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Find the Fire Protection Class 1-6 column. Find the column, Wood Frame. Step 2: Find the annual premium. (See Figure 10.6 on page 393.)

Find the Amount of Insurance Coverage row with 120,000.

Follow across the row and down the column to where 120,000 and 1-6 meet.

= \$476 annual premium

Concept CHECK

the book. using Figure 10.6 on page 393. Check your answer in the back of Find the (a) amount of coverage and (b) annual insurance premium

protection class 11. insured at 75% of its replacement value. The home is in fire 1. The replacement cost of Jalese Chiara's brick home is \$200,000. It is

Lesson Practice

annual insurance premium. Use Figure 10.6 on page 393. For Problems 2 and 3, find (a) the amount of coverage and (b) the

class 8, and they insured it for 100% of its replacement value. 2. The Campbells own a \$150,000 wood-frame house. It is in fire protection

insured for 75% of its replacement value. 3. Kuen Yee owns a 4400,000 brick home in fire protection class 11 that is

were in class 11? policy premium? (b) What would the annual policy premium be if they They live in an area rated fire protection class 9. (a) What is the annual They purchased a homeowners policy for 80% of its replacement value. 4. The Quicks own a brick home that has a replacement value of \$375,000.

(c) insurance, and (d) total monthly payment? monthly payment for the (a) mortgage, (b) real estate taxes, He has a \$120,000.00 mortgage at 8% for 20 years. How much is the 35%, his tax rate is 51.58 mills, and his fire protection is rated class 6. insures it for 100% of its replacement value. His rate of assessment is 5. CHALLENGE PROBLEM Gary Penn owns a \$150,000 brick home. He

Spiral Review

8. 456.25478

Round to the nearest thousandth. (Skill 2)

9. ALCEBRA Donald Houston can save \$55 on a new microwave if he buys 7. 7.21973 6. 0.1245

regular price? (Lesson 6.6) it on sale. The store has marked down the microwave 45%. What is its

der Ready for the Next Lesson

PREREQUISITE SKILL Adding Decimals (Skill 5)

.bbA

12. 191.34 + 58.177 + 2.03

11. 98.34 + 17.626 88.ISZ + Z.EZ + ₺.85.**01**

A.O.F. Problems

Study Tip

Write Your Own Questions

Write and solve your own word problems as you study. Use the practice problems in the book as models.

EXAMPLE

Joy and Ron Amodeo estimate the replacement value of their home at \$194,000. They have insured the home for 80% of its replacement value. According to the preceding guidelines and using Figure 10.5 on page 391, what is the amount of coverage on the Amodeos' personal property?

Step 1: Find the amount of coverage on the home.

Replacement Value × Insured Percent

\$194,000 80% = \$155,200 coverage on home

Step 2: Find the amount of coverage on personal property.

Amount of

Percent

Coverage on Home

Covered

\$155,200

50% = \$77,600 coverage on personal property

Concept CHECK

Complete the problems. Check your answers in the back of the book.

Assume that Tilda and Nolan Wendt insure their home for 90% of its replacement value of \$320,000, or \$288,000. Using the percents from Figure 10.5 on page 391, find the coverage for the following.

1. Personal property

2. Loss of use

3. Garage

120

Lesson Practice

For Problems 4–8, use Figure 10.5 on page 391 for the percent of coverage to determine the (a) amount of insurance on the home, (b) amount of coverage for the garage, (c) amount of coverage for loss of use, and (d) amount of coverage for personal property.

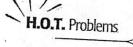
4. Replacement value: \$270,000; coverage: 80%. 240

5. Replacement value: \$405,000; coverage: 100%.

6. Replacement value: \$538,500; coverage: 90%.

7. Replacement value: \$324,000; coverage: 90%. 8. Replacement value: \$324,000; coverage: 80%.

9. WRITING Write a brief paragraph that compares the answers for Problem 7 to those for Problem 8.



piral Review.

Find the percent. (Skill 30)

10. 10% of 90,000

11. 80% of 30,000

12. 75% of 140,000

13. ALGEBRA Amber Hawke estimates that she will drive 12,000 miles during the year and will have \$2,200 in annual vehicle-related fixed costs. If her goal is to have a cost per mile of \$0.36 or less for her compact car, what is the maximum annual variable cost she can have? (Lesson 9.5)

GET READY for the Next Lesson

PREREQUISITE SKILL Finding the Percentage (Skill 30) Find the percentage.

