaults to equal the Loan Amount (i.e. assuming a 100% loan), in which case the Tax and Insurance rates are based on the entered Loan Amount

Setting Tax and Insurance Rates

Enter an annual property tax rate of 1%, a property insurance rate of .25%, and a mortgage insurance rate of .15%:

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Set Tax rate and Insurance rate:	
1 [Tax]	**1.00**
.25 [Ins]	**0.25**
3. Set Mortgage Insurance rate:	
(Qualifier Plus IIx only)	
.15 [Mtg Ins]	**0.15**

Recall your stored rates by pressing **[Rcl]** followed by the **[Tax], [Ins]**, or **[Mtg Ins]** keys:

Steps/Keystrokes	Display
1. Recall Tax rate and Insurance rate:	
[Rcl] [Tax]	**1.00**
[Rcl] [Ins]	**0.25**
2. Recall Mortgage Insurance rate:	
(Qualifier Plus IIx only)	
[Rcl] [Mtg Ins]	**0.15**

*Note: Pressing **[On/C] [On/C]** will set **[Tax]**, **[Ins]** and **[Mtg Ins]** registers to zero, unless Pro Mode is activated, then these become permanent entries that must be cleared by pressing **[Set] [x]** or re-entering zeros.*

Total PITI Payment with Percentages

Find both the P&I and PITI payment on a new home priced at $125,000, with a 5% down payment at 8.75% interest for a term of 15 years, given a 1% annual property tax, 0.25% annual property insurance.

Steps/Keystrokes	Display
1. Clear calculator: [On/C] [On/C]	**0.00**
2. Set Tax rate: 1 [Tax]	**1.00**
3. Set Insurance rate: .25 [Ins]	**0.25**
4. Enter annual interest, then term in years: 8.75 [Int] 15 [Term]	**8.75** **15.00**
5. Enter sales price: 125,000 [Price]	**125,000.00**
6. Enter down payment and find loan amount: 5 [Dn pmt] [L/A]	**5.00** **118,750.00**
7. Find P&I and PITI payments: [Pmt] "run" [Pmt]	**1,186.85** **1,317.05**

Total PITI Payment with Dollar Values

Find both the P&I and PITI payment on a new home selling for $134,000, and a 15% down payment at 7.75% interest for a term of 30 years, given an estimated annual property tax of $1,200 and a yearly $350 property insurance premium.

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Set Tax figure:	
1,200 [Tax]	**1,200.00**
3. Set Insurance figure:	
350 [Ins]	**350.00**
4. Enter annual interest, term in years and sales price:	
7.75 [Int]	**7.75**
30 [Term]	**30.00**
134,000 [Price]	**134,000.00**
5. Enter down payment then find the loan amount:	
15 [Dn pmt]	**15.00**
[L/A]	**113,900.00**
6. Find P&I and PITI payments:	
[Pmt]	"run" **815.99**
[Pmt]	**945.16**

Estimated "After-Tax" Payment

Buyers in the 28% income tax bracket want to finance a $150,000 mortgage for 30 years at 9.75% interest. If they pay $1,500 in annual property taxes and $350 in annual insurance, find the *estimated* "after-tax" monthly payment. **Note:** *This "after–tax" payment is an estimation because it does not include tax variables pertaining to an individual's tax situation, different tax laws, etc. When figuring accurate/detailed tax information, consult a tax specialist.*

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Enter annual taxes and insurance:	
1,500 [Tax]	**1,500.00**
350 [Ins]	**350.00**
3. Enter annual interest, term in years, then loan amount:	
9.75 [Int]	**9.75**
30 [Term]	**30.00**
150,000 [L/A]	**150,000.00**
4. Find P&I and PITI payments:	
[Pmt]	"run" **1,288.73**
[Pmt]	**1,442.90**
5. Enter tax bracket to find annual and monthly tax deductions, then "after-tax" payment:	
28 [Set] [Pmt]	**4,504.20**
[Pmt]	**375.35**
[Pmt]	**1,067.55**

— DO NOT CLEAR CALCULATOR —

If the previous loan started in July, find the "after-tax" payment.

Steps/Keystrokes	Display
1. Set Month 1 Offset to July: 7 [Set] [:]	**7.00**
2. Enter tax bracket to find annual tax deduction: 28 [Set] [Pmt]	**2,255.09**
3. Find monthly tax deduction: [Pmt]	**375.85**
4. Find "after-tax" payment: [Pmt]	**1,067.05**

Amortization & Remaining Balance

Using the amortization function, you can find the total interest, principal and remaining balance for an entire loan, a range of payments/years, or an individual payment/year, for fully or partially amortized loans.

