10-1 Computing the Mortgage Loan Amount

To purchase a new home you need to make a down payment, which can range from 5 to 40 percent of the selling price. Next, you need to find a lender to provide you with a mortgage loan to finance the remainder of the selling price. The **mortgage loan** is usually repaid in monthly installments, which include interest.

Mortgage Loan Amount = Selling Price − Down Payment

Example

Find the mortgage loan amount.

A couple are considering buying a new home with a selling cost of $168,000. A 20 percent down payment is required, and the rest will be financed through a mortgage company.

1. Find the down payment.
   Down payment = $168,000 × 0.20 = $33,600

2. Find the mortgage loan payment.
   Selling Price − Down Payment = Mortgage Loan Amount
   $168,000 − $33,600 = **$134,400 mortgage loan amount**

Practice

Find the down payment and the mortgage loan amount.

	Selling Price	Portion of Down Payment	Amount of Down Payment	Mortgage Loan Amount
1.	$137,500	25.0%	a.	b.
2.	149,300	27.5%	a.	b.
3.	191,375	$\frac{1}{3}$	a.	b.
4.	224,169	$\frac{1}{5}$	a.	b.

5. A couple agrees to a $\frac{2}{5}$ down payment on a new ranch home, which has a selling price of $98,750. They will finance the rest through a mortgage with a bank. What is the amount of the down payment? What is the amount of the mortgage loan?

6. A couple wants to buy an old Victorian home with a listing price of $239,575. It's a bit out of their price range, so they make a lower offer of $232,500. The seller agrees to the offer. The bank will finance their purchase if they make a $\frac{1}{4}$ down payment. What is the amount of their mortgage loan?

7. A couple are ready to retire and would like to move to Florida. They sell their current home for $89,000 and use that as a down payment to buy a beach home in Miami. It has a selling price of $321,000. What is the amount of their mortgage loan?

8. **Standardized Test Practice** James and Beverly Stanton make a $128,000 offer on a home listed for $135,000. After some negotiating, the sellers agree to a final price of $131,500. What is the amount of the mortgage loan if the Stantons agree to make a 25 percent down payment?
   A. $32,875   **B.** $98,625   **C.** $96,000   **D.** $101,250

10-2 Computing Monthly Payment and Total Interest

When you take out a mortgage, your lending firm will charge you **interest.** If you know the annual interest rate, the amount of the loan, and the length of the loan, you can determine the monthly payment, the total amount paid, and total interest charged.

(Example)

Find the total interest charged.

Lyle and Katlyn Stevens have applied for a mortgage loan of $135,000 at an annual interest rate of 7.5 percent. The loan is for a period of 25 years. Payments will be made in monthly installments, including interest.

1. Find the monthly payment.
   Monthly Payment = Amount of Mortgage ÷ $1,000 × Monthly Payment for a $1,000 Loan
   ($135,000 ÷ $1,000) × $7.39 = $997.65 monthly payment

2. Find the amount paid.
   Amount Paid = Monthly Payment × Number of Payments
   $997.65 × (25 years × 12 months) = $299,295 amount paid

3. Find the total interest charged.
   Total Interest Charged = Amount Paid − Amount of Mortgage
   $299,295 − $135,000 = **$164,295 total interest charged.**

(Practice)

Find the monthly payment, the amount paid, and the total interest.

	Mortgage	Years	Rate	Monthly Payment	Amount Paid	Total Interest
1.	$ 75,000	15	7.50%	a.	b.	c.
2.	92,000	20	8.50%	a.	b.	c.
3.	176,958	30	6.50%	a.	b.	c.

4. A couple agrees to a $\frac{1}{5}$ down payment on a new ranch home, which is selling for $98,750. They will finance the rest through a mortgage loan with at an annual interest rate of 7 percent for 25 years. What is the monthly payment and the total amount to be paid?

5. A couple reached an agreed-upon price of $232,500 for a home. The bank will finance their purchase at either 10 percent interest for 30 years or 10.5 percent for 25 years. If they make a $\frac{1}{4}$ down payment, which mortgage results in the least amount of total interest?

6. **Standardized Test Practice** Sylvia Baxter reaches an agreed-upon selling price of $136,250 for a Cape Cod home. She agrees to pay 20 percent as a down payment and will finance the rest at 8 percent interest for 25 years. What is the total interest charged on her mortgage?
   A. $143,444   **B.** $116,194   **C.** $179,305   **D.** $206,555

10-3 Determining Total Closing Costs

When you sign the papers that transfer ownership of a home to you, your lender will charge you **closing costs.** These include such things as attorney fees, credit checks, title searches, surveys, taxes, and document preparation. How these fees are charged will vary, depending on the lender.