14. 60% of 24,000

15. 55% of 13,400

16. 94% of 45,300

Homeowners Insurance Premium

Lesson Objective

Calculate the annual homeowners insurance premium.

Content Vocabulary

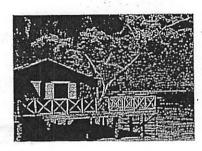
- premium
- fire protection class

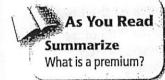
a home?

Ashley and Tim Huggins are buying their first home, and they want to make sure that they purchase adequate insurance coverage. They meet with several insurance agents.

GET READY for the Lesson

How much does it cost to insure





Homeowners Insurance Premium The important considerations when buying a home, as they say in real estate, are location, location, location. Your location even affects your homeowners policy premium —the amount you must pay for insurance coverage. Also, the type of house (brick, masonry, veneer, or wood frame) and the amount of coverage affect your premium. The insurance company will assign your home a number that reflects how fire resistant it is and how close you are to a water source. This number is called your fire protection class.

	h
Figure 10	

Homeowners Insurance Premiums											
17 50	Annual Premiums for a Typical Homeowners Policy										
Amount of		Brick/M	asonry	Veneer	11/4	u 2 2	Wo	od Fran	ne		
Insurance		Fire Pro	tection	Class	enclusia.	Tue 70	Fire Pro	otection	Class		
Coverage	1-6	7–8	9.	10	1.1	1-6	7–8	9	10	11	
\$ 80,000	\$ 301	\$ 310	\$ 410	\$ 429	\$ 493	\$ 321	\$ 331	\$ 429	\$ 454	\$ 519	
90,000	335	345	456	480	551	361	370	480	504	580	
100,000	373	384	509	533	613	400	411	533	561	644	
120,000	443	455	605	635	730	476	489	635	668	768	
150,000	574	589	781	821	944	616	633	821	865	,993	
200,000	770	791	1,051	1,105	1,271	828	850	1,105	1,164	1,338	
250,000	921	943	1,201	1,276	1,459	975	998	1,276	1,358	1,554	
300,000	1,099	1,126	1,434	1,523	1,743	1,164	1,191	1,523	1,619	1,854	
400,000	1,276	1,306	1,664	1,766	2,021	1,334	1,381	1,766	1,880	2,154	
500,000	1,636	1,675	2,134	2,265	2,593	1,731	1,773	2,265	2,411	2,761	

EXAMPLE

The replacement value of Marcia Syke's home is \$150,000, and she has insured it for 80% of its replacement value. The home is of wood-frame construction and has been rated in fire protection class 4. What is the amount of (a) coverage and (b) annual premium?

Step 1: Find the amount of coverage.

Replacement Value of Home imes Insured Percent of Replacement Value $150,000 \times 80\% = 120,000$ coverage

LESSON

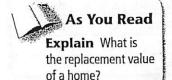
Homeowners Insurance

Lesson Objective

Determine the amount of coverage for homeowners insurance.

Content Vocabulary

- homeowners insurance
- property damage coverage
- personal liability coverage
- medical coverage
- loss-of-use coverage
- replacement value



GET READY for the Lesson

Why would you need to insure your home?

A forest fire destroyed Randy and Connie Silver's home. They managed to save some family mementoes and important papers but lost everything else. They were overwhelmed by the expense of rebuilding their home.



Homeowners Insurance When you are a homeowner, you will need to buy homeowners insurance to provide financial protection against various losses. Basic coverage included in a homeowners insurance policy includes four kinds of coverage:

Property damage coverage pays for damage to the home and personal property such as computers, furniture, and clothing. Fire, windstorm, rain, lightning, and so on may cause the damage. The homeowner must purchase special coverage for damage caused by flooding. Personal liability coverage protects you as a homeowner if someone alleges that your negligence caused her or him bodily injury or property damage. For example, if a neighbor falls off the deck of your house and breaks a leg, personal liability will protect you from financial losses. Medical coverage pays for medical expenses for nonfamily members accidently injured on your property. It does not matter who is at fault. Loss-of-use coverage pays for the expenses for living away from home while your damaged home is being repaired.

