Chapter 14

Financials and Calculations Review

Learn Mortgage

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Chapter Objectives

- Identify different types of financial payments
- Recognize mortgage loan-to-value conditions
- Determine mortgage closing costs and prepaid items

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Periodic Interest Charges

- **Calculations**
  - Determine **Annual Interest**
    - Loan Amount x Note/Interest Rate = Annual Interest
  - Determine **Daily Interest**
    - Consult with the lender to determine whether to use a 360- or a 365-day calendar
    - Annual Interest Rate ÷ 365 days per year = Per Diem Interest Charge
  - Determine **Prepaid Interest Charge**
    - Multiple by days until funding (e.g. 18 days)
    - Per Diem Interest Charge x 18 days = Prepaid Interest Charge

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Prepaid Expenses

- **Closing Disclosure Credit or Debit**
  - Prorated
  - Party paying the expense = credit; other party = debit
- **Calculation**
  1. Determine if expense is accrued or prepaid
  2. Divide expense by appropriate period to find a monthly (daily) rate
  3. Determine how many months (days) are affected by expense
  4. Multiply the monthly (daily) rate by number of affected months (days)
  5. Determine which party is credited and which is debited

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Prepaid Expenses

- **Items Not Paid or Paid by Seller**
  - Prepaid by seller: Calculated from date of settlement to the date the items are paid through; show on CD as credit seller
  - Seller due to pay: Shown on CD as credit to borrower and a debit to the seller; reduces cash proceeds
- **Pro-Rated Items**
  - Same as calculation of prepaid interest

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Payments

- **Calculations**
  - **Interest-Only**
    - Loan Amount x Note/Interest Rate = Annual Interest
    - Annual Interest Charge ÷ 12 months = Interest Only payment per month
  - **Monthly Property Taxes / Paid ½ Year**
    - Annual Property Tax Cost ÷ 6 months = Monthly property tax reported every half year

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Payments

- **Calculations**
  - **Monthly Hazard Insurance**
    - Annual Premium ÷ 12 months = Insurance payment per month
  - **PMI**
    - Loan Amount x PMI factor = Annual PMI payment
    - Annual PMI Payment ÷ 12 months = PMI payment amount per month

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Payments

- **Calculations**
  - **Total Monthly Housing Expense**

    Housing Expense Payment

    \+ Monthly Property Tax Payment

    \+ Monthly Hazard Insurance Payment

    \+ <u>Monthly PMI Charge</u>

    = Total Monthly Housing Expense/Payment

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14.1 Knowledge Check

When the initial loan amount is multiplied by the note rate, the result is the

A. annual interest charge.

B. monthly interest-only payment.

C. monthly PMI payment.

D. total housing expense.

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PITI Payments

- **About PITI**
  - Commonly means monthly mortgage payment
  - Principal, interest, taxes, and insurance
  - Principal and interest payments repay mortgage
  - Amounts covering property taxes, homeowner’s insurance, and mortgage typically go in escrow account to be paid due; can be consumer paid
  - Must be part of housing expense calculation
  - Used in conjunction with gross income to determine whether maximum debt ratios allowed by loan program have been exceeded

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Down Payment

- **Minimum Down Payment Requirements**
  - Conventional Conforming Loan
    - Minimum 3% down payment (from borrower's own funds)
  - FHA-Insured Loan
    - Minimum 3.5% down payment (can be a gift)
  - VA and USDA Guaranteed Loans
    - Do not require a down payment
- **Calculation**
  - Lesser of sale price or appraised value x required down payment % = cash down payment

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Loan-to-Value

- **LTV Calculation**
  - Proposed or unpaid loan balance which is in a first-lien position ÷ by the lesser of the sale price or appraised value = LTV %
- **CLTV Calculation**
  - Combined total of all lien balances of a property ÷ by the lesser of the sale price or appraised value = CLTV %

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14.2 Knowledge Check

When the initial loan amount is divided by the lesser of the sale price or the current appraised value, the result is known as the

A. annual interest charge.

B. combined loan-to-value.

C. housing ratio.

D. loan-to-value.

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Income Calculations

- **Income Requirements**
  - Must be stable and consistent and may be required to be received for a certain time period
  - Use gross monthly income
- **Monthly Income Calculations**
  - Hourly Wage = hourly wage x hours worked per week x 52 weeks per year ÷ 12 = monthly income
  - Bi-Weekly Salary = bi-weekly pay x 26 paydays per year ÷ 12 = monthly income
  - Semi-Monthly Salary = gross pay x 2 paydays per month = monthly income