Closing Costs = Sum of Bank Fees
Amount of Mortgage + Closing Costs = Amount Financed

Example

Find the total of the closing costs.

Lyle and Katlyn Stevens have been granted a mortgage loan of $135,000 at an annual interest rate of 7.5 percent for 25 years. The following closing costs are associated with the loan.

Credit report	$72
Loan origination	1.5% of loan amount
Abstract of title	$115
Attorney fee	$200
Documentation stamp	0.35% of loan amt.
Processing fee	1.25% of loan amount

1. Find the loan origination, documentation stamp, and processing fees.
   Loan origination = 0.015 × $135,000 = $2,025
   Documentation stamp = 0.0035 × $135,000 = $472.50
   Processing fee = 0.0125 × $135,000 = $1,687.50

2. Find the total closing cost.
   Sum of Bank Fees = Closing Costs
   $72 + $2,025 + $115 + $200 + $472.50 + $1,687.50 = **$4,572 total closing costs**

Practice

Use the table above to solve Problems 1–4.

1. Mortgage loan: $137,500. What are the closing costs?
2. Mortgage loan: $108,242. What are the closing costs?
3. Mortgage loan: $179,335.20. What are the closing costs?
4. A couple reached an agreed-upon price of $232,500 for the Victorian home. The bank will finance their purchase if they make a $\frac{1}{4}$ down payment. Closing costs are 3 percent of the mortgage loan. What are the closing costs? What is the total amount of their mortgage if the couple finances their closing costs?
5. **Standardized Test Practice** Sylvia Baxter reaches an agreed-upon selling price of $136,250 for a Cape Cod home. She agrees to pay 20 percent as a down payment and will finance the rest through her local bank at 8 percent interest for 25 years. Closing costs are 3.75 percent of the mortgage loan. What is the total amount of her mortgage if she finances the closing costs?
   A. $141,359.37   **B.** $109,000.00   **C.** $113,087.50   **D.** $136,500.00

10-4 Allocating the Monthly Payment

When you make a monthly mortgage payment, part of it goes towards interest, and part of it goes toward the **principal** of the loan, or the amount borrowed to finance the loan. The amount of principal that you owe decreases with each payment. Tables can show you the interest and principal paid over the course of the mortgage loan.

Example

Find the first month interest, the payment to principal, and the new principal.

Lyle and Katlyn Stevens have been granted a mortgage loan of $135,000 at an annual interest rate of 7.5 percent for 25 years. Their monthly payment is $997.65.

1. **Interest = Principal × Rate × Time**
   $135,000.00 × .075 × $\frac{1}{12}$ = **$843.75 interest**

2. **Payment to Principal = Monthly Payment + Interest**
   $997.65 − $843.75 = **$153.90 payment to principal**

3. **New Principal = Previous Balance − Payment to Principal**
   $135,000.00 − $153.90 = **$134,846.10 new principal**

Practice

Find the amount for interest, the amount for principal, and the new principal.

	Mortgage Amount	Interest Rate	1st Monthly Payment	Amount for Interest	Amount for Principal	New Principal
1.	$ 62,000	7.5%	$ 434.00	a.	b.	c.
2.	87,000	8.5%	701.22	a.	b.	c.
3.	92,500	9.5%	863.03	a.	b.	c.
4.	115,875	10.0%	1,017.38	a.	b.	c.

5. A couple has been granted a mortgage loan at an annual interest rate of 7 percent for 25 years. The home has a selling price of $98,750. They need a 25 percent down payment on their new home. What is the monthly payment? How much of the first monthly payment goes toward reducing the principal?

6. A couple reached an agreed-upon price of $232,500 for a Victorian home. The bank will finance their purchase at 8 percent interest for 30 years, provided they make a $\frac{1}{5}$ down payment. What is their monthly payment? What is the interest for the first payment? What is the new principal after the first payment?

7. **Standardized Test Practice** Sylvia Baxter reaches an agreed-upon selling price of $136,250 for a Cape Cod home. She agrees to pay 15 percent as a down payment and will finance the rest through her local bank at 8 percent interest for 25 years. What is her new principal balance after the first payment?

   A. $894.07   **B.** $772.08   **C.** $136,106.48   **D.** $115,690.51

10-5 Assessed Value and Real Estate Taxes

The **real estate taxes** you pay to your city or county go toward the operation and maintenance of such things as roads, schools, and government. Your real estate taxes depend on your property's **assessed value** and your **tax rate.** The **market value** of a house is the price at which it can be bought or sold. The **rate of assessment** is the percentage of the market value that is taxed. The tax rate is sometimes expressed in *mills* per dollar of assessed value of property.

