

# MORTGAGE QUALIFIER PLUS<sup>®</sup>

Residential Mortgage Finance Calculator  
Model 3416

## Pocket Reference Guide



**CALCULATED INDUSTRIES<sup>®</sup>**

# MORTGAGE QUALIFIER PLUS®

The *MORTGAGE QUALIFIER PLUS* lets you pre-qualify clients and calculate financial problems with ease!

## **Quickly Solve:**

- *Time-Value-of-Money (TVM) Problems: Find Loan Amount, Term, Interest, Payment, Future Value*
- *Restricted/Unrestricted Qualifying*
- *Required Income/Debt*
- *Property Tax and Insurance, Mortgage Insurance*
- *P&I and PITI payment*
- *Sales Price, Down Payment, and LTV*
- *Adjustable-Rate Mortgages*
- *Amortization and Remaining Balance*
- *Bi-Weekly Loans*
- *Date-Math Problems*
- *Combo Loans (80:10:10, 80:20)*
- *APR, including Mortgage Insurance*
- *Income Tax Savings and Rent vs. Buy*
- *Month Offset, Prepaid Interest*

## **New!**

- *Interest-Only Payments*
- *Interest-Only Loan Qualifying*
- *Interest-Only (2nd TD) Combo Loans*

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# KEY DEFINITIONS

*Note: This is a short “reference” guide. Please see your large User’s Guide for detailed definitions and examples.*

- :** Colon separator (*used for date, ARM adjustment, qualifying ratios and combo loans*)
- ←** Backspace key; for backing up/deleting wrong entry
- Rcl** Recalls or re-displays a value when followed by a chosen key (*e.g., **Rcl Int** will display current interest value*)
- M+** Memory Function:
- **M+** Adds value on display to Memory
  - **Shift M+** Subtracts value on display from Memory
  - **Rcl M+** Recalls Memory Total
  - **Rcl Rcl** Recalls and clears Memory Total

<b>Shift</b>		Sets number of displayed decimal places and activates 2nd functions
<b>Shift</b>	<b>—</b>	Change sign
<b>Shift</b>	<b>×</b>	Clear All ( <i>Note: perform with caution as it will clear/reset stored values</i> )
<b>Shift</b>	<b>=</b>	Preference mode ( <i>see Large User's Guide for details</i> )
<b>Shift</b>	<b>÷</b>	Payments per year ( <i>Default 12, for monthly</i> )
<b>Shift</b>	<b>←</b>	Periodic ( <i>identifies entry as periodic rather than yearly</i> )
<b>Shift</b>	<b>000</b>	Month offset
<b>Shift</b>	<b>:</b>	Odd-days interest
<b>Shift</b>	<b>+</b>	Tax bracket %
<b>Shift</b>	<b>Pmt</b>	Interest-Only Payment entry/display
<b>Shift</b>	<b>Price</b>	Rent vs. Buy
<b>Loan Amt</b>		Loan amount
<b>Pmt</b>		P&I, PITI, Total Payment, and Interest-Only Payment

<b>Term</b>	Number of years
<b>Int</b>	Annual interest rate
<b>Shift</b> <b>Loan Amt</b>	Future value
<b>Shift</b> <b>Int</b>	APR ( <i>annual percentage rate</i> ), including mortgage insurance, if entered
<b>Price</b>	Home's sales price
<b>Dn Pmt</b>	Down payment
<b>Shift</b> <b>Term</b>	Bi-Weekly loan
<b>Amort</b>	Amortization function
<b>Shift</b> <b>Amort</b>	Remaining balance
<b>ARM</b>	Adjustable-rate mortgage
<b>Shift</b> <b>ARM</b>	ARM decreasing interest % adjustment
<b>Shift</b> <b>%</b>	ARM lifetime interest cap%
<b>Qual 1</b>	Qualify based on 28%-36%
<b>Qual 2</b>	Qualify based on 31%-43%
<b>Inc</b>	Annual income
<b>Debt</b>	Long-term, <i>monthly</i> debt ( <i>e.g., car payment</i> )

- Tax** Property Tax (*enter as percent or dollar amount*)
- Shift Tax** Estimated Tax savings/after tax payment
- Ins** Property/homeowner's Insurance (*enter as percent or dollar amount*)
- Shift Ins** Mortgage Insurance (*enter as percent or dollar amount*)
- Exp** Monthly Expenses (*such as homeowner's association dues*)
- Shift Dn Pmt** For entering (*or finding*) Loan-to-Value ratio and computing respective Down Payment and/or Loan Amount
- 1st Int: Term** Used to enter 1st TD interest:term for Combo Loans
- Shift 1st Int: Term** Used to enter 2nd TD interest:term for Combo Loans



**80:10:10**

Combo loan function for an 80:10:10 LTV loan\*; calculates 1st/2nd TD values and compares them to entered fixed-rate loan w/mortgage insurance