1. When entering a range of payments using the Colon **[:]** key, all three possible outputs: Interest, Principal and Remaining Balance, can be found without having to re-enter the range each time.

2. You can find Remaining Balance by entering a year or range of years, period or range of periods, then pressing **[Set] [Amort]**. (i.e., to find the remaining balance after the 10th

year, press **10 [Set] [Amort]**; to find the remaining balance after the 10th period, press **10 [Per] [Set] [Amort]**).

3. Entered ranges are inclusive: That is, a range of 1 to 5 includes year 1 and 5.

4. Entering a numerical value or performing a math operation on the keyboard alters the values (including the default settings) when calculating range of payments. Always specify a range of payments or an individual payment first.

5. In some cases, a final, regular P&I payment is included in the "balloon payment." Neither calculator includes this. While calculating the remaining balance; only the remaining principal balance is calculated.

6. If the first loan payment begins in a month other than January, reset the Month Offset value to calculate the correct number of periods in the amortization range. To change this setting, press the month number, then **[Set] [:]**. For example, if the first payment begins in April, press **4 [Set] [:]**. If requesting amortization values for year 1, press 1 [Amort] to display the amortization of periods 1–9. Year 2, 2 [Amort], displays values for periods 10–21. To return the Month Offset to 1, press

[Off] then **[On/C],** or press **1 [Set] [:]**.

Total Principal/Total Interest for a Loan

Find the total interest payed on a $200,000 loan at 9.25% interest over 30 years?

Steps/Keystrokes	Display
1. Turn calculator off then back on:	
[Off] [On/C]	**0.00**
2. Enter loan amount, interest, term, then find monthly payment:	
200,000 [L/A]	**200,000.00**
9.25 [Int]	**9.25**
30 [Term]	**30.00**
[Pmt]	"run" **1,645.35**
3. Find total number of payments:	
[Amort]	"run" **1-360**
4. Find total interest paid then total principal paid:	
[Amort]	**392,326.31**
[Amort]	**200,000.00**

**Using Month Offset to Calculate Total
Principal & Interest for One Year**

Your first loan payment begins in May.
How much total interest and total princi-
pal will you pay on a 30 year, $90,000
loan at 8% interest during the first year?
(First find the monthly payment to "set
up" this loan.)

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Set Month Offset to May:	
5 [Set] [:]	**5.00**
3. Enter loan amount, interest and term, then find the monthly payment:	
90,000 [L/A]	**90,000.00**
8 [Int]	**8.00**
30 [Term]	**30.00**
[Pmt]	"run" **660.39**
4. Enter Year 1 and find the total interest and total principal in Year 1:	
1 [Amort]	"run" **1-8**
[Amort]	**4,788.58**
[Amort]	**494.53**

*Note: Return your Month Offset to 1 by
turning your calculator off then on, or by
pressing **1 [Set] [:]**. Display the Month
Offset by pressing **[Rcl] [:]**.*

Principal/Interest for a Given Payment

For a $175,000 loan at 9.25% interest for 30 years, find out how much interest and how much principal you pay in the first and second payments.

Steps/Keystrokes	Display
1. Clear calculator:	
[Off] [On/C]	**0.00**
2. Enter loan amount, interest, term and find monthly payment:	
175,000 [L/A]	**175,000.00**
9.25 [Int]	**9.25**
30 [Term]	**30.00**
[Pmt]	"run" **1,439.68**
3. Display 1st payment period:	
1 [Per] [Amort]	"run" **1-1**
4. Find interest and principal on 1st payment:	
[Amort]	**1,348.96**
[Amort]	**90.72**
5. Display 2nd payment period:	
2 [Per] [Amort]	"run" **2-2**
6. Find interest and principal on 2nd payment:	
[Amort]	**1,348.26**
[Amort]	**91.42**

Principal/Interest – Range of Payments/Years

For a $125,000 loan at 10.25% interest for 30 years, how much interest and principal will you pay in payments 1–9 and years 1–10.

Steps/Keystrokes	Display
1. Clear calculator:	
[Off] [On/C]	**0.00**
2. Enter loan amount:	
125,000 [L/A]	**125,000.00**
3. Enter interest, term and find monthly payment:	
10.25 [Int]	**10.25**
30 [Term]	**30.00**
[Pmt]	"run" **1,120.13**
4. Enter payment periods 1–9:	
1 [:] 9 [Per] [Amort]	"run" **1-9**
5. Find interest and principal:	
[Amort]	**9,592.93**
[Amort]	**488.21**
6. Enter years 1–10:	
1 [:] 10 [Amort]	"run" **1-120**
7. Find interest and principal:	
[Amort]	**123,522.48**
[Amort]	**10,892.71**

Balloon Payment/Remaining Balance Needed to Pay Off a Loan

You are looking at a new home with the following financing available: Loan amount $125,000 at 8.75% amortized over 30 years but due and payable after 10 years. What is the balloon payment (remaining balance) after 10 years?