── Example ──

Find the real estate tax.

A house has a market value of $142,500. The rate of assessment is 35 percent. The tax rate is 65 mills.

1. Find the assessed value.
   Assessed Value = Market Value × Rate of Assessment
   $142,500 × 0.35 = $49,875 assessed value

2. Express the tax rate as a decimal.
   1 Mill = $1.00 ÷ 1,000 = $0.001
   65 mills = 65 ÷ 1,000 = 0.065 tax rate

3. Find the real estate tax.
   Real Estate Tax = Tax Rate × Assessed Value
   0.065 × $49,875 = **$3,241.88 real estate tax**

── Practice ──

Find the real estate tax.

	Market Value	Rate of Assessment	Tax Rate	Real Estate Tax
1.	$140,000	40.0%	$75/$1,000	
2.	115,000	35.0%	$70/$1,000	
3.	135,500	45.0%	67.5 mills	
4.	201,585	37.5%	72 mills	

5. A couple's home and property have a market value of $109,750. They reside in Jefferson County, where the rate of assessment is 40 percent and the tax rate is 64.5 mills. What is their property's assessed value? What is their property tax?

6. A couple's Victorian home has a market value of $352,000. They live in San Francisco, California, where the rate of assessment is 60 percent and the tax rate is $75.5 per $1,000 of assessed value. What is their yearly real estate tax?

7. **Standardized Test Practice** Sylvia Baxter's Cape Cod home has an assessed value of $64,000 and her land has an assessed value of $4,800. If the rate of assessment in her municipality is 35 percent, what is the market value of her property?
   A. $196,571.43   **B.** $68,800.00   **C.** $44,720.00   **D.** $113,520.00

Determining the Amount of Homeowners Insurance

10-6

Homeowners insurance protects you from such losses as theft, fire, and **personal liability,** in case someone is injured on your property. Your policy includes **loss-of-use coverage,** which covers costs incurred while you cannot live in your home. You must insure your home for at least 80 percent of its **replacement value,** which is the amount it would cost to rebuild it if destroyed, and is typically calculated as follows:

Coverage	Amount
Garage and other structures	10%
Lose of use	20%
Personal property	50%

Example

Find the coverage on personal property.

The replacement value of a couple's home is $135,000. They have insured their home for 85 percent of its replacement value.

1. Find the amount of insurance.
   $135,000 × 0.85 = **$114,750**

2. Find the coverage on personal property.
   Amount of Coverage = Amount of Coverage on Home × Percent
   $114,750 × 0.50 = **$57,375 coverage on personal property**

Practice

Use the table above to answer Problems 1–4.

1. Replacement value: $132,000. Coverage: 80 percent. What is the amount of insurance?
2. Replacement value: $109,000. Coverage: 85 percent. What is the amount of coverage on garage and other structures?
3. Replacement value: $127,500. Coverage: 80 percent. What is the amount of coverage on loss of use?
4. Replacement value: $198,750. Coverage: 85 percent. What is the amount of coverage on personal property?
5. A couple's Victorian home has a replacement value of $350,000. It is insured for 85 percent of its replacement value. Two percent of the replacement value covers medical payments. What is the amount of insurance coverage for medical payments?
6. **Standardized Test Practice** Sylvia Baxter's Cape Cod home has a replacement value of value of $175,000. She insures it for 80 percent of its replacement value. Loss of use coverage is 15 percent of the replacement value. What is the amount of coverage on loss of use?

   A. $28,000   **B.** $26,250   **C.** $21,000   **D.** $35,000

10-7 Calculating Annual Homeowners Insurance Premium

Where you live and the type of home you live in plays an important part in determining your homeowners insurance **premium,** the amount you have to pay for your coverage. Your home is assigned a number, called a **fire protection class,** that reflects how fire resistant it is and how close you live to a water supply.

Example

Find the annual premium.

The replacement value of a home is $187,500. It is insured for 80 percent of its replacement value. The home is a brick structure and has been rated in fire protection class 7. What is the annual premium?

1. Find the amount of insurance coverage.
   Amount of Coverage = Amount of Coverage on Home × Percent
   $187,500 × 0.80 = $150,000 coverage

2. To find the annual premium, use the Homeowners Insurance Premiums table on page 178. Brick $150,000 coverage; fire class 7 = **$471 annual premium**

Practice

Use the Homeowners Insurance Premiums table on page 178 to answer the questions.