*\*You may enter any LTV prior to pressing this key (e.g., LTV of 90:5, enter **9**)*

**0** **:** **5** **80:10:10**)

**Shift** **80:10:10**

Interest-only 2nd TD combo loan; operates similarly to **80:10:10** function

# EXAMPLES

## Monthly Mortgage (P&I) Payment

*Find the monthly (P&I) payment on a 30-year, fixed-rate loan of \$265,000 at 6.75% annual interest:*

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Enter loan	<b>2</b> <b>6</b> <b>5</b> <b>000</b> <b>Loan Amt</b>	265,000.00
Enter term	<b>3</b> <b>0</b> <b>Term</b>	30.00
Enter interest	<b>6</b> <b>.</b> <b>7</b> <b>5</b> <b>Int</b>	6.75
Find payment	<b>Pmt</b>	1,718.78

## Interest – Only Payment (Calculation)

*Find the interest-only payment on a loan of \$15,000 at 9% interest.*

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Enter Loan	<b>1</b> <b>5</b> <b>000</b> <b>Loan Amt</b>	15,000.00
Enter Interest	<b>9</b> <b>Int</b>	9.00
Find payment	<b>Shift</b> <b>Pmt</b>	112.50

## Interest – Only Payment (Entry)

*How much can you borrow if the interest rate is 7% on a 30-year interest-only mortgage and you can afford to pay \$1,000 each month?*

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Enter Interest	<b>7</b> <b>Int</b>	7.00
Enter Payment	<b>1</b> <b>000</b> <b>Shift</b> <b>Pmt</b>	1000.00
Find Loan	<b>Loan</b> <b>Ami</b>	171,428.57

## 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 \$200 each month?*

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Enter loan	<b>1</b> <b>5</b> <b>000</b> <b>Loan</b> <b>Ami</b>	15,000.00
Enter interest	<b>1</b> <b>0</b> <b>Int</b>	10.00
Enter payment	<b>2</b> <b>0</b> <b>0</b> <b>Pmt</b>	200.00
Find term/years	<b>Term</b>	9.85
Number of months	<b>Term</b>	118.19

## Interest Rate

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*Find the interest rate on a mortgage if the loan amount is \$98,500, term is 30 years and payment is \$1,150 a month:*

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Enter loan	<b>9</b> <b>8</b> <b>5</b> <b>0</b> <b>0</b> <b>Loan Amt</b>	98,500.00
Enter term	<b>3</b> <b>0</b> <b>Term</b>	30.00
Enter payment	<b>1</b> <b>1</b> <b>5</b> <b>0</b> <b>Pmt</b>	1,150.00
Find annual interest	<b>Int</b>	13.78
Find periodic interest	<b>Int</b>	1.15

## Loan Amount

---

*Approximately how much can you borrow if the interest rate is 6.5% on a 30-year loan and you can afford \$1,500 in monthly payments? What if the interest rate is lowered to 6%?*

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Enter interest	<b>6</b> <b>.</b> <b>5</b> <b>Int</b>	6.50
Enter term	<b>3</b> <b>0</b> <b>Term</b>	30.00
Enter payment	<b>1</b> <b>5</b> <b>0</b> <b>0</b> <b>Pmt</b>	1,500.00
Find loan	<b>Loan Amt</b>	237,316.23

Enter new interest rate	<b>6</b> <b>Int</b>	6.00
Find new loan amount	<b>Loan Amt</b>	250,187.42

## Loan Amount Based on Sales Price and Down Payment

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*Find both \$ down payment and loan amount if the sales price is \$375,500 and you're planning to put 20% down:*

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Enter price	<b>3</b> <b>7</b> <b>5</b> <b>5</b> <b>0</b> <b>0</b> <b>Price</b>	375,500.00
Enter down%	<b>2</b> <b>0</b> <b>Dn Pmt</b> *	20.00
Find down\$	<b>Dn Pmt</b>	75,100.00
Find loan	<b>Loan Amt</b>	300,400.00

*\*You do not have to label the value as a percent.*

## Date Example

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*If a 45-day escrow begins June 15, 2004, what is the closing date and day?*

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Enter month	<b>6</b> <b>:</b>	6-
Enter day	<b>1</b> <b>5</b> <b>:</b>	6-15-
Enter year	<b>0</b> <b>4</b>	6-15-04
Add 45 days	<b>+</b> <b>4</b> <b>5</b> <b>=</b>	FRI 07-30-04

## Setting Tax and Insurance

*Enter an annual property tax rate of 1.5%, a property/homeowner's insurance rate of 0.25% and a mortgage insurance rate of 0.50%:*

