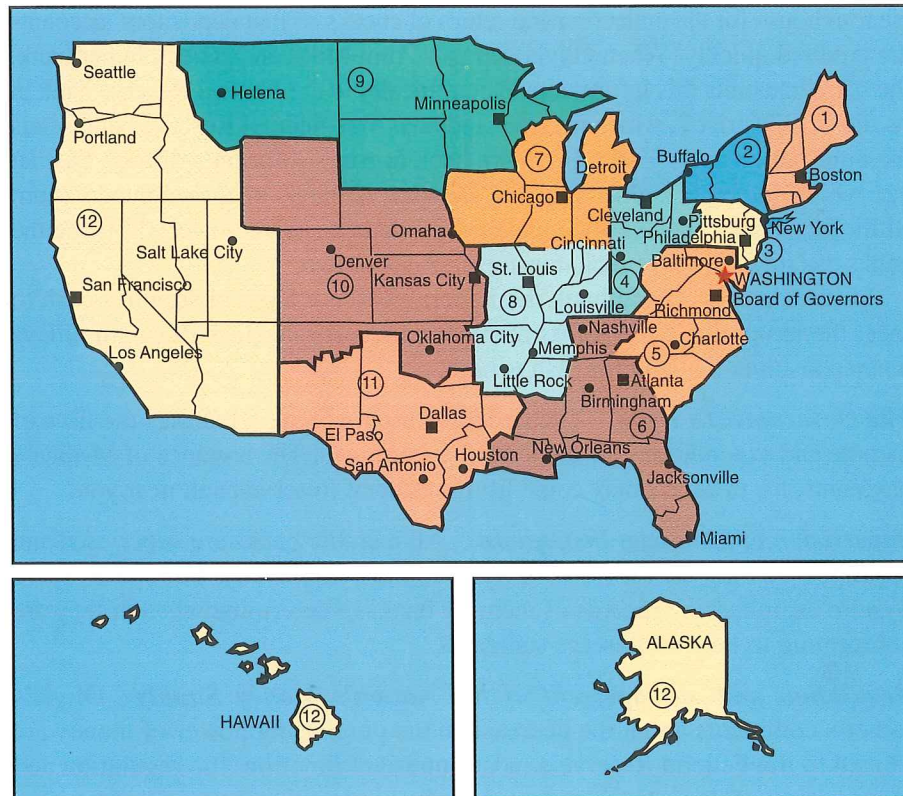


FUNCTIONS OF THE FEDERAL RESERVE SYSTEM

The **Federal Reserve System** consists of 12 Federal Reserve banks, 25 branch banks, a board of governors, and the Federal Open Market Committee, which directs the purchases and sales by the reserve banks of Federal government securities and other obligations in the open market. The following map of the Federal Reserve System shows the locations of the district banks and branches. Olivia has seen this map in her economics class. She noticed that she lives in District 7 and Aunt Millicent lives in District 12.

ORGANIZATION OF THE FEDERAL RESERVE SYSTEM



LEGEND

- BOUNDARIES OF FEDERAL RESERVE DISTRICTS
- ★ BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM
- CITY WHERE A BRANCH OF FEDERAL RESERVE BANK IS LOCATED
- BOUNDARIES OF FEDERAL RESERVE BRANCH TERRITORIES
- CITY WHERE FEDERAL RESERVE BANK IS LOCATED
- ③ FEDERAL RESERVE DISTRICT NUMBER. THIS NUMBER APPEARS ON THE CURRENCY ISSUED BY THE FEDERAL RESERVE BANK IN THE DISTRICT

The important functions of the Federal Reserve System are the following:

1. To act as a central bank.
2. To serve as a bank for the U.S. government.
3. To supervise financial institutions.
4. To regulate and manage the nation's money supply.

The Nation's Central Bank The Federal Reserve System issues the country's main type of currency, the **Federal Reserve note**. Such notes are **legal tender**; that is, they are money that by law must be accepted for payments of debts and taxes. This currency is printed by the Bureau of Printing and Engraving.

In addition to issuing currency, the Federal Reserve banks act as a major clearinghouse for the collection and return of checks so that depositors' accounts are credited quickly. When Olivia deposits Aunt Millicent's check in her bank, the bank transmits this information electronically to the Federal Reserve bank in its district, District 7, which includes Indiana. This Federal Reserve bank sends the information to the Federal Reserve bank in Aunt Millicent's district, District 12, which includes California. The District 12 bank in turn contacts Aunt Millicent's bank. The use of computers has made this process very fast, and the banks can now complete such transfers in a day or two.