To recover full payment for any loss up to the amount of the policy, you must insure your home for at least 80% of its replacement value. Replacement value is the amount required to reconstruct your home if it is destroyed. To calculate the minimum amount of coverage, use the formula:

Amount of Coverage on Home = Replacement Value \times Insured Percent

Figure 10.5

Coverage	Percent Covered
Garage and other structures	10%
Loss of use	20%
Personal property	50%

Insurance companies use the amount of coverage on your home to calculate the amount of coverage you receive on a detached garage, personal property, and for loss of use.

To calculate the amount of coverage for each type of protection, use the formula:

Amount of Coverage = Amount of Coverage on Home \times Percent Covered



Staying in Shape Studies conducted by scientists from the National Institute on Aging suggest that a healthy diet and exercise can combat obesity, which may increase life expectancy.

Step 2: Find how much she can save.

 $(12 \times \$79.69) - \$937.50 =$

\$956.28 - \$937.50 = \$18.78 amount saved

Concept CHECK

Determine how much can be saved by paying annually. (Refer to Figure 11.3 and Figure 11.4.) Check your answers in the back of the book.

- 3. A 20-year-old male has a \$100,000 whole life policy paid monthly.
- **4.** A 40-year-old female has a \$150,000 paid up at age 65 policy that she pays quarterly.

Lesson Practice

Use Figure 11.3 and Figure 11.4 to solve.

	Туре	Gender	Age	Face Value	Number of Units	Cost per \$1,000	Annual Premium	Monthly Premium
5.	Whole Life	Female	20	\$ 50,000	a. 50	b. 6.25	C. 01.10	d. 0/12
6.	Paid at 65	Male	30	\$120,000	a.	b	c.	d.
7.	Paid at 65	Female	35	\$200,000	a.	b.	C.	d.
8.	Whole Life	Male	45	\$200,000	a	b	c.	d.

- 9. Forty-year old Ann Gosik's policy is a "whole life" for \$50,000.(a) What is her annual premium? (b) What is her semi-annual premium?
- 10. James Dolby, 20 years old, has a \$50,000 policy that is "paid up at age 65." (a) What is his annual premium? (b) What is his quarterly premium?
- 11. Robert and Lucy Dubbs each purchase a \$100,000 whole life insurance policy. Both are 25 years of age. What are their total annual premiums? How much more is Robert Dubbs's annual premium than his wife's?
- 12. **CHALLENGE** Leona Sowinski purchased a \$50,000 universal life insurance policy at the age of 20. What is her annual premium? If Leona pays \$15, a month, how much is she saving annually?



Spiral Review

Multiply or Divide. Round answers to the nearest hundredth. (Skill 8, 11)

13. $18.4 \div 0.032$

14. 0.31×0.84

15. 7.81×8.1

16. ALGEBRA Double Impressions charges 9¢ a page for machine fed copies and 21¢ per page for copies that are placed by hand on the copy machine. If your bill for 120 copies is \$19.44, how many copies of each type were made? (Lesson 1.4)

GET READY for the Next Lesson

PREREQUISITE SKILL Rounding Numbers (Skill 2) Round to the nearest ten.

17. 84

18. 15

19. 221

20. 336

Step 2: Find the premium per \$1,000. (Refer to Figure 11.3.)

Whole Life, Female, Age 25 = \$7.50

Step 3: Find the annual premium.

Number of Units Purchased × Premium per \$1,000

125

×

7.50

= \$937.50 annual premium

Figure 11.3

ı	Monthly Premium				
Age	Paid Up	at Age 65	Whol	\$50,000 Universal Life	
	Male	Female	Male	Female	Male or Female
20	\$11.75	\$ 9.75	\$ 8.00	\$ 6.25	\$ 19.00
25	\$13.75	\$11.50	\$ 9.50	\$ 7.50	\$ 24.00
30	\$17.00	\$14.50	\$11.75	\$ 9.25	\$ 29.00
35	\$21.50	\$18.00	\$15.00	\$11.50	\$ 37.50
40	\$29.75	\$25.00	\$19.50	\$14.50	\$ 52.00
45	\$39.50	\$32.50	\$25.50	\$18.75	\$ 69.50
50	\$56.25	\$45.75	\$34.00	\$24.25	\$ 93.50
55		A SECURITION AND	\$46.50	\$32.25	\$126.00

Concept CHECK

Find the annual premium. Check your answers in the back of the book.

- 1. A 30-year-old male obtains a \$70,000 whole life policy.
- 2. A 40-old female obtains a limited payment policy until age 65 of \$90,000.