STEPS	KEYSTROKES	DISPLAY
Set tax%*	<b>1</b> <b>•</b> <b>5</b> <b>Tax</b>	<b>1.50</b>
Set insurance%	<b>•</b> <b>2</b> <b>5</b> <b>Ins</b>	<b>0.25</b>
Set mortgage insurance%	<b>•</b> <b>5</b> <b>0</b> <b>Shift</b> <b>Ins</b>	<b>0.50</b>

*\*Note: Do not label as a percent, or use the % key; it is automatically registered as a percent.*

*To Enter Tax/Insurance in Dollar Figures: Enter dollar values for tax/insurance in the same manner — e.g., to enter \$5,500 estimated annual tax, enter **5** **5** **0** **0** **Tax**.*

## PITI Payment, Total Payment and Interest-Only Payment

- **Term: 30 years**
- **Interest: 6.25%**
- **Sales price: \$325,000**
- **Down payment: 5%**
- **Property taxes: 1.3%**
- **Property insurance: 0.25%**
- **Mortgage insurance: 0.45%**

*Find PITI payment:*

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Enter term	<b>3</b> <b>0</b> <b>Term</b>	30.00
Enter interest	<b>6</b> <b>.</b> <b>2</b> <b>5</b> <b>Int</b>	6.25
Enter price	<b>3</b> <b>2</b> <b>5</b> <b>000</b> <b>Price</b>	325,000.00
Down%	<b>5</b> <b>Dn Pmt</b>	5.00
Set tax%*	<b>1</b> <b>.</b> <b>3</b> <b>Tax</b>	1.30
Set insurance%	<b>.</b> <b>2</b> <b>5</b> <b>Ins</b>	0.25
Set MI%	<b>.</b> <b>4</b> <b>5</b> <b>Shift</b> <b>Ins</b>	0.45
Find loan	<b>Loan</b> <b>Amf</b>	308,750.00
Find P&I payment	<b>Pmt</b> “run”	1,901.03
Find PITI payment	<b>Pmt</b>	2,436.60

**— DO NOT CLEAR CALCULATOR —**

*Find the total payment, if you estimate homeowner's association fees at \$80/mo. Also find the interest-only payment:*

STEPS	KEYSTROKES	DISPLAY
Enter expenses	<b>8</b> <b>0</b> <b>Exp</b>	80.00
Find total pmt.	<b>Pmt</b> <b>Pmt</b> <b>Pmt</b>	2,516.60
Find interest-only payment	<b>Pmt</b>	1,608.07

*\*Note: Perform the same steps when entering \$ Tax/Ins. — e.g., \$1,625 tax, enter **1** **6** **2** **5** **Tax**.*

## Quarterly Payment

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

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Set to 4 payments per year	<b>4</b> <b>Shift</b> <b>÷</b>	4.00
Enter loan	<b>1</b> <b>5</b> <b>000</b> <b>Loan Ami</b>	15,000.00
Enter term	<b>1</b> <b>0</b> <b>Term</b>	10.00
Enter interest	<b>1</b> <b>2</b> <b>Int</b>	12.00
Find quarterly payment	<b>Pmt</b>	648.94
Return to 12 payments per year	<b>1</b> <b>2</b> <b>Shift</b> <b>÷</b>	12.00



## Estimated Tax Savings

- **Loan: \$150,000**
- **Buyer's tax bracket: 28%**
- **Term: 30 years**
- **Interest: 8%**
- **Property taxes: \$1,500**
- **Property insurance: \$250**

*Note: This is an estimate only.*

*What is this buyer's estimated income tax savings and "after tax" payment?*

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Enter term	<b>3</b> <b>0</b> <b>Term</b>	30.00
Enter interest	<b>8</b> <b>Int</b>	8.00
Enter tax \$	<b>1</b> <b>5</b> <b>0</b> <b>0</b> <b>Tax</b>	1,500.00
Enter insurance\$	<b>2</b> <b>5</b> <b>0</b> <b>Ins</b>	250.00
Enter loan	<b>1</b> <b>5</b> <b>0</b> <b>000</b> <b>Loan Amt</b>	150,000.00
Find P&I payment	<b>Pmt</b> "run"	1,100.65
PITI payment	<b>Pmt</b>	1,246.48
Enter tax bracket	<b>2</b> <b>8</b> <b>Shift</b> <b>+</b>	28.00
Find annual tax savings	<b>Shift</b> <b>Tax</b> <b>Tax</b>	3,767.32
Monthly tax savings	<b>Tax</b>	313.94
Net payment	<b>Tax</b>	932.54

## Rent vs. Buy

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- **Term: 30 years** **Tax: 1.25%**
- **Interest: 7.5%** **Ins: 0.35%**
- **Down: 10%** **Tax bracket: 30%**

*If your client is currently renting a home for \$1,250/month, find the comparable home sales price and loan amount that he or she could afford:*