In its role as a central bank the Federal Reserve System supplies cash to meet the temporary needs of its member banks, for instance during holidays when consumer demand for cash is high.

The Government's Bank The Federal Reserve System handles the flow of income and expenditures for the federal government. The issuance of Medicare payments, for instance, may come from a Federal Reserve bank near you.

Supervision of Financial Institutions All member banks are supervised and regulated by the Federal Reserve System. Periodically, the Federal Reserve System examines the records of member banks to determine whether they are conforming to Federal Reserve standards.

Regulation and Management of the Nation's Money Supply Olivia's father's comments about the decrease in the purchasing power of money are related to the Federal Reserve's most important function: the regulation and management of the nation's **money supply**—the total amount of coins, paper currency, and demand deposits (checking-account money) in circulation in the economy. The Federal Reserve System tries to maintain the right amount of money in circulation. If there is too much money, **inflation** results; that is, the overall purchasing power of money declines. If the money supply is too low, economic activity will diminish and may even lead to a recession and an increase in unemployment.

If business activity is slowing down and unemployment does begin to rise, the Federal Reserve may try to expand the supply of money and credit. To do this, it will encourage financial institutions to borrow short-term money from the Federal Reserve banks at its relatively low interest rates. With such low rates, businesses will be encouraged to borrow money to expand their operations and wage earners will be encouraged to borrow money to build

more homes and buy more goods. On the other hand, suppose that business activity expands too rapidly. This will be characterized by some positive things such as full employment but also by rising prices and too much borrowing by both businesses and consumers. Then the Federal Reserve banks will try to cool off the economy by reducing the money and credit supply. If the money supply is limited in this way, then interest rates will rise, and businesses and individuals will be discouraged from borrowing.

By maintaining a balance in the amount of money in circulation, the Federal Reserve tries to ensure that credit is plentiful enough to allow expansion of the economy but not so plentiful that rapid inflation occurs. A rough indication of the rate of inflation is provided by the **Consumer Price Index (CPI)**, a statistic that is calculated monthly by the Bureau of Labor Statistics. This index reflects the price of a specific group of goods and services used by the average household. This “market basket” consists of about 400 goods and services in the areas of food, housing, transportation, clothing, entertainment, and medical and personal care. (You will learn more about the CPI in Chapter 9.)

In summary, by controlling the money supply the Federal Reserve System affects the prices that consumers pay for goods and services. When interest rates are low and the money supply increases, people spend more freely. Suppliers can more easily raise their prices because demand for goods and services is greater than their supply. Thus higher inflation may occur. On the other hand, when interest rates are high and money is tight, people buy fewer goods and services. Therefore merchants have an oversupply of inventory and must lower their prices to attract buyers.



THE CREATION OF DEPOSITS

By law, depository institutions (banks) must deposit a specified percent of their customers' deposits with the Federal Reserve System. Such a deposit is known as a **required reserve**. It serves as a safeguard against a financial institution's placing too much of its customers' deposits into various investments. These investments might range from simple loans to the purchase of government securities.

The Federal Reserve can exert several minor controls on deposits in financial institutions; these controls are quite powerful tools. However, the real strength that the Federal Reserve exerts is due to its control over an institution's required reserves. This is due to the **multiplier effect** that these reserves create throughout the banking system.

For any given *demand deposit* (money in a checking account) a financial institution has the right to invest or extend loans from the **excess reserves**. As an example, assume that the reserve requirement is 20%; that leaves 80% in excess reserves. This is illustrated below by the simple balance sheet for a \$1000 demand deposit. The financial institution actually creates an extra \$800 of money or credit. This is done by lending the \$800 rather than holding it in the vault as a reserve.

INITIAL DEPOSIT			
Assets		Liabilities	
Required reserves (20%)	\$200	Demand deposit	\$1000
Loans and investments (80%)	<u>800</u>		<u> </u>
Total	\$1000	Total	\$1000

If the \$800 that is used in making loans is deposited by the borrower in the same or other institution, still more money or credit can be created. The second deposit creates an extra \$640 of money or credit, as shown below.