Steps/Keystrokes	Display
1. Clear calculator: [On/C] [On/C]	**0.00**
2. Enter the loan amount: 125,000 [L/A]	**125,000.00**
3. Enter interest, term then find monthly payment: 8.75 [Int] 30 [Term] [Pmt] "run"	**8.75** **30.00** **983.38**
4. Find balloon/remaining balance after 10 years: 10 [Set] [Amort] "run"	**111,277.99**

Future Value

Given any four components to a problem which includes a future value, you can calculate the fifth.

Appreciation

You buy a house for $200,000 and want to know what it will be worth in 3 years figuring an inflation or appreciation rate of 8.5%. (Set pay periods to one per year.)

Steps/Keystrokes	Display
1. Clear calculator: [On/C] [On/C]	**0.00**
2. Set to 1 payment per year: 1 [Set] [÷]	**1.00**
3. Enter present value: 200,000 [L/A]	**200,000.00**
4. Enter term in years: 3 [Term]	**3.00**
5. Enter appreciation rate then find the future value: 8.5 [Int] [FV]	**8.50** "run" **255,457.83**
6. Set back to 12 payments per year: 12 [Set] [÷]	**12.00**

Trust Deeds & Discounted Notes

Two things to remember when calculating trust deed, purchase price and yield problems are: 1) When entering or solving for "yield" or "rate of return," use the **[Int]** key, and 2) when entering or solving for "purchase price" or "present value," use the **[L/A]** key.

Purchase Price of a Note — Fully Amortized

The mortgage you are thinking about buying has the following terms and conditions: 15 years remaining, $100 per month in incoming payments and you want a 25% yield or return on your investment. In this case you are paying for the income stream, the incoming payments, and not the future value.

Steps/Keystrokes	Display
1. Turn calculator off then on:	
[Off] [On/C]	**0.00**
2. Enter desired yield:	
25 [Int]	**25.00**
3. Enter term and payment amount:	
15 [Term]	**15.00**
100 [Pmt]	**100.00**
4. Find purchase price:	
[L/A] "run"	**4,682.68**

— DO NOT CLEAR THE CALCULATOR —

What if you wanted a 20% yield? Leave all of the above data the same and re-enter the 20% interest right over the old rate and then re-calculate the loan amount.

Steps/Keystrokes	Display
1. Enter your new desired rate of return:	
20 [Int]	20.00
2. Find purchase price:	
[L/A]	"run" 5,693.80

Finding the Yield on a Discounted Note

Someone wants to sell you a note under the following terms: 60 months remaining on the term, a face amount when due of $7,500, 10% interest-only payments of $62.50 (incoming) and he will sell the note for $6,500 if you buy today. What would be the yield on your investment?

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Enter future value of note when due:	
7,500 [FV]	**7,500.00**
3. Enter purchase price, remaining term, payment amount, then find your yield:	
6,500 [L/A]	**6,500.00**
5 [Term]	**5.00**
62.50 [Pmt]	**62.50**
[Int]	"run" **13.70**

— DO NOT CLEAR CALCULATOR —

What should you pay for this trust deed if you desire an 18% yield on your investment?

Steps/Keystrokes	Display
1. Enter your desired yield: 18 [Int]	**18.00**
2. Find purchase price: [L/A]	"run" **5,530.99**

APR & Total Finance Charges

Solving for APR/TFC is done in two steps: 1) you set up the loan just like any other problem (that is, enter three known variables and solve for the fourth) and 2) combine points and fees and press **[Set] [Int]** to solve APR. Press **[Int]** a second time to display the total finance charges. Press a third time to display total finance charges plus principal. **Note:** *APR for non-real estate loans (such as auto and boat loans), should not be solved using the following keystrokes, as methods for solving differ.*

APR solutions are interest calculations, therefore they may take several seconds to calculate.

APR Solution

You are taking out a real estate loan of $50,000 for 30 years at a quoted rate of 9% interest. The loan cost is quoted as 1.5 points and $250 in fees. Find the APR and total finance charges when these costs are included?

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Enter loan amount, interest and term, then find monthly payment:	
50,000 [L/A]	**50,000.00**
9 [Int]	**9.00**
30 [Term]	**30.00**
[Pmt]	"run" **402.31**
3. Recall loan amount and find point cost:	
[Rcl] [L/A]	**50,000.00**
[x] 1.5 [%] [=]	**750.00**
4. Add fees & find total:	
[+] 250 [=]	**1,000.00**
5. Find APR and total finance charges:	
[Set] [Int]	"run" **9.23**
[Int]	**95,832.07**

Odd Days Interest & APR

Odd days interest is the "prepaid" interest accumulated from the date of escrow closing to the first payment date. It is based on straight simple interest calculated for a 360-day year, using the entered interest rate value. This interest is calculated at funding time, and is included in the total cost of the loan, for calculating the Annual Percentage Rate (APR). In solving for odd days interest, you must enter the following: 1) the loan amount 2) the annual interest and, 3) the number of days from escrow closing to the date of the first payment.