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Enter term	<b>3</b> <b>0</b> <b>Term</b>	30.00
Enter interest	<b>7</b> <b>.</b> <b>5</b> <b>Int</b>	7.50
Enter down	<b>1</b> <b>0</b> <b>Dn Pmt</b>	10.00
Enter property tax%	<b>1</b> <b>.</b> <b>2</b> <b>5</b> <b>Tax</b>	1.25
Enter insurance%	<b>.</b> <b>3</b> <b>5</b> <b>Ins</b>	0.35
Tax bracket	<b>3</b> <b>0</b> <b>Shift</b> <b>+</b>	30.00
Enter rent to find comparable home price	<b>1</b> <b>2</b> <b>5</b> <b>0</b> <b>Shift</b> <b>Price</b>	221,894.90
Find comparable loan amount	<b>Price</b>	199,705.41
Find PITI payment	<b>Price</b>	1,692.23
Find annual tax savings	<b>Price</b>	5,306.75
Monthly tax savings	<b>Price</b>	442.23
Reset tax bracket	<b>2</b> <b>1</b> <b>Shift</b> <b>+</b>	21.00

Clear All

**Shift** **X**

0.00

**ARM Payment — Lifetime Cap**

- **Loan: \$230,000**
- **Term: 30 years**
- **Interest: 7.25%**
- **Lifetime cap: 4%**
- **ARM Interest Adjustment: 1% per year**

*Find the adjusted ARM payments through year six:*

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Enter loan	<b>2</b> <b>3</b> <b>0</b> <b>000</b> <b>Loan</b> <b>Ami</b>	230,000.00
Enter term	<b>3</b> <b>0</b> <b>Term</b>	30.00
Enter interest	<b>7</b> <b>.</b> <b>2</b> <b>5</b> <b>Int</b>	7.25
Find initial monthly payment	<b>Pmt</b> "run"	1,569.01
Enter interest cap	<b>4</b> <b>Shift</b> <b>%</b>	<b>CAP</b> 4.00
Enter ARM parameters	<b>1</b> <b>:</b> <b>1</b> <b>ARM</b>	1.00 - 1.00
Find 1st "adjusted" payment	<b>ARM</b> "run" 1	1,724.90
Find 2nd "adjusted" payment	<b>ARM</b> 2	1,883.17

*(Cont'd)*

(Cont'd)

STEPS	KEYSTROKES	DISPLAY
Find 3rd "adjusted" payment	<b>ARM</b>	3 2,043.26
Find 4th "adjusted" payment	<b>ARM</b>	4 2,204.68 M*
Find 5th "adjusted" payment	<b>ARM</b>	5 2,204.68 M*
Find principal at start of year	<b>Rcl</b> <b>Loan</b> <b>Ami</b>	220,856.34
Recall current interest rate	<b>Rcl</b> <b>Int</b>	11.25
Recall remaining term	<b>Rcl</b> <b>Term</b>	25.00
Clear Cap	<b>0</b> <b>Shift</b> <b>%</b>	<b>CAP</b> 0.00

*\*Note that the payment for 4th and 5th adjustments (corresponding to the 5th and 6th years) is the same because the lifetime cap was reached on the 4th adjustment. An "M" for "maximum" will appear in the display once the Cap is reached.*

## Amortization

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- **Loan: \$300,000**
- **Term: 30 years**
- **Interest: 7.5%**

*Find total interest and principal for the life of the loan:*

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Enter loan	<b>3</b> <b>0</b> <b>0</b> <b>000</b> <b>Loan</b> <b>Ami</b>	300,000.00
Enter interest	<b>7</b> <b>.</b> <b>5</b> <b>Int</b>	7.50
Enter term	<b>3</b> <b>0</b> <b>Term</b>	30.00
Find P&I pmt	<b>Pmt</b>	2,097.64
Find # pmts	<b>Amort</b>	1-360
Find total int.	<b>Amort</b>	455,151.67
Find total prin.	<b>Amort</b>	300,000.00
Find total pmts	<b>Amort</b>	755,151.67

*Find all values for the first year:*

Enter Year 1	<b>1</b> <b>Amort</b>	1-12
Find total int.	<b>Amort</b>	22,406.22
Find total prin.	<b>Amort</b>	2,765.50
Find total pmts	<b>Amort</b>	25,171.72
Find balance	<b>Amort</b>	297,234.50
Remaining term	<b>Amort</b>	29.00
Tax deduction	<b>Amort</b>	4,705.31

*Note: Based on default 21% tax bracket & loan start in January. To change these values, see Large User's Guide.*

## APR and Total Finance Charges, Including Mortgage Insurance

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- Loan: \$250,000
- Term: 30 years
- Interest: 7%
- Cost: 1.5 points + \$550
- Mortgage insurance/MI: \$1,200/year