SECOND DEPOSIT			
Assets		Liabilities	
Required reserves (20%)	\$160	Demand deposit	\$800
Loans and investments (80%)	<u>640</u>		<u> </u>
Total	\$800	Total	\$800

We can also expect this \$640 to be deposited by the new borrower. The multiplier effect continues as shown below.

THIRD DEPOSIT			
Assets		Liabilities	
Required reserves (20%)	\$128	Demand deposit	\$640
Loans and investments (80%)	<u>512</u>		<u> </u>
Total	\$640	Total	\$640

The cycle continues until there is not a penny left to deposit. By this time the original \$1000 deposit will have enabled close to \$4000 in new money to be created.

MANAGING THE MONEY SUPPLY

The Federal Reserve System uses the reserve requirements to manage the money supply. If the reserve requirement is increased, then the multiplier effect for creating new money or credit is reduced. This is known as a **tight-money policy**. If the reserve requirement is reduced, then the multiplier effect is increased. This is known as an **easy-money policy**.

Economic conditions can prevent the multiplier effect from reaching its full force. For example, if the economy is in a period of high inflation and interest

rates are also quite high, businesses and consumers may not wish to borrow money. In this case the lack of demand for money means that not all the excess reserves available will be loaned out, and the multiplier effect will be reduced. If the economy is in a period of recession, businesses and consumers may be afraid to borrow even though interest rates are low. This, too, will tend to keep the multiplier effect from reaching its full potential, since financial institutions will not be able to make the loans that they would like. The multiplier effect can reach its full potential in creating new money and credit only when the demand for loans equals the supply of money available for those loans.

Another condition that can keep the multiplier effect from reaching its full potential is personal behavior regarding money and financial institutions. Some people do not trust depository institutions but keep their money at home or in safe-deposit boxes. If this money does not get into circulation (through spending or depositing), then the multiplier effect will be diminished.

Olivia and her brother Orson will certainly do their part to keep their money in circulation. They aren't very big savers; they spend whatever comes their way and wherever they can, for example, at the local music store. Perhaps the owner of the store will deposit its cash receipts in his checking account at the local bank, thus allowing the bank to multiply that money four or five times.

Ask Yourself

1. What states make up District 12 of the Federal Reserve System?
2. What are four important functions of the Federal Reserve System?
3. What is legal tender?
4. How does the Federal Reserve System try to expand the money supply?
5. What is a reserve requirement?
6. What is the difference between a tight-money policy and an easy-money policy?
7. What is the multiplier effect?
8. Describe the Federal Reserve System.

ALGEBRA REVIEW

For each series (sum of two or more terms), tell whether there is a common ratio between successive terms. If there is, give that ratio.

Examples

a. $1 + 2 + 4 + 8 + 16$

$$2 \div 1 = 2$$

$$4 \div 2 = 2$$

$$8 \div 4 = 2$$

$$16 \div 8 = 2$$

Yes; 2

b. $1 + 2 + 3 + 4$

$$2 \div 1 = 2$$

$$3 \div 2 = 1.5$$

No

1. $8 + 4 + 2 + 1 + \frac{1}{2}$

2. $x + 4x + 8x + 16x$

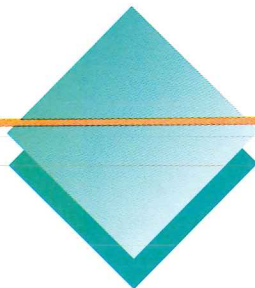
3. $0.04 + 0.08 + 0.12 + 0.16$

4. $0.01 + (0.01)(0.01) + (0.01)(0.01)(0.01)$

5. $0.04 + (0.04)^2 + (0.04)^3$

6. $0.3 + 2(0.3) + 3(0.3) + 4(0.3)$

7. $100(0.07)^2 + 100(0.07)^3 + 100(0.07)^4 + 100(0.07)^5$



SHARPEN YOUR SKILLS

SKILL 1

EXAMPLE 1 Olivia wants to find out the multiplier effect on an initial deposit of \$1000 through five levels.

QUESTION What is the total amount of extra money or credit created through five levels of the multiplier effect?

SOLUTION

Olivia made the following table to show the first five levels and the total additional money available for loans and investments after five levels. The required reserve is 20% of the demand deposit.

$$0.20(1000.00) = 200.00$$

The amount of loans and investments is the demand deposit minus the required reserves.

$$1000.00 - 200.00 = 800.00$$

At each level beginning with Level 2, the demand deposit is the loan amount from the previous level.