Figure 11.4

Optional-Payme	nt Pla	50.5% 25.5%	
Percent of Annua	Prem	ium	
Semi-annual Premiums	=	50.5%	
Quarterly Premiums	=	25.5%	
Monthly Premiums	=	8.5%	31

Payment Plans Many insurance companies will allow you to make smaller payments several times a year, rather than one annual payment. A small fee is charged to cover the additional expense of collecting and handling the payments. Many companies use the guidelines shown in Figure 11.4.

Reading Math+++=

Glossary and Index --

Use the glossary in the back of the book to check the definition of important terms. Use the index to cross check other references to the term.

EXAMPLE 2

Suppose Phyllis Saul (from Example 1) wants to pay the \$937.50 annual premium monthly. What are her monthly payments? How much can she save in one year by paying the premium annually?

Step 1: Find the monthly premium. (Note: Refer to Figure 11.4 for percent of monthly premium.)

Annual Premium × 8.5%

 $$937.50 \times 0.085 = $79.6875 = $79.69 \text{ monthly premium}$

120 Chamton 11 Incurance

11.4

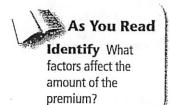
Other Types of Life Insurance

Lesson Objective

Apply tables to data to compute the annual premiums for three types of life insurance.

Content Vocabulary

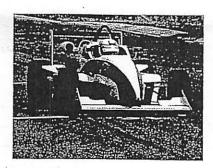
- · whole life insurance
- cash value
- limited payment policy
- universal life insurance



GET READY for the Lesson

How does risk affect insurance?

Marlon Fuentes is healthy and his family has no history of disease. However, he drives a race car for a living.



Life Insurance Policies Whole life insurance, also known as permanent insurance, offers financial protection for your entire life. You pay a specific premium for the entire duration of the policy. When you die, the insurance company pays your beneficiary a declared sum. The amount of the premium depends on your age, the condition of your health and your smoking habits at the time when you purchase the policy. Some insurance companies require a physical examination by a physician to see if you qualify for a policy.

A whole life insurance policy provides your beneficiary financial coverage, and it can also be used as an investment. In addition to the face value that your beneficiary will receive, whole life insurance has a cash value and *loan value*. The cash value is the amount of money you will receive if you cancel your policy. Think of whole life insurance as both a death benefit and a savings account. You can borrow money on the policy and then pay interest on the loan. The insurance company will lend you the same amount as the cash value, if you request it.

Insurance companies offer many different types of whole life insurance policies. Two common ones are a limited payment policy and universal life insurance. A limited payment policy offers lifetime protection. You pay premiums only for a limited number of years or until you reach a certain age, such as a "paid up at age 65" policy. Universal life insurance is a combination of a life insurance policy and a savings plan. The policy covers you for your entire life. Part of your premium goes into an investment account that grows and earns interest. You are able to borrow or withdraw your cash value. Annual premiums are calculated using the following formula:

Annual Premium = Number of Units Purchased × Premium per \$1,000

Need Help/ Coton

- Skill 11: Dividing Decimals, p. SK12
- Skill 8: Multiplying Decimals, p. SK9
- Application C: Tables and Charts, p. AP3

EXAMPLE 1

Phyllis Saul is 25 years old. She wants to purchase a whole life policy with a face value of \$125,000. What is her annual premium?

Step 1: Find the number of units purchased.

$$\frac{125,000}{1,000}$$
 = 125 units purchased



Did You Know?...

Women and Life
Insurance A historic law
passed by New York in
1840 gave women equal
protection to men
concerning life-insurance
policies. Before then, no
U.S. woman could have
her own policy, and in
the case of a husband's
death his creditors were
entitled to funds before
his wife and children.



Lesson Practice

For Problems 5–14, determine (a) number of units, (b) annual premium per \$1,000, and (c) annual premium. Use Figure 11.2 on page 425.

	Insured	Age	Coverage	Number of Units	Annual Premium per \$1,000	Annual Premium
5.	Lianna Torrez	20	\$ 60,000	a.	b.	c.
6.	John O'Neill	45	\$ 85,000	'a. 333	b	c
7.	Kate Owens	35	\$ 95,000	a.	b.	C.
8.	Debra Green	50	\$200,000	a	b. *	Ç. 🕸

For Problems 9 and 10, determine the annual premium.