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Enter loan	<b>2</b> <b>5</b> <b>0</b> <b>000</b> <b>Loan Amt</b>	250,000.00
Enter term	<b>3</b> <b>0</b> <b>Term</b>	30.00
Enter interest	<b>7</b> <b>Int</b>	7.00
Find P&I pmt	<b>Pmt</b>	1,663.26
Enter MI	<b>1</b> <b>2</b> <b>0</b> <b>0</b> <b>Shift</b> <b>Ins</b>	1,200.00

### *Find Loan Costs:*

Recall loan	<b>Rcl</b> <b>Loan Amt</b>	250,000.00
Find points	<b>X</b> <b>1</b> <b>0</b> <b>5</b> <b>%</b> <b>=</b>	3,750.00
Add fees and find total	<b>+</b> <b>5</b> <b>5</b> <b>0</b> <b>=</b>	4,300.00
Find APR	<b>Shift</b> <b>Int</b>	7.77
Find total chgs. Amount	<b>Int</b>	389,072.25
financed	<b>Int</b>	245,700.00
Total cost	<b>Int</b>	634,772.25
P&I payment	<b>Int</b>	1,663.26
Monthly MI	<b>Int</b>	100.00
PIMI payment	<b>Int</b>	1,763.26

## Appreciation

*What will a \$350,000 home's value be in 3 years, figuring an inflation or appreciation rate of 6%?*

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Set to 1 payment per year	<b>1</b> <b>Shift</b> <b>÷</b>	1.00
Enter PV*	<b>3</b> <b>5</b> <b>0</b> <b>000</b> <b>Loan Ami</b>	350,000.00
Enter term	<b>3</b> <b>Term</b>	3.00
Enter appreciation rate	<b>6</b> <b>Int</b>	6.00
Find FV**	<b>Shift</b> <b>Loan Ami</b>	416,855.60
Return to 12 payments per year	<b>1</b> <b>2</b> <b>Shift</b> <b>÷</b>	12.00

\* PV (Present Value) = original purchase price;  
enter as **Loan  
Ami**

\*\* FV (Future Value) = **Shift** **Loan  
Ami**

## Bi-Weekly Loans

---

- **Loan: \$212,500**
- **Term: 30 years**
- **Interest: 7.85%**

*Find the Bi-Weekly term, savings, interest savings, total cost, and Bi-Weekly payment:*

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Enter loan	<b>2</b> <b>1</b> <b>2</b> <b>5</b> <b>0</b> <b>0</b> <b>Loan Amt</b>	212,500.00
Enter term	<b>3</b> <b>0</b> <b>Term</b>	30.00
Enter interest	<b>7</b> <b>.</b> <b>8</b> <b>5</b> <b>Int</b>	7.85
Find P&I payment	<b>Pmt</b>	1,537.09
Find Bi-Weekly term	<b>Shift</b> <b>Term</b>	22.97
Find total interest savings	<b>Term</b>	94,305.23
Find total interest paid	<b>Term</b>	246,545.97
Find total principal	<b>Term</b>	212,500.00
Find total principal plus interest	<b>Term</b>	459,045.97
Bi-Weekly payment	<b>Pmt</b>	768.54
Exit Bi-Weekly mode	<b>On/C</b> <b>On/C</b>	0.00



## Setting Qualifying Ratios

*Enter new qualifying ratios of 30% for Income and 38% for Debt in **Qual 1**:*

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Set qualifying ratios	<b>3</b> <b>0</b> <b>:</b> <b>3</b> <b>8</b> <b>Qual 1</b>	30.00-38.00
Return ratios to 28:36	<b>2</b> <b>8</b> <b>:</b> <b>3</b> <b>6</b> <b>Qual 1</b>	28.00-36.00

## Qualifying Loan Amount

- Buyer's income: \$75,000
- Monthly debt: \$500
- Down\$: \$5,000
- Property taxes: 1.5%
- Property insurance: 0.25%
- Mortgage insurance: 0.6%
- Monthly association dues: \$50
- Term: 30 years
- Interest: 7.5%
- Qualifying ratios: 28%: 36%

*Find the Qualifying Loan Amount, Price and Total Payment:*

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Enter income	<b>7</b> <b>5</b> <b>000</b> <b>Inc</b>	75,000.00
Enter debt	<b>5</b> <b>0</b> <b>0</b> <b>Debt</b>	500.00
Enter down	<b>5</b> <b>000</b> <b>Dn Pmt</b>	5,000.00
Set tax%	<b>1</b> <b>.</b> <b>5</b> <b>Tax</b>	1.50
Set insurance%	<b>.</b> <b>2</b> <b>5</b> <b>Ins</b>	0.25
Set MI%	<b>.</b> <b>6</b> <b>Shift</b> <b>Ins</b>	0.60
Enter association dues	<b>5</b> <b>0</b> <b>Exp</b>	50.00
Enter interest	<b>7</b> <b>.</b> <b>5</b> <b>Int</b>	7.50
Enter term	<b>3</b> <b>0</b> <b>Term</b>	30.00
Display ratios	<b>Qual 1</b>	28.00 - 36.00