Level	Demand Deposit	Required Reserve (20%)	Loans and Investments
1	1000.00	200.00	800.00
2	800.00	160.00	640.00
3	640.00	128.00	512.00
4	512.00	102.40	409.60
5	409.60	81.92	327.68
Total after 5 levels			2689.28

This shows how the money supply will multiply if the initial \$800 loan is all redeposited in the banking system and if the resulting \$640 loan also is all redeposited, and so on through five levels of loans and redeposits. The result is the creation of \$2689.28 that did not exist before the initial \$1000 deposit.

SKILL 2

EXAMPLE 2 Olivia wants to use a spreadsheet program to find out the multiplier effect on an initial deposit of \$1000 through ten levels.

QUESTION What is the total amount of extra money or credit created through ten levels of the multiplier effect?

SOLUTION

Olivia used formulas in the spreadsheet program to give the numerical values shown in the table in Example 1. The spreadsheet shows the actual values (not the formulas). Thus in cell D5 you will see “512.00,” not “+B5–C5.”

	A	B	C	D
1	Level	Demand	Required	Loans and
2		Deposit	Reserve (20%)	Investments
3	1	1000.00	<code>@round(0.2*B3,2)</code>	<code>+B3–C3</code>
4	2	<code>+D3</code>	<code>@round(0.2*B4,2)</code>	<code>+B4–C4</code>
5	3	<code>+D4</code>	<code>@round(0.2*B5,2)</code>	<code>+B5–C5</code>

In Column C, Olivia used a “rounding” function (often expressed as @ROUND) so that the spreadsheet would use the rounded value in the remaining calculations. If she did not do this, a calculated value would not actually be rounded; it would only be displayed as rounded and small errors would be created. For cell C3, Olivia typed @ROUND (0.2*B3,2) to obtain a value rounded to two decimal places.

Olivia used the spreadsheet’s COPY command to extend the formulas created in Rows 3 and 4 to the other rows. The spreadsheet creates the formulas for the new rows but displays the values for those formulas.

To find the total amount of money created, Olivia used the spreadsheet’s “sum” function (often expressed as @SUM) to add the entries of Column D from Row 3 to Row 12 and display that total in Column D, Row 13. For cell D3, Olivia typed @SUM(D3 . . D12).

	A	B	C	D
1	Level	Demand	Required	Loans and
2		Deposit	Reserve (20%)	Investments
3	1	1000.00	200.00	800.00
4	2	800.00	160.00	640.00
5	3	640.00	128.00	512.00
6	4	512.00	102.40	409.60
7	5	409.60	81.92	327.68
8	6	327.68	65.54	262.14
9	7	262.14	52.43	209.71
10	8	209.71	41.94	167.77
11	9	167.77	33.55	134.22
12	10	134.22	26.84	107.38
13			Total after 10 levels	3570.50 <code>@SUM(D3..D12)</code>

The total amount of extra money or credit created through ten levels of the multiplier effect is \$3570.50.

If you extend the spreadsheet even further, to 20 levels, 30 levels, and so on, you will create more and more money as summarized below.

Level	Amount of New Money Created
5	2689.28
10	3570.50
20	3953.88
30	3995.05
40	3999.47

Even though the deposits and redeposits continue to ever higher levels without end, the total amount of new money created by the initial \$1000 deposit seems to have a limiting value of \$4000. In other words, it seems that the sum

$$800 + 640 + 512 + 409 + \dots$$

with an infinite number of terms (indicated by the three dots at the end) has a finite sum, \$4000. This is actually the case.

The sum can also be written as

$$800 + 800(0.8) + 800(0.8)^2 + 800(0.8)^3 + 800(0.8)^4 + \dots$$

You can see that the ratio of each pair of successive terms is always the same, namely, 0.8. Any series that has a **common ratio** (such as 0.8) is called a **geometric series**. If the series has an infinite number of terms and if it has a sum (many series do not), then that sum is called the **sum of an infinite geometric series**. The series above *is* infinite and *does* have a sum. The formula for the sum of an infinite geometric series is

$$S = \frac{a}{1 - r}$$

where a is the first term 800 and r is the common ratio 0.8. Since $1 - 0.8 = 0.2$, the expression $1 - r$ is the reserve requirement 0.2.