Finding ODI and APR

Find the monthly payment on a $100,000 loan at 8.5% annual interest and 30 year term. Next, find the amount of odd days interest, or "prepaid" interest due, if escrow closes on 7/21/98 and the first payment is due 8/1/98.

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**

Continued on the next page ➡

2. Enter loan amount, interest, term and
   find monthly payment:

100,000 [L/A]	**100,000.00**
8.5 [Int]	**8.50**
30 [Term]	**30.00**
[Pmt]	"run" **768.91**

3. Find days between escrow closing and
   date of 1st payment:

   8 [:] 1 [:] 98 [–] 7 [:] 21 [:] 98 [=] **11.00**

4. Find the prepaid interest due at closing:

   [Set] [000]   **259.72**

   — DO NOT CLEAR THE CALCULATOR —

Add the prepaid interest to the loan's
points and fees if they are equal to
1.5% and $500, respectively. Then find
the Annual Percentage Rate (APR),
based on these closing costs.

Steps/Keystrokes	Display
1. Store the prepaid interest in Memory:	
[M+]	**259.72**
2. Recall loan amount:	
[Rcl] [L/A]	**100,000.00**
3. Find point cost and fees:	
[x] 1.5 [%] [=]	**1,500.00**
[+] 500 [=]	**2,000.00**
4. Add prepaid interest stored in Memory:	
[+] [Rcl] [M+] [=]	**2,259.72**
5. Find APR for this loan:	
[Set] [Int]	"run" **8.75**

Bi-Weekly Loans

The built-in Bi-weekly loan function (**[Set] [Term]**) converts established, fully amortized monthly loans into bi-weeklies (one-half the monthly payment is made every two weeks). With the addition of two half-payments a year, 26 bi-weekly payments amount to 13 monthly payments. This means large interest savings and a reduction in pay off time.

Bi-Weekly Term Reduction & Payment

Find the initial monthly payment on a 30 year, $76,500 mortgage at a 10.25% annual interest rate. Next, convert it to a bi-weekly and calculate the number of years it will take to pay off. Also find the total interest savings and the bi-weekly payment amount.

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Enter loan amount, term in years and interest rate:	
76,500 [L/A]	**76,500.00**
30 [Term]	**30.00**
10.25 [Int]	**10.25**
3. Find monthly payment:	
[Pmt]	"run" **685.52**

4. Find Bi-Weekly term, then the total interest savings:

[Set] [Term]	"run"	20.72
[Term]		– 62,166.78

5. Find bi-weekly payment:

[Pmt]	342.76

Adjustable Rate Mortgages

Using the **[ARM]** key, you can find the "adjusted" payments for future years on fully and partially amortized Adjustable Rate Mortgages. Here are some notes on solving ARM loans:

1. Solve the initial ARM payment as you would any standard fixed-rate loan. The ARM function is only used for "adjusted" periods.
2. The "split" Interest **[:]** Term Adjustment entry for ARM should always be entered on an annual basis. This value is permanently stored in memory.
3. After performing an ARM calculation, your permanently stored values for Term and Interest will be changed. Performing an ARM alters these values.
4. To calculate a "decreasing ARM," enter the two ARM parameters, then press **[Set] [ARM]**.
5. The calculator includes a "lifetime cap" (i.e., the maximum amount an interest rate may increase over the life of a loan). Before setting the ARM parame-

ters, enter the maximum lifetime interest increase then press **[Set] [%]**. This permanently sets the lifetime cap. To reset the cap to "0," enter **O** then press **[Set] [%]**, or perform an "All Clear."

Increasing & Decreasing ARM Payment

Find the payment for the first three years on a $100,000, 30 year ARM loan staring at 10%, increasing 1% after six months, then decreasing to 1.5% after an additional 12 months.

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Enter loan amount, term in years and annual interest, then find initial monthly payment:	
100,000 [L/A]	**100,000.00**
30 [Term]	**30.00**
10 [Int]	**10.00**
[Pmt]	"run" **877.57**
3. Enter initial ARM adjustment and find increased "adjusted" payment:	
1 [:] .5 [ARM]	**1.00 – 0.50**
[ARM]	"run" **951.83**
4. Enter 2nd ARM "adjustment" and find increased "adjusted" payment:	
1.5 [:] 1 [Set] [ARM]	**– 1.50 – 1.00**
[ARM]	"run" **842.56**

ARM Payment — Worst-Case Scenario

Find the initial monthly payment on a 30 year, $176,000 mortgage at 8.25% annual interest rate. Find the second and third years' "worst-case" adjusted payments if this ARM loan increases 1% at the end of each year. Find the remaining loan balance, term, and interest rate.