Find qualifying loan amount	<b>Qual 1</b>	<b>189,119.31</b>
Find price	<b>Price</b>	<b>194,119.31</b>

**— DO NOT CLEAR CALCULATOR —**

*Find the monthly P&I payment and total payment:*

<b>STEPS</b>	<b>KEYSTROKES</b>	<b>DISPLAY</b>
P&I payment	<b>Pmt</b>	<b>1,322.35</b>
PITI payment	<b>Pmt</b>	<b>1,700.00</b>
Total payment	<b>Pmt</b>	<b>1,750.00</b>

## “Restricted” vs. “Unrestricted” Qualifying

- Buyer's income: \$68,000
- Monthly debt: \$750
- Down\$: \$5,000
- Property taxes: 1.5%
- Property insurance: 0.25%
- Mortgage insurance: 0.6%
- Monthly association dues: \$50
- Term: 30 years
- Interest: 7.5%
- Qualifying ratios: 28%: 36%

*Find the “restricted” qualifying loan amount, actual ratios, “unrestricted” loan amount and maximum allowable debt.*

*(Re-enter 0.6% mortgage insurance rate, \$50 association dues and \$5,000 down.)*

*Note: If you are not continuing from the previous problem, you'll need to re-enter interest, term, tax/insurance.*

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Recall interest	<b>Rcl</b> <b>Int</b>	7.50
Recall term	<b>Rcl</b> <b>Term</b>	30.00
Recall property tax%	<b>Rcl</b> <b>Tax</b>	1.50
Recall property insurance%	<b>Rcl</b> <b>Ins</b>	0.25

Re-enter MI%	<b>6</b> <b>Shift</b> <b>Ins</b>	0.60
Re-enter homeowner's dues	<b>5</b> <b>0</b> <b>Exp</b>	50.00
Enter down	<b>5</b> <b>000</b> <b>Dn Pmt</b>	5,000.00
Income	<b>6</b> <b>8</b> <b>000</b> <b>Inc</b>	68,000.00
Monthly debt	<b>7</b> <b>5</b> <b>0</b> <b>Debt</b>	750.00
Display qualifying ratios	<b>Qual 1</b>	28.00 - 36.00
Find "restricted" qualifying loan amount	<b>Qual 1</b>	137,725.41

**— DO NOT CLEAR CALCULATOR —**

STEPS	KEYSTROKES	DISPLAY
Find actual ratios	<b>Qual 1</b>	22.76-36.00
Find "unrestricted" loan amount	<b>Qual 1</b>	170,870.75 LA INC*
Find maximum allowable debt	<b>Qual 1</b>	453.33

*\*Note: The "INC" tells you this unrestricted Qualifying Loan Amount is based on the buyer's Income Ratio — therefore, the restricted Qualifying Loan Amount is based on the buyer's Debt Ratio. This means that if they pay off their monthly debt (to \$453/mo. or lower) they may qualify for a mortgage loan of approximately \$170,000 or more and afford a \$175,000 home (if they put approximately \$4-\$5K down).*

## Qualifying Loan Amount (Interest Only-Loan)

*Using the same values from the previous example, find qualifying loan amount, price, and total payment for an interest-only loan:*

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Enter income	<b>7</b> <b>5</b> <b>000</b> <b>Inc</b>	75,000.00
Enter debt	<b>5</b> <b>0</b> <b>0</b> <b>Debt</b>	500.00
Enter down	<b>5</b> <b>000</b> <b>Dn Pmt</b>	5,000.00
Set tax%	<b>1</b> <b>.</b> <b>5</b> <b>Tax</b>	1.50
Set ins%	<b>.</b> <b>2</b> <b>5</b> <b>Ins</b>	0.25
Set MI%	<b>.</b> <b>6</b> <b>Shift</b> <b>Ins</b>	0.60
Enter association dues	<b>5</b> <b>0</b> <b>Exp</b>	50.00
Enter interest	<b>6</b> <b>.</b> <b>7</b> <b>5</b> <b>Int</b>	6.75
Enter term	<b>3</b> <b>0</b> <b>Term</b>	30.00
Display ratios	<b>Shift</b> <b>Qual 1</b>	28.00 - 36.00
Find qualifying amount	<b>Qual 1</b>	223,214.29
Find price	<b>Price</b>	228,214.29

**— DO NOT CLEAR CALCULATOR —**

*Find the monthly P&I pmt, PITI pmt, total pmt, and I/O pmt:*

STEPS	KEYSTROKES	DISPLAY
P&I payment	<b>Pmt</b>	1,447.76
PITI payment	<b>Pmt</b>	1,892.18
Total payment	<b>Pmt</b>	1,942.18
I/O payment	<b>Pmt</b>	1,255.58