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Debt-to-Income Ratios

- **Housing Expense Ratio**
  - Called front-end ratio
  - Total Monthly Housing Expense (PITI) ÷ Income = Housing Expense %
- **Debt-to-Income**
  - Includes PITI and monthly recurring credit debts
- **Loan Program Requirements**
  - Conventional/Conforming: 28% HE ratio; 36% DTI
  - FHA: 31% HE ratio; 43% DTI ratio
  - VA: No HE ratio; 41% DTI ratio

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For Example

PITI payment + Other Required Debt Payments ÷ Gross Monthly Income = DTI ratio

If a borrower earns an annual salary of $84,000 per year, his gross monthly income is $7,000 per month ($84,000 ÷ 12)

$1,628.79	Total monthly housing expense
÷ $7,000	Gross monthly income
23.27%	Housing expense ratio

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For Example

Assume the borrower had the following additional monthly debt:

Monthly Payment Amount	Outstanding Balance
Auto = $200	$3,600
Child support = $300	15 years remaining
VISA = $50	$350
Furniture Layaway = $120	3 months left
Student loan = $50	$375

The auto payment, the child support payment, and the VISA card payment, which total $550, are the only debt payments required to be used in the calculation.

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For Example

PITI payment + other required debt payments ÷ Gross monthly income = DTI ratio

$1,628.79 + $550 = $2,178.79 ÷ $7,000 = 31.13% DTI

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14.3 Apply Your Knowledge

Review the following information, and then complete the calculations.

A borrower earns $15.75 per hour and works 40 hours per week. He wants to be prequalified for FHA home financing with a PITI payment of no more than his current rental payment of $1,000 per month. He has a truck payment of $250 per month and a credit card payment of $25 per month. He intends to obtain a loan from his 401K account for the 3.5% down payment.

What is the maximum housing payment amount for which the borrower can qualify?

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14.3 Apply Your Knowledge

$15.75 per hour x 40 x 52 = $32,760 (Borrower's Income)

$32,760 per Year ÷ 12 = $2,730 (Gross Monthly Income)

$2,730.00	$2,730.00
x .31	x .43
$ 846.30	$1,173.90
	– $250.00 Auto Loan Payment
	– $25.00 Credit Card Payment
	$ 898.90

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14.4 Knowledge Check

When the PITI payment is divided by the gross monthly income, the result is known as the

A. annual debt payment ratio.
B. back ratio.
C. gross monthly interest-only payment.
D. housing expense ratio.

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Buydowns

- **Buydown Types**
  - Permanent Buydown: for life of loan
  - Temporary Buydown: defined time period
    - Level Payment: payment reduction remains constant
    - Graduated Payment: payment subsidies in the early years keep payments low, but payments increase each year as indicated in the note
- **Calculation**
  - Loan Amount x Discount Points = Buydown Cost
  - Example: $142,100 x .02 = $2,842

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Acquisition Costs

- **Total Acquisition Calculation**
  - Purchase Price + Borrower Paid Closing Costs = Total Acquisition Cost
  - Example: $187,000 purchase price + $5,500 borrower paid closing cost = $192,500 acquisition cost
- **Total Acquisition Calculation w/ 2 Discount Points Paid**
  - Example: $187,000 purchase price + $5,500 borrower paid closing cost – $2,842 (2% of $142,100) = $189,658 acquisition cost

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Closing Costs

- **Total Cash to Close Calculation**

Sale Price		$187,000
Loan Amount	–	$142,100
Down Payment Required		$44,900
Closing Costs	+	$5,500
Total Cash Required to Close		**$50,400**

- **Total Cash to Close w/ Discount Points**

Total cash required to close		$50,400
Discount points (2)	-	$2,842
Net Cash Required to Close		**$47,558**

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ARM – Fully Indexed Rate

A borrower has a one-year adjustable rate mortgage. The start rate is 3.5%, the margin is 2.5%. The index is the One Year Treasury Constant Maturity (TCM), whose index was 1.5% when the loan was closed and at the time of the first rate adjustment, the index is 2.25%.