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Enter loan amount, term and annual interest:	
176,000 [L/A]	**176,000.00**
30 [Term]	**30.00**
8.25 [Int]	**8.25**
3. Find initial monthly payment:	
[Pmt]	"run" **1,322.23**
4. Enter ARM parameters and find 1st and 2nd "adjusted" payments:	
1 [:] 1 [ARM]	**1.00 – 1.00**
[ARM]	"run" **1,445.79**
[ARM]	"run" **1,570.86**
5. Find principle at start of year:	
[Rcl] [L/A]	**173,350.16**
6. Recall current interest rate, then recall remaining term:	
[Rcl] [Int]	**10.25**
[Rcl] [Term]	**28.00**

ARM Payment — Using Lifetime Cap

Using the previous loan, add a lifetime cap of 4%, then find the adjusted payments through year six.

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Enter loan amount, term and annual interest, then find the initial monthly payment:	
176,000 [L/A]	**176,000.00**
30 [Term]	**30.00**
8.25 [Int]	**8.25**
[Pmt]	"run" **1,322.23**
3. Input interest cap:	
4 [Set] [%]	**CAP 4.00**
4. Enter ARM parameters then Find 1st — 5th "adjusted" payment:	
1 [:] 1 [ARM]	**1.00 – 1.00**
[ARM]	"run" **1,445.79**
[ARM]	"run" **1,570.86**
[ARM]	"run" **1,697.07**
[ARM]	"run" **1,824.09**
[ARM]	"run" **1,824.09**
7. Find principle at start of year, recall current interest rate then remaining term:	
[Rcl] [L/A]	**170,198.79**
[Rcl] [Int]	**12.25**
[Rcl] [Term]	**25.00**

Note: *The payment for 4th and 5th adjustments (corresponding to the 5th and 6th years) are the same because the lifetime cap was reached on the 4th adjustment. An "M" for "maximum" displays when the Cap is reached. Before starting a new ARM problem, press* **0 [Set] [%]** *to reset the Cap to "0."*

Qualifying — Qualifier Plus IIx Only

When qualifying a prospective buyer, the **[Qual 1]** and **[Qual 2]** keys are used to perform the following qualifying functions:

1. *Store an Income:Debt Ratio:* The entered ratio will remain in storage until revised or reset. (**[Qual 1]** defaults to 28%:36% and **[Qual 2]** to 29%:41%.)

   Note: The **[Qual 2]** *key stores additional (i.e., Government, FHA/VA, etc.), Income and Debt ratios; otherwise it operates exactly as the* **[Qual 1]** *key.*

2. *Find the Maximum (Qualifying) Loan Amount* based on income and other entered values (interest, term, taxes, insurance, etc.) when loan amount is zero.

   Note: The Qualifying Loan Amount is automatically stored in the Loan Amount **[L/A]** *register.*

The first press of **[Qual 1]** or **[Qual 2]** displays the stored ratios, the second press displays the "restrictive" qualifying loan amount, the third press the "nonrestrictive" qualifying loan amount, and the fourth press the buyer's actual income and debt ratios.

3. *Find the Minimum Income Required* based on loan amount and other entered values when income is zero.

4. *Find the Actual Income:Debt Ratio* based on loan amount, income and other entered values.

Pro–Mode

If in "Pro-Mode," the order in which the information displays will be different.

1. When calculating Annual Income Required, the first press of **[Qual 1]** or **[Qual 2]** displays the stored ratios and the second press the Annual Income Required. The third press shows the Allowable Monthly Debt.

2. When calculating buyer's Actual Ratios, the first press of **[Qual 1]** or **[Qual 2]** displays the stored qualifying ratios while the second press calculates the buyer's actual ratios.

3. The **[Exp]**, **[Tax]**, **[Ins]**, and **[Mtg Ins]** keys may be used as optional variables affecting the buyers' qualifying (and

PITI payment). Taxes and Insurance rates, if applicable, are computed from the Sales Price. Mortgage Insurance is computed from the Loan Amount.

Note: All of the example problems in this section are based on the default Income and Debt Ratios of 28% and 36%, respectively.

Setting Income/Debt Qualifying Ratios

Enter and permanently store qualifying ratios of 28% for Income; 36% for Debt.