## Income Required (Stated Income) and Allowable Monthly Debt

---

- Sales price: \$300,000
- Down%: 20%
- Property taxes: 1.5%
- Property insurance: 0.25%
- Mortgage insurance: 0%
- Term: 30 years
- Interest: 5.88%

*Find the income required to finance a \$300,000 home and the maximum allowable debt.*

*Note: Clear mortgage insurance rate to zero, as the down payment is 20%.*

STEPS	KEYSTROKES	DISPLAY
Clear	<b>On/C</b> <b>On/C</b>	0.00
Enter interest	<b>5</b> <b>•</b> <b>8</b> <b>8</b> <b>Int</b>	5.88
Enter term	<b>3</b> <b>0</b> <b>Term</b>	30.00
Enter tax%	<b>1</b> <b>•</b> <b>5</b> <b>Tax</b>	1.50
Enter insurance%	<b>•</b> <b>2</b> <b>5</b> <b>Ins</b>	0.25
Clear MI%	<b>0</b> <b>Shift</b> <b>Ins</b>	0.00
Enter price	<b>3</b> <b>0</b> <b>0</b> <b>000</b> <b>Price</b>	300,000.00
Enter down	<b>2</b> <b>0</b> <b>Dn Pmt</b>	20.00
Find \$ down	<b>Dn Pmt</b>	60,000.00
Find loan	<b>Loan Amt</b>	240,000.00

(Cont'd)

(Cont'd)

<b>STEPS</b>	<b>KEYSTROKES</b>	<b>DISPLAY</b>
Display qualifying ratios	<b>Qual 1</b>	28.00 - 36.00
Find income required	<b>Qual 1</b>	79,626.76
Find maximum allowable monthly debt	<b>Qual 1</b>	530.85
Find P&I payment	<b>Pmt</b>	1,420.46
Find PITI payment	<b>Pmt</b>	1,857.96

### **80:10:10 Combo Loan vs. Fixed-Rate Loan with Mortgage Insurance**

*Compare an 80:10:10 Combo Loan vs. a Fixed-Rate loan w/mortgage insurance. The loan parameters are:*

	<b>FIXED w/PMI</b>	<b>COMBO (1st/2nd)</b>
<b>Loan</b>	250,000	250,000
<b>Interest</b>	6.50%	6.00% – 8.50%
<b>Term</b>	30	30 year– 15 year
<b>PMI</b>	0.62%	--
<b>LTV</b>	90%	80% – 10%



STEPS	KEYSTROKES	DISPLAY
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*1. Enter Fixed-Rate Loan Values and Find Total Payment:*

Clear	<b>On/C</b> <b>On/C</b>	0.00
Enter loan	<b>2</b> <b>5</b> <b>0</b> <b>000</b> <b>Loan Amt</b>	250,000.00
Enter down payment	<b>1</b> <b>0</b> <b>Dn Pmt</b>	10.00
Find price	<b>Price</b>	277,777.78
Enter interest	<b>6</b> <b>.</b> <b>5</b> <b>Int</b>	6.50
Enter term	<b>3</b> <b>0</b> <b>Term</b>	30.00
Enter MI%	<b>.</b> <b>6</b> <b>2</b> <b>Shift</b> <b>Ins</b>	0.62
Clear Tax	<b>0</b> <b>Tax</b>	0.00
Clear Insurance	<b>0</b> <b>Ins</b>	0.00
Solve for P&I payment	<b>Pmt</b>	1,580.17
Solve for PITI (including PMI)	<b>Pmt</b>	1,709.34

*2. Enter Combo Loan Values:*

Enter 1st TD Interest and Term	<b>6</b> <b>:</b> <b>3</b> <b>0</b> <b>1st Int: Term</b>	6.00-30.00
Enter 2nd TD Interest and Term	<b>8</b> <b>.</b> <b>5</b> <b>:</b> <b>1</b> <b>5</b> <b>Shift</b> <b>1st Int: Term</b>	8.50-15.00

(Cont'd)

(Cont'd)

<b>STEPS</b>	<b>KEYSTROKES</b>	<b>DISPLAY</b>
<b>3. Find Combo Loan Values:</b>		
Find blended interest rate for 1st/2nd TD	<b>80:10:10*</b>	<b>6.18</b>
Find equivalent interest rate for fixed-rate loan with mortgage insurance	<b>80:10:10</b>	<b>7.27</b>
Find 1st/2nd TD combined monthly payment	<b>80:10:10</b>	<b>1,605.87</b>
Find equivalent payment for fixed-rate loan with mortgage insurance	<b>80:10:10</b>	<b>1,709.34</b>
Display monthly savings over fixed-rate loan with mortgage insurance	<b>80:10:10</b>	<b>103.46</b>
Display adjusted 2nd term (if savings applied to 2nd TD)	<b>80:10:10</b>	<b>8.71</b>
Find 1st TD loan amount	<b>80:10:10</b>	<b>222,222.22</b>
Find 2nd TD loan amount	<b>80:10:10</b>	<b>27,777.78</b>
Find 1st TD payment	<b>80:10:10</b>	<b>1,332.33</b>
Find 2nd TD payment	<b>80:10:10</b>	<b>273.54</b>
Redisplay LTV	<b>80:10:10</b>	<b>80.00-10.00</b>