EXAMPLE 3 Olivia wants to find out the maximum multiplier effect on an initial deposit of \$1000.

QUESTION What is the maximum amount of money a \$1000 deposit can create and what is the multiplier?

SOLUTION

For a \$1000 deposit, initial loan amount of \$800, and 20% reserve requirement,

$$S = \frac{a}{1-r} \quad a = 800; 1 - r = 0.2$$

$$S = \frac{800}{0.2} \quad \text{Reserve requirement} = 0.2$$

$$S = 4000$$

The original \$1000 deposit can create as much as \$4000 in new money. To find the multiplier add the amount created to the original amount and divide by the original amount.

$$\frac{1000 + 4000}{1000} = 5$$

The multiplier is 5.

TRY YOUR SKILLS

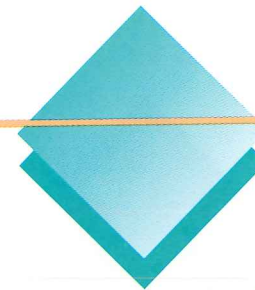
Make a table to show the multiplier effect on the amounts below if the Federal Reserve requirement is 20%. Show the first ten levels and find the total extra money that is generated.

1. Initial deposit: \$500
2. Initial deposit: \$2500



Make a table or use a spreadsheet to show the multiplier effect on the amounts below if the Federal Reserve requirement is 25%. Show the first ten levels and find the total extra money that is generated.

3. Initial deposit: \$500
4. Initial deposit: \$2500
- 5.-8. For the initial deposits of Exercises 1-4, find the maximum amount of new money created by the multiplier effect.
- 9.-12. What is the multiplier for Exercises 5-8?
13. Consider your answers to Exercises 1-12. How does changing the reserve requirement affect the extra money generated?



EXERCISE YOUR SKILLS

1. Does one bank actually send cash to another bank across the country to cash a check drawn on an account there? Why or why not?
2. What happens if there is too much money in circulation? too little money in circulation?
3. How does the multiplier effect work?
4. How can the Federal Reserve reduce or increase the multiplier effect?

Make a table or use a spreadsheet to show the multiplier effect on the amounts below if the Federal Reserve requirement is as given. Show the first ten levels and find the total extra money that is generated.

5. Reserve requirement: 15%; initial deposit: \$500
6. Reserve requirement: 15%; initial deposit: \$2500
7. Reserve requirement: 15%; initial deposit: \$12,500
8. Reserve requirement: 18%; initial deposit: \$12,500
9. Reserve requirement: 20%; initial deposit: \$12,500
10. Reserve requirement: 25%; initial deposit: \$12,500
- 11.-16. For the initial deposits of Exercises 5-10, find the maximum amount of new money created by the multiplier effect.
- 17.-22. What is the multiplier for Exercises 11-16?
23. Consider your answers to Exercises 1-22. How does changing the reserve requirement affect the extra money generated?
24. Find the maximum amount of extra money that can be generated by a savings account deposit of \$4000 if the Federal Reserve System's reserve requirement is 18%.
25. Find the maximum amount of extra money that can be generated by a savings account deposit of \$1000 if the Federal Reserve System's reserve requirement is 16%.

KEY TERMS

common ratio
 Consumer Price Index (CPI)
 easy-money policy
 excess reserves
 Federal Reserve note
 Federal Reserve System
 geometric series
 inflation
 legal tender
 money supply
 multiplier effect
 required reserve
 sum of an infinite geometric series
 tight-money policy

MIXED REVIEW

An employer has offered two of his salespeople the two options shown. What is the least amount of sales that each person would need for Option 2 to be the better choice?

1. Ellen: Option 1 is a base salary of \$1224 and an 8% commission on all sales; Option 2 is no base salary and 12% commission on all sales.
2. Peter: Option 1 is a base salary of \$724 and a 10% commission on all sales; Option 2 is no base salary and 12% commission on all sales.

For the given weekly savings, find out how much Dwain can save and how long he will have to save to be able to afford a business calculator that usually sells for \$209.00 but that is on sale for \$179.99. The sale ends nine weeks from now.