Steps/Keystrokes	Display
1. Clear calculator: [On/C] [On/C]	**0.00**
2. Set qualifying ratios: 28 [:] 36 [Qual 1]	**28.00 – 36.00**

Recalling Income/Debt Qualifying Ratios

Recall stored ratios by pressing **[Rcl]** followed by **[Qual 1]**.

Steps/Keystrokes	Display
1. Clear calculator: [On/C] [On/C]	**0.00**
2. Recall qualifying ratios: [Rcl] [Qual 1]	**28.00 – 36.00**

Qual. Loan Amount Based on Income & Debt

What size loan can a buyer qualify for if she earns $45,000/year, has $500/month long term debt and is putting $35,000 down? Loan parameters are a 7.5% interest rate at 30 years and qualifying ratios of 28%:36%. (No Tax and Insurance.)

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Recall Tax rate, Insurance rate and Mortgage Insurance rate:	
[Rcl] [Tax]	**0.00**
[Rcl] [Ins]	**0.00**
[Rcl] [Mtg Ins]	**0.00**
3. Enter term in years, annual interest and down payment:	
30 [Term]	**30.00**
7.5 [Int]	**7.50**
35,000 [Dn Pmt]	**35,000.00**
4. Enter annual income and monthly debts:	
45,000 [Inc]	**45,000.00**
500 [Debt]	**500.00**
5. Display qualifying ratios and find qualifying loan amount:	
[Qual 1]	**28.00 – 36.00**
[Qual 1]	"run" **121,564.98**
6. Find price and monthly payment:	
[Price]	**156,564.98**
[Pmt]	**850.00**

— DO NOT CLEAR THE CALCULATOR —

Re-qualify this buyer assuming $200 per month in additional housing expenses.

Steps/Keystrokes	Display
1. Enter monthly housing expenses:	
200 [Exp]	**200.00**
2. Display qualifying ratios, then find new qualifying loan amount and new price:	
[Qual 1]	**28.00 – 36.00**
[Qual 1]	"run" **92,961.46**
[Price]	**127,961.46**

Qualifying Loan Amount Based on Income/Debt

Buyers who make $68,000 annually with $750 in long-term monthly debts wish to buy a home offered at $200,000. For what loan amount can they qualify? (Use previously stored interest, term and qualifying ratios.)

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Enter annual income and monthly debts:	
68,000 [Inc]	**68,000.00**
750 [Debt]	**750.00**
3. Display qualifying ratios, then find qualifying loan amount:	
[Qual 1]	**28.00 – 36.00**
[Qual 1]	"run" **184,492.74**

— DO NOT CLEAR THE CALCULATOR —

"Nonrestrictive" Qualifying L/A & Actual Ratios

The amount calculated in the previous example is the lower, or "restrictive," ratio. What does the other "nonrestrictive" qualifying ratio calculate to and which side is it based on (i.e., buyer's income or debt)? What are the buyer's actual income and debt ratios?

Steps/Keystrokes   Display

1. Find nonrestrictive loan amount:
   [Qual 1]   "run"   **– 226,921.30 INC**
2. Find actual ratios:
   [Qual 1]   "run"   **22.76-36.00**

*Note: The "**INC**" legend tells you that the nonrestrictive side was based on the Income Ratios; therefore, the restrictive side was based on debts.*

— **Do Not Clear the Calculator** —

Using the "Pro-Mode"

Now change the order of the qualifying display using the "Pro-Mode."

Steps/Keystrokes	Display
1. Set the Pro-Mode to On:	
[Set] [+]	**Pro On**
2. Find qualifying loan amount:	
[Qual 1] "run"	**184,492.74**
3. Find nonrestrictive loan amount:	
[Qual 1] "run"	**– 226,921.30 INC**
4. Display actual qualifying ratios:	
[Qual 1]	**22.76 – 36.00**
5. Display stored ratios:	
[Qual 1]	**28.00 – 36.00**

— DO NOT CLEAR THE CALCULATOR —

Continuing on, how much money will they need to put down to buy the $200,000 house?

Steps/Keystrokes	Display
1. Enter Price:	
200,000 [Price]	**200,000.00**
2. Find Down Payment:	
[Dn Pmt]	**15,507.26**
3. Turn Pro-Mode off:	
[Set] [+]	**Pro Off**

Important: Be sure to turn the "Pro-Mode" off (**[Set] [+]**) before continuing to other problems, as it will store future amounts entered into the Tax, Insurance and Mortgage Insurance keys permanently, in addition to changing the sequence the values are displayed using the **[Qual 1]** and **[Qual 2]** keys.