1. Wood-frame house $132,000. Homeowners policy $120,000. Fire class 9. What is the annual premium?
2. Brick house $109,000. Homeowners policy $100,000. Fire class 2. What is the annual premium?
3. Masonry veneer house $127,500. Homeowners policy $100,000. Fire class 8. What is the annual premium?
4. Wood-frame farmhouse $208,750. Homeowners policy $200,000. Fire class 10. What is the annual premium?
5. A brick home has a replacement value of $108,000. It is insured for $100,000. The area is rated fire protection class 11. What is the annual premium?
6. A Victorian wood-frame home has a replacement value of $312,500. It is insured for 80 percent of its replacement value. If the area is rated fire class protection 7, what is the annual premium?
7. **Standardized Test Practice** Sylvia Baxter's Cape Cod beach home has a replacement value of $500,000. She insures it for 80 percent of its replacement value. Her home is brick and her area is rated fire protection class 11. How much more would her annual premium be if she lived in a wood-frame home?
   A. $106   **B.** $135   **C.** $1,617   **D.** $1,723

10-8 Computing the Total Housing Cost

There are other costs involved with owning a home such as utilities and maintenance. **Utility costs** include gas, telephone, and cable TV. The Federal Housing Administration (FHA) recommends that your total monthly housing cost be less than 35 percent of your monthly net pay.

Example

Determine if the housing costs are within FHA guidelines.

Lyle and Katlyn Stevens have a combined monthly take-home pay of $4,150. They have the following monthly housing expenses for the month of August.

Housing Expenses for August	
Mortgage payment	$852.00
Insurance ($471 ÷ 12)	39.25
Real estate taxes ($3,241 ÷ 12)	370.08
Electricity	74.18
Telephone	47.21
Water	28.74
Cell phone	31.75
Miscellaneous repairs	62.89

1. Find the total monthly cost.
   The sum of the above expenses is $1,506.10.

2. Find the FHA's recommended maximum.
   $4,150 × 35% = $1,452.50

3. Compare the two. Is $1,506.10 less than $1,452.50?
   No, the costs are not within the recommended guidelines.

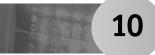#### Practice

Find the FHA's recommended maximum.

	Monthly Net Pay	Recommended FHA Maximum
1.	$1,500	
2.	2,850	
3.	1,195	
4.	4,418	

5. **Standardized Test Practice** Sylvia Baxter's monthly net income is $3,275. She had the following yearly housing expenses: mortgage payments $7,524.82; insurance premiums $492; real estate taxes $3,489; water/sewer $264.50; electricity $576.98; telephone $456.72; and misc. repairs $2,300. What is her average monthly housing expense?
   A. $1,146.25   **B.** $1,258.67   **C.** $15,104.02   **D.** $13,755

10 Chapter Review

Role Playing

For this review, you will play the roles of both buyer and lender. In the buyer role, you will determine your housing costs. In the lender role, you will decide whether or not to lend yourself the money.

1. Buyer Role

You are considering buying a $125,000 home. The mortgage company requires a 20 percent down payment. It will then finance your purchase at 8 percent interest for 25 years. What is your monthly payment?

2. Lender Role

You earn a monthly net salary of $2,500 and your monthly household and general expenses total $2,000. If you were a bank would you lend yourself the money? Why or why not?

3. Buyer Role

Suppose you are considering buying the same home as in number 1 above. The down payment amount remains the same, but you opt for a 7.5 percent mortgage over 30 years. What is your monthly payment?

4. Lender Role

Suppose you earn a monthly net salary of $2,500 but your monthly household and general expenses total $1,450. Would you lend yourself the money? Why or why not?

5. Buyer Role

You go with the 7.5 percent mortgage over 30 years and will finance the $100,000 cost of your home after the down payment. The total closing costs are 3.5 percent of the mortgage and you finance them as well. What is your monthly payment now?

6. Lender Role

You earn a monthly net salary of $2,500 and your monthly household and general expenses total $1,450. Factoring in the closing costs, would you lend yourself the money? Why or why not?

7. Buyer Role

Your home has a market (and replacement) value of $125,000. Your county assessment rate is 40 percent of market value. The tax rate is 75 mills. Your home is wood frame, and you live in an area where the fire protection code is 10. You insure it for 80 percent of its replacement value. What is your *monthly* real estate tax on the property? What is your *monthly* premium for homeowners insurance?

8. Lender Role

You earn a monthly net salary of $2,500. Your monthly household and general expenses total $1,450. Factoring in closing costs, real estate taxes, and homeowners insurance, would you still lend yourself the money? Why or why not?