*\*To enter a different LTV without changing the stored LTV, you can enter it prior to pressing the **80:10:10** key. For example, enter **8 0 :** **2 0**, then press the **80:10:10** key, as above, for the new calculations. To return to the existing problem, press **On/C** once and press **80:10:10**.*

## 80:20 Interest-Only 2nd Combo Loan

*Find the monthly payments with an 80:20 Interest-Only 2nd Combo Loan:*

### COMBO (1st/2nd)

Loan	350,000
Interest	5.25% – 7.0%
Term	30 year – 15 year
LTV	80% – 20%

STEPS	KEYSTROKES	DISPLAY
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*1. Enter the Total of the Combined Loans:*

Clear All	<b>Shift</b> <b>X</b>	0.00
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Enter combined

Loan total	<b>3</b> <b>5</b> <b>0</b> <b>000</b> <b>Price</b>	350,000.00
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*2. Enter Combo Loan Values:*

Enter 1st TD Interest

and Term	<b>5</b> <b>.</b> <b>2</b> <b>5</b> <b>:</b> <b>3</b> <b>0</b> <b>1st Int: Term</b>	5.25 - 30.00
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Enter 2nd TD Interest

and Term	<b>7</b> <b>:</b> <b>1</b> <b>5</b> <b>Shift</b> <b>1st Int: Term</b>	7.00-15.00
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*3. Find Combo Loan Values:*

Enter Combo loan LTV to find

blended interest rate. Enter 1st/2nd TD

	<b>8</b> <b>0</b> <b>:</b> <b>2</b> <b>0</b> <b>Shift</b> <b>80:10:10*</b>	5.35
--	--	------

Find 1st/2nd TD combined monthly payment	<b>80:10:10</b>	<b>1,954.50</b>
Find 1st TD loan amount	<b>80:10:10</b>	<b>280,000.00</b>
Find 2nd TD loan amount	<b>80:10:10</b>	<b>70,000.00</b>
Find 1st TD payment	<b>80:10:10</b>	<b>1,546.17</b>
Find 2nd TD payment	<b>80:10:10</b>	<b>408.33</b>
Display entered LTV	<b>80:10:10</b>	<b>80.00:20.00</b>

*\*To enter a different LTV without changing the stored LTV, you can enter it prior to pressing the **80:10:10** key. For example, enter **8 0 :** **2 0**, then press the **80:10:10** key, as above, for the new calculations. To return to the existing problem, press **On/C** once and press **80:10:10**.*

# APPENDIX

## Default Settings

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*Performing a Reset will return your calculator to the default settings below:*

- 12 Periods per Year
- Property Tax/Insurance = % Rates Not Permanently Stored/Clears Upon **Off**
- Mortgage Insurance = % Rates Not Permanently Stored/Clears upon **On/C On/C**
- Month Offset of January (1)
- Two Fixed Decimal Places
- Amortization Range = Specified Year (Ent-Ent)
- Qual 1 Ratios = 28%-36%
- Qual 2 Ratios = 31%-43%
- Qualifying Ratios Displayed 1st

## Decimal Place Setting

*To set the number of decimal places displayed:*

<b>Shift</b> <b>6</b>	0.000000
<b>Shift</b> <b>5</b>	0.00000
<b>Shift</b> <b>4</b>	0.0000
<b>Shift</b> <b>3</b>	0.000
<b>Shift</b> <b>2</b>	0.00
<b>Shift</b> <b>1</b>	0.0
<b>Shift</b> <b>0</b>	0.
<b>Shift</b> <b>•</b>	Floating Point

## Preference Settings

To access the Preference Mode, press **Shift**, then **=**, then keep pressing **=** to toggle through the preference settings listed. Press the **+** key to advance through the sub-settings. Use the **-** key to back up within the sub-settings.

*See Large User's Guide for details.*

## Batteries

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### Replacing the Batteries:

Slide open and remove the battery door (located on upper backside of calculator). Remove the old batteries. Insert two new LR44 button-cell batteries, making sure they're facing positive-side (+) up. Close the battery door.

## Reset

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### Keystroke Reset — Returning the Calculator to its Original Factory Settings:

You may at times want to reset your calculator to its factory settings (i.e., reset all registers and Preference Settings to their original default values). To do this, turn off the calculator, hold down the  key, and then turn it back on.







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