Qualifying for Specified Purchase Price Based on Income & Debt – Tax/Insurance Included

The same buyers earning $68,000 annually with $750 in monthly debts now wish to buy a lower-priced home and are willing to put $20,000 down. If you include estimated annual property taxes of 1%, insurance of 0.5% and a mortgage insurance rate of 0.25%, what loan amount can they now qualify for? (Again, use previously stored 7.5% interest, 30 year term and qualifying ratios of 28%:36%.)

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Enter down payment, annual income and monthly debts:	
20,000 [Dn Pmt]	**20,000.00**
68,000 [Inc]	**68,000.00**
750 [Debt]	**750.00**

3. Set annual property tax rate:	
1 [Tax]	**1.00**
4. Set annual property insurance rate:	
.5 [Ins]	**0.50**
5. Set annual mortgage insurance rate:	
.25 [Mtg Ins]	**0.25**
6. Recall interest and term:	
[Rcl] [Int]	**7.50**
[Rcl] [Term]	**30.00**
7. Display qualifying ratios:	
[Qual 1]	**28.00 – 36.00**
8. Find qualifying loan amount:	
[Qual 1] "run"	**149,695.67**
9. Find Price:	
[Price]	**169,695.67**

— DO NOT CLEAR THE CALCULATOR —

Now find the monthly payment and PITI payment based on the entered tax and insurance.

Steps/Keystrokes		Display
1. Find P & I payment:		
[Pmt]	"run"	**1,046.69**
2. Find PITI payment:		
[Pmt]		**1,290.00**

Qualifying for both "Conventional" and "Government" Loans Based on Income, Debt, and Expenses — No Tax/Insurance

Given a buyer's annual income of $36,000, $500/month in long-term debts, monthly homeowners' association dues of $50, an interest rate of 7.25% and a 30 year term, what size conventional loan can he qualify for if using 28%:36% ratios? What size government loan if using 29%:41% ratios? (Use **[Qual 1]** for conventional qualifying; **[Qual 2]** for government qualifying.) Find the monthly payment for each.

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Enter annual income and monthly debts:	
36,000 [Inc]	**36,00.00**
500 [Debt]	**500.00**
3. Enter monthly housing expenses then interest and term:	
50 [Exp]	**50.00**
7.25 [Int]	**7.25**
30 [Term]	**30.00**

4. Find Qual 1 stored ratios then find Qual 1 qualifying loan amount:

[Qual 1]	**28.00 – 36.00**
[Qual 1]	"run" **77,692.53**

5. Find Qual 1 P & I payment, then total payment:

[Pmt]	**530.00**
[Pmt]	**580.00**

— Do Not Clear the Calculator —

Steps/Keystrokes	Display

1. Find Qual 2 stored ratios:

[Qual 2]	**29.00 – 41.00**

2. Find Qual 2 qualifying loan amount:

[Qual 2] "run"	**99,680.98**

3. Find Qual 2 P&I payment then total payment:

[Pmt]	**680.00**
[Pmt]	**730.00**

Income Required and Allowable Monthly Debt — Sales Price & Down Payment

Using 28%:36% ratios, what income must a buyer earn to purchase a $245,000 home if they put down 20%? (Use 8% interest for 30 years.)

Steps/Keystrokes	Display
1. Clear calculator: [On/C] [On/C]	**0.00**
2. Enter annual interest: 8 [Int]	**8.00**
3. Enter term in years then enter sales price: 30 [Term] 245,000 [Price]	**30.00** **245,000.00**
4. Enter down payment percent and find loan amount: 20 [Dn Pmt] [L/A]	**20.00** **196,000.00**
5. Display qualifying ratios, find income required and maximum allowable monthly debts: [Qual 1] [Qual 1] [Qual 1]	**28.00 – 36.00** "run" **61,636.22** "run" **410.91**

Solving for Actual Qualifying Ratios — Given Both Borrower & Property Data

A buyer with an annual income of $85,000 has $1,000 in long–term monthly debts. He wants to borrow $150,000 to purchase a home. Estimating an additional $300 per month for other housing expenses, what will this borrower's ratios be? (Use 10% interest for 30 years.)

Steps/Keystrokes	Display
1. Clear calculator:	
[On/C] [On/C]	**0.00**
2. Enter interest, term, loan amount and annual income:	
10 [Int]	**10.00**
30 [Term]	**30.00**
150,000 [L/A]	**150,000.00**
85,000 [Inc]	**85,000.00**
3. Enter monthly debts and expenses:	
1,000 [Debt]	**1,000.00**
300 [Exp]	**300.00**
4. Display stored ratios then calculate actual ratios:	
[Qual 1]	**28.00 – 36.00**
[Qual 1]	"run" **22.82 – 36.94**

Note: Subsequent presses of the [Qual 1] key will toggle between your stored ratios and the calculated ratios.