- **9.** Joni Hauck wants to purchase a \$65,000, 5-year term life insurance policy. She is 25 years old.
- 10. Paul Barojas wants to purchase a \$105,000, 5-year term life insurance policy. He is 25 years old.

For Problems 11 and 12, determine the percent increase in the premium.

- 11. Phil Davis purchased a \$75,000, 5-year term life insurance policy when he was 40. Now he is 45.
- **12.** Marica Deerfoot purchased a \$120,000, 5-year term life insurance policy when she was 55. Now she is 60.
-13. Peter and Edith Lichtner have a child. Peter is a 30-year old career counselor, and Edith is a 25-year old child psychologist. Both want to purchase \$80,000, 5-year term life insurance policies. What is Edith's annual premium? What is Peter's annual premium?
 - 14. CHALLENGE PROBLEM Sam and Kolleen Hastings have two children. Sam was 30 years old when he first purchased a \$125,000, 5-year term life insurance policy. He is now 35 years old and decides to increase the policy to \$200,000.
 - (a) What is his new annual premium?
 - (b) What is his new monthly premium?
 - (c) What total amount did he pay during the previous 5-year term?
 - (d) What total amount will he pay for the next 5-year term?

Spiral Review

Multiply or Divide. Round answers to the nearest thousandth. (Skill 8)

15. 76.26 ÷ 0.14 **16.**

16. $1.025 \div 0.05$

17. 34.362×100

18. 0.95×0.16

19. ALGEBRA Your current job pays a monthly gross salary of \$1,860. You are offered a new position that pays \$9.60 per hour with time and a half for all hours over 40 per week. How many hours of overtime per week would you need to work to earn the same amount per week as in your current job? (Lesson 1.5)

GET READY for the Next Lesson

PREREQUISITE SKILL Multiplying Decimals (Skill 8)

Multiply. Round answers to the nearest hundredth.

20. 1.43×0.57

21. 0.072 × 6.42

22. 5.31×0.213

23. 21.93×0.72

24. 3.045×0.04

25. 6.751 × 1.51

Age	nsurance: 5-Yo	Female
18–30	\$ 3.21	\$ 2.77
35	\$ 3.51	\$ 2.98
40	\$ 4.25	\$ 3.47
45	\$ 5.42	\$ 4.60
50	\$ 7.59	\$ 6.27
55	\$11.45	\$ 8.58
60	\$17.19	\$12.62

Reading Math+-+=

Charts

When you look at a chart, think about the story it tells. Figure 11.2 gives three factors to consider when determining a premium: age, gender, and the amount of life insurance purchased.

Concept CHECK

Use Figure 11.2 to complete the problems. Check your answers in the back of the book.

Find the annual premium for a 5-year term policy.

- 1. An eighteen-year-old female purchases a \$50,000, 5-year term policy. What is the annual premium?
- 2. A forty-five-year-old male purchases a \$60,000, 5-year term policy. What is the annual premium?

EXAMPLE 2

Maria Rita Gomez purchased an \$80,000, 5-year term policy at age 30. She will be 35 years old this year. What will the annual premium be at age 35? What was the annual premium at age 30? How much is the increase? What is the percent increase?

Step 1: Find the number of units purchased.

 $\frac{80,000}{1,000}$ = 80 units purchased

Step 2: Find premium at age 35.

 $80 \times 2.98 = 238.40 annual premium at 35

Step 3: Find premium at age 30.

 $80 \times 2.77 = 221.60 annual premium at 30

Step 4: Find the increase.

238.40 - \$221.60 = \$16.80 increase

Step 5: Find the percent increase.

 $\frac{\text{Increase}}{\text{Original Amount}} = \frac{16.80}{221.60} = 0.075812 = 7.6\% \text{ increase}$

Concept CHECK

Use Figure 11.2 to find the percent increase in premiums. Check your answer in the back of the book.

- **3.** At age 40, Julie Johnson purchases a \$60,000, 5-year term policy. She is now 45 years old.
- **4.** Harold McDonough at age 55 purchases a \$100,000, 5-year term policy. He is now 60 years old.



Neolithic Dentistry Scientists using an electron microscope to study 9,000-year-old teeth from a graveyard in present-day Pakistan found evidence of dental work. The research indicates that a drill made of flint heads was "surprisingly effective" at removing rotting dental tissue, and that the technique was used for about 1,500 years.