Index value	2.25%
Margin	+2.50%
Fully indexed rate	**4.75%**

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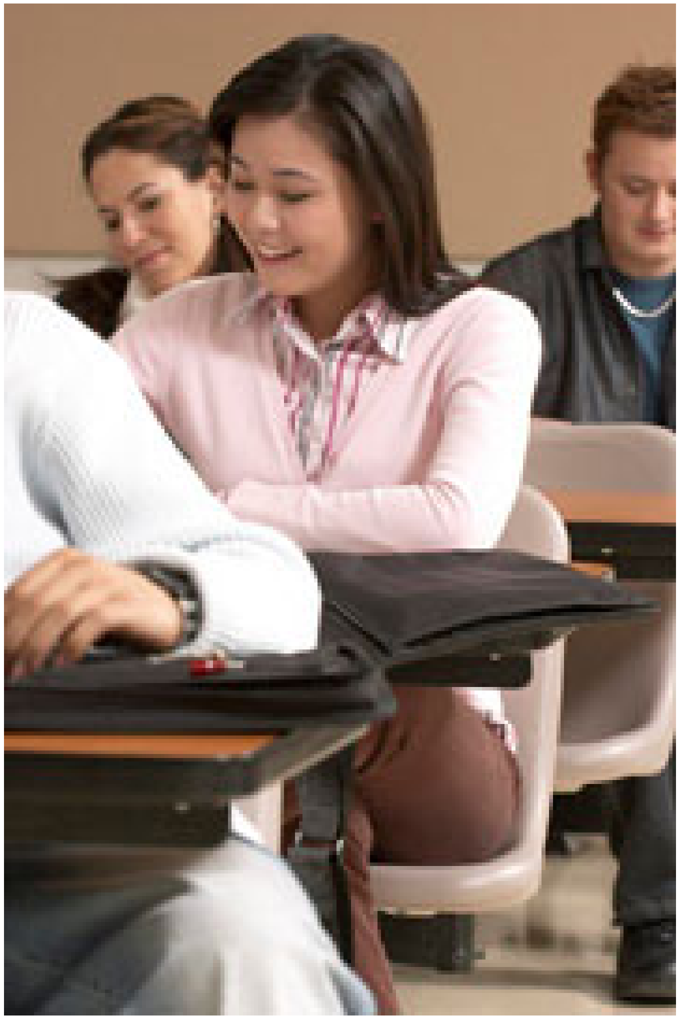
Chapter 14



Chapter Quiz

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Chapter 14 Quiz

1. **Bob is buying a house that was appraised at $236,000, the sales price is $228,000, and the loan amount is $216,800. To buy down his interest rate, Bob is willing to pay two points in addition to the one point in loan origination fees. What is the price of Bob's discount points?**

   A. $4,336

   B. $4,720

   C. $6,840

   D. $7,080

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Chapter 14 Quiz

2. A borrower has a stable monthly gross income of $3,200 and recurring monthly debts of $370. What is the maximum amount of money available to him for monthly housing expenses to qualify for a conforming loan?

A. $782

B. $896

C. $928

D. $1,152

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Chapter 14 Quiz

3. **If $90,000 is the loan amount on a $100,000 home with a Fannie Mae/Freddie Mac coverage rate of 0.62%, what is the monthly PMI cost?**
   A. $18.75
   B. $46.50
   C. $90.00
   D. $108.00

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Chapter 14 Quiz

4. A borrower offers to purchase a home for $120,000. His first mortgage amount is $90,000 and the seller is providing a second mortgage of 15% of the sale price. The borrower provides the balance as a cash down payment. What are the LTV and CLTV?

A. 70% / 85%

B. 75% / 15%

C. 75% / 90%

D. 80% / 90%

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Chapter 14 Quiz

5. **A potential borrower is applying for a conventional loan to purchase a primary residence. Currently, he pays $500 in rent, $420 for an auto loan, $170 toward his VISA bill, and $300 on a student loan each month. His gross monthly income totals $4,900, and his take-home pay after taxes is $3,700. What is the maximum housing payment for which he can qualify?**

   A. $701

   B. $874

   C. $1,036

   D. $1,372

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Chapter 14 Quiz

6. **Borrower Stu wants to get an FHA loan for a home priced at $253,500 and appraised for $257,000. The monthly PITI payment on this house would be $1,780. He has a 680 credit score, gross monthly income of $6,850, other monthly recurring debts of $850 and a $75 monthly electric bill. Stu will finance 1.75% UFMIP into the loan amount. What is Stu's minimum down payment for the home purchase?**

   A. $0

   B. $8,872.50

   C. $8,995.00

   D. $9,027.77

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Chapter 14 Quiz

7. A borrower purchases a property for $200,000 and pays 20% of the sale price as a down payment. The owner provides a purchase money mortgage at 6% per annum, interest-only monthly payments with a balloon payment in 60 months. In the 40th month, the borrower is approached to sell the property for $240,000. How much equity does the borrower have and what will his sale proceeds be (without any other closing costs)?

A. $40,000

B. $72,000

C. $80,000

D. $240,000

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Chapter 14 Quiz

8. A borrower earns $4,500 weekly and the co-borrower earns $2,400 bi-weekly. If they wish to obtain a conforming loan, what is the maximum PITI payment they qualify for?

A. $6,384

B. $6,804

C. $6,916

D. $100,464

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Chapter 14 Quiz

9. If a borrower pays $695.20 per month for principal and interest on a $110,000 loan for a 30-year term and the interest rate is 5.25%, what is the amount of interest the borrower will pay over the life of the loan?

A. $90,856

B. $107,750

C. $140,272

D. $250,272

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