APPENDIX

Default Settings – Performing an All Clear (**[Set] [x]**) returns these settings to their original values.

- ◆ 12 Periods per Year
- ◆ Two Fixed Decimal Places
- ◆ Qual 1 Ratios = 28% : 36%*
- ◆ Qual 2 Ratios = 29% : 41%*
- ◆ Month Offset of January (1)
- ◆ ARM Ratios = 1.00 : 1.00
- ◆ Pro-Mode "Off"
- ◆ CAP = "0"

Battery & Auto Shut-Off – Powered by a single 3-Volt Lithium CR-2032 battery, your calculator provides approximately 800 hours of actual use (1 year plus for most people). If the display becomes weak or erratic, replace the battery. After 8–12 minutes of non-use, your calculator shuts itself off. If this happens, values in Memory or on the display are cleared. Press any key to clear an error.

Error Codes

Error 1	Number to large for display
Error 2	Attempt to Divide by Zero
Error 3	Time Value of Money Error
Error 4	Invalid Entry
Error 5	Invalid Entry Type
Error 6	Bi-Weekly Error
Error 7	Qualifying Error*

*Qualifier Plus IIx only

Warranty Repair Service — USA

Calculated Industries, Inc. ("CII") warrants this product against defects in materials and workmanship for a period of one (1) year from the date of original consumer purchase in the U.S. If a defect exists during the warranty period, CII at its option will either repair (using new or remanufactured parts) or replace (with a new or remanufactured unit) the product at no charge.

THE WARRANTY WILL NOT APPLY TO THE PRODUCT IF IT HAS BEEN DAMAGED BY MISUSE, ABUSE, ALTERATION, ACCIDENT, IMPROPER HANDLING OR OPERATION, OR IF UNAUTHORIZED REPAIRS ARE ATTEMPTED OR MADE. SOME EXAMPLES OF DAMAGES NOT COVERED BY WARRANTY INCLUDE, BUT ARE NOT LIMITED TO, BATTERY LEAKAGE, BENDING, OR VISIBLE CRACKING OF THE LCD WHICH ARE PRESUMED TO BE DAMAGES RESULTING FROM MISUSE OR ABUSE.

To obtain warranty service in the U.S., ship the product postage paid to the CII Authorized Service Provider listed on the back page of the User's Guide. Please provide an explanation of the service requirement, your name, address, day phone number and dated proof of purchase (typically a sales receipt). If the product is over 90 days old, include payment of $6.95 for return shipping and handling within the contiguous 48 states. (Outside the contiguous 48 states, please call CII for return shipping costs.) A repaired or replacement product assumes the remaining warranty of the original product or 90 days, whichever is longer.

Non-warranty Repair Service — USA

Non-warranty repair covers service beyond the warranty period or service requested due to damage resulting from misuse or abuse. Contact the CII Authorized Service Provider listed on the back page of the User's Guide to obtain current product repair information and charges. Repairs are guaranteed for 90 days.

Repair Service — Outside the USA

Not all countries have CII Authorized Service Providers or the same warranty and service policies. To obtain warranty or non-warranty repair service for goods purchased outside the U.S., contact the dealer through which you initially purchased the product. If you cannot reasonably have the product repaired in your area, you may contact CII to obtain current product repair information and charges, including freight and duties.

Disclaimer

CII MAKES NO WARRANTY OR REPRESENTATION, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THE PRODUCT'S QUALITY, PERFORMANCE, MERCHAN-TABILITY, OR FITNESS FOR A PARTICULAR PURPOSE. AS A RESULT, THIS PRODUCT, INCLUDING, BUT NOT LIMITED TO, KEYSTROKE PROCEDURES, MATHEMATICAL ACCURACY AND PREPROGRAMMED MATERIAL, IS SOLD "AS IS," AND YOU THE PURCHASER ASSUME THE ENTIRE RISK AS TO ITS QUALITY AND PERFORMANCE. IN NO EVENT WILL CII BE

LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCI-DENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY DEFECT IN THE PROD-UCT OR ITS DOCUMENTATION.

The warranty, disclaimer, and remedies set forth above are exclusive and replace all others, oral or written, expressed or implied. No CII dealer, agent, or employee is authorized to make any modification, extension, or addition to this warranty. Some states do not allow the exclusion or limitation of implied warranties or liability for incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific rights, and you may also have other rights which vary from state to state.

FCC Class B

This equipment has been certified to comply with the limits for a Class B computing device, pursuant to Subpart J of Part 15 of FCC rules.

Looking for New Ideas

Calculated Industries, a leading manufacturer of special function calculators and digital measuring instruments, is always looking for new product ideas in these areas. If you have any ideas or suggestions, please call or write our Product Development Department. Thank You.

How to Reach CII Headquarters

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