3. \$50 per week
4. \$25 per week
5. \$20 per week
6. \$15 per week
7. How much will \$15,500 be worth at the end of three years if it earns 7% interest, compounded quarterly?
8. How much will \$4900 be worth at the end of five years if it earns 4% interest, compounded semiannually?
9. Suppose that your checkbook shows a balance of \$290.56. Your bank deducts a service charge of \$2.50 each month but does not pay interest and does not charge for each written check. The only check that you wrote during the month was for \$80.60 and was mailed the day before the bank's monthly statement arrived. What will the bank show as the closing balance?

Use the Rule of 72 to determine how long it will take your \$3300 savings account to double in value if it is growing at a rate of

10. 4% per year
11. 6% per year
12. 10% per year
13. 12% per year

Susan's paycheck is for \$998.43. There is an amount of \$276 that is withheld for taxes as well as 7.65% of the gross salary that is withheld for FICA taxes.

14. Let x represent the gross salary and write an equation for the gross salary.
15. What is Susan's gross salary?
16. How much money is withheld in all?

CHAPTER 3 REVIEW

How much can be saved over the following time periods if \$45 can be saved each week?

1. 4 weeks
2. 12 weeks
3. 26 weeks
4. 1 year (52 weeks)

How long will it take to save \$165 if you can save the following amounts each week? What is the total amount saved in that time period?

	Amount Per Week	Number of Weeks	Total Amount Saved
5.	\$15		
6.	25		
7.	50		

8. Ivan can save \$30 a week to buy one or more of the following items.

A watch for \$111.99

A camera for \$199.99

A VCR for \$260.00

A computer monitor for \$309.00

Draw a graph or use a spreadsheet graphing program to show the number of weeks required to save up for each item.

A bank pays 3% simple interest on a one-year CD. Find out how much is saved, how much interest is earned by the CD in one year, and the total amount of money in each account after the bank has credited the interest to the accounts.

	Amount Saved per Week	Number of Weeks	Total Saved	Interest Earned	Total in Account
9.	\$ 25.00	52			
10.	32.50	48			
11.	68.00	50			
12.	110.00	40			

Use a calculator to find the amount of interest and the new balance that will accumulate over two years on the following principal amount at the given annual interest rate compounded semiannually.

	Principal	Interest Rate	Interest Earned	New Balance
13.	\$2000	5%	First period: _____	_____
14.			Second period: _____	_____
15.			Third period: _____	_____
16.			Fourth period: _____	_____

Use a calculator to find the amount of interest and the new balance that will accumulate over two years on the following principal amount at the given annual interest rate compounded quarterly.

	Principal	Interest Rate	Interest Earned	New Balance
17.	\$2000	5%	First period: _____	_____
18.			Second period: _____	_____
19.			Third period: _____	_____
20.			Fourth period: _____	_____
21.			Fifth period: _____	_____
22.			Sixth period: _____	_____
23.			Seventh period: _____	_____
24.			Eighth period: _____	_____

25. Use the compound interest formula to find out how much \$2000 will be worth at the end of two years, compounded semiannually and compounded quarterly. Do your results agree with Exercises 16 and 24?

Suppose that in 1750, when he was 44 years old, Benjamin Franklin invested 50 pounds in a bank at 3.5% compounded semiannually and stipulated in his will that the money was to be allowed to accumulate in the account after his death. Use the compound interest formula to find the value of the account in each case.

26. After 5 years 27. After 50 years 28. After 75 years

Peggy's grandmother opened a savings account for her that pays interest compounded semiannually. Use the Rule of 72 to find how many years it will take for the original principal of \$500 to double at the given rates of interest.

29. 3% 30. 4% 31. 8% 32. 10%

Make a table to show the multiplier effect on the amounts below if the Federal Reserve requirement is as given. Show the first five levels, and find the total extra money that is generated.

33. Reserve requirement: 20%; initial deposit: \$2000
 34. Reserve requirement: 25%; initial deposit: \$1000
 35. Reserve requirement: 17%; initial deposit: \$11,500
 36. Reserve requirement: 15%; initial deposit: \$25,000
 37.–40. For the initial deposits of Exercises 26–28, find the maximum amount of new money created by the multiplier effect.
 41.–44. What is the multiplier for Exercises 29–31?
 45. Find the maximum amount of extra money that can be generated by a checking account deposit of \$800 if the Federal Reserve System's reserve requirement is 18%.

CHAPTER 3 TEST

How much can be saved over the following time periods if \$75 can be saved each week?

1. 4 weeks
2. 12 weeks
3. 26 weeks
4. 1 year (52 weeks)

How long will it take to save \$355 if you can save the following amounts each week? What is the total amount saved in that time period?

	Amount Per Week	Number of Weeks	Total Amount Saved
5.	\$20		
6.	30		
7.	60		

A bank pays 4% simple interest on a one-year CD. Find out how much is saved, how much interest is earned by the CD in one year, and the total amount of money in each account after the bank has credited the interest to the accounts.

	Amount Saved per Week	Number of Weeks	Total Saved	Interest Earned	Total in Account
8.	\$ 35.00	52			
9.	42.50	52			
10.	96.80	48			
11.	125.00	46			

Suppose that you have a savings account with \$8500 in it. It pays 7% interest compounded as shown below. Find the value at the end of each year for the next four years.

12. Annually
13. Semiannually
14. Quarterly
15. Monthly

Use the Rule of 72 to find how many years it will take for \$7000 to double at the given rates of interest.

16. 9%
17. 3%

A \$3000 deposit is made in a checking account when the Federal Reserve System's reserve requirement is 16%.

18. Make a table to show the multiplier effect on the deposit. Show the first five levels, and find the total extra money that is generated.
19. Find the maximum amount of extra money that can be generated.
20. What is the multiplier?

CUMULATIVE REVIEW

For each company fringe benefits policy described below, find

- the amount that the company must pay for extra taxes, retirement, health and life insurance, and other indicated fringe benefits.
- how much salary is paid for the indicated number of nonworking days in a total of 240 operating days.

	EMPLOYEE	SALARY	FRINGE BENEFITS POLICY
1.	Office manager	\$45,000	7.65% of gross for FICA taxes; 4% of gross for retirement; \$125/month for life and health insurance; 24 nonworking days
2.	Restaurant cashier	\$12,000	7.65% of gross for FICA taxes; \$80/month for health insurance; 10 holidays, 4 sick days, no vacation days

Basil's earnings as a real-estate salesperson are based on a graduated commission. He receives 4% on each sale up to \$125,000 and 6% of the amount above \$125,000. How much would he earn for selling each house below?

- | | |
|---|---|
| <p>3. PRICED TO SELL
\$108,500 Imagine yourself in this 2000 square foot home.</p> | <p>4. LOW-MAINTENANCE YARD
\$139,950 Large living room, formal dining and breakfast area, 4 bedrooms, 2 baths.</p> |
|---|---|

- Suppose you wrote 35 checks in July. Your bank charges \$0.035 per check for the first 25 checks and \$0.15 for each check over 25. How much were your July bank charges?
- Find the maximum amount of extra money that can be generated by a checking account deposit of \$2200 if the Federal Reserve System's reserve requirement is 18%.
- How much will \$9500 be worth at the end of five years if it earns 8% interest, compounded quarterly?
- How much will \$22,500 be worth at the end of five years if it earns 4% interest, compounded semiannually?
- Suppose that you wrote a check for \$243.50. Before writing the check, you had \$982.61 in your checking account. Show how you would enter this check in your check register.

Peggy's grandmother opened a savings account for her that pays interest compounded semiannually. Use the Rule of 72 to find about how many years it will take for the original principal of \$500 to double at the given rates of interest.

- | | | | |
|--------|--------|--------|-----------|
| 10. 3% | 11. 4% | 12. 8% | 13. 10.5% |
|--------|--------|--------|-----------|



PROJECT 3-1: Savings Accounts

As you know, there are many different kinds of savings accounts. These accounts may vary greatly. Visit local banks and savings and loan associations to find information on various types of savings accounts.

1. Name of institution
2. Types of accounts available
3. Rate of interest for each type of account
4. Minimum balance requirements
5. How interest is compounded
6. When interest is paid



PROJECT 3-2: Federal Reserve System

As you learned in this chapter, the Federal Reserve System is a very important agency. It acts as a fiscal agent for the U.S. government. The Federal Reserve banks regulate our economy by regulating the money supply.

Gather information about the Federal Reserve System by doing research at your local library, by interviewing bankers, and/or by reading news magazines and newspapers. Answer the following questions.

1. What Federal Reserve District do you live in?
2. How does the Federal Reserve System actually process your checks?
3. What is the current condition of the money supply?
4. Is the Federal Reserve currently trying to expand or reduce the money and credit supply?
5. What are the current implications of the above activity?
6. What is the current required reserves for banks?