For Problems 11 and 12, find the (a) deductible, (b) co-payment amount, (c) hospital charges, and (d) total paid by the insured. (Use Figure 11.1 on page 421.)

- 11. Sofia Carbondale has a network single plan. After meeting her annual deductible, she had these co-payments: 18 physician visits, 15 specialist visits, and 15 physical therapy visits at \$90 each. Sofia also had 1 emergency room visit and a hospital charge of \$24,560.
- Did You Know?12. After meeting the family's deductible, Jacobi Duarte had the following family, non-network medical bills: 22 physician visits, 12 specialist visits, 25 physical therapy appointments at \$95 each, 8 generic local drug prescriptions, and 4 mail-in prescriptions for 3 generic drugs and 1 brand-name drug. Hospital charges totaled \$55,600 plus an emergency room visit.
 - 13. Tom Buell is single and has a health insurance plan with the benefits shown in Figure 11.1 on page 421. After meeting his annual deductible, his recent network health care costs include co-payments for 4 physician visits and 5 specialist visits. He made co-payments for 4 non-network physical therapy visits at \$125 each. He had 3 co-payments at his local pharmacy, for one generic and 2 brand-name drugs. His hospital admission charge was \$150 and his hospital bill was \$18,750. What amount did he pay?
 - 14. Emily Ward is married and has a non-network family health insurance plan with the benefits shown in Figure 11.1 on page 421. Her recent non-network health care costs include 5 physician visits and 2 specialist visits. She made co-payments for 6 physical therapy visits at \$110 each. Emily had one ambulance trip to the emergency room and a subsequent hospital bill of \$14,680. Emily has no deductible. What amount did she pay?
 - 15. CHALLENGE PROBLEM Wanda Orsini broke her leg playing basketball. She has the family network insurance plan with the benefits shown in Figure 11.1 on page 421. After meeting her annual deductible, her health care costs include co-payments for 9 physician visits, 12 orthopedic bone specialist visits, and hospital costs of \$52,940. She had 40 physical therapy visits at \$60 each. Wanda's hospital admission charge was \$200. There was an ER charge and an ambulance charge. She also had 8 generic local drug prescriptions and 4 mail-in prescriptions for 2 generic drugs and 2 brand-name drugs. Find her total charges.

1.O.T. Problems

Reading Math 4-4=

Read With Pen and Paper

When a word problem contains a lot of information, such as problem 15, read it several times. Make a list of the key information you need to solve.

Spiral Review

Subtract. (Skill 4)

16. 978 – 865

17. 77,521 – 66,842 **18.** 997,341 – 942,876

19. ALGEBRA Rob Glover's group medical coverage costs \$178.45 per month. His employer pays 65% of the cost. How much is the annual premium for Rob's health insurance? (Lesson 2.5)

GET READY for the Next Lesson

PREREQUISITE SKILL Dividing Decimals (Skill 11)

Divide. Round answers to the nearest thousandth.

20. $72.84 \div 2.41$

21. 23.97 ÷ 5.942

22. $42.158 \div 7.66$

23. $186.4 \div 55.726$

24. 646.9 ÷ 19.547

25. 238.007 ÷ 84.593

LESSON 11.3

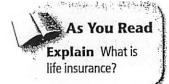
Term Life Insurance

Lesson Objective

Utilize tables to compute the annual premium for term life insurance.

Content Vocabulary

- · life insurance
- · term life insurance
- beneficiary



GET READY for the Lesson

Why should young adults have life insurance?

Dylan Hughes once thought he had no need for life insurance. But when his first child was born, Dylan worried about how his family would get by if something were to happen to him.



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Term Life Insurance When the main source of income of a family dies, what happens financially? For a family with children, it is the **classic** case of financial setback. **Life insurance**, however, can soften the financial blow. This is financial protection for the family in case the main source of income dies.

Term life insurance is the least expensive form of life insurance that you can purchase. You buy term life insurance for a specified term, such as five years, or to a specified age. Unless you renew your policy at the end of each term, the insurance coverage ends.

The annual premium depends on your age at the time you buy the policy and the number of *units*. One unit of insurance has a face value of \$1,000. The annual premium for term life insurance usually increases with each new term.

The annual premium is computed using the following formula: Annual Premium = Number of Units Purchased \times Premium per \$1,000

The person whose name is on the policy chooses a beneficiary. The beneficiary will receive the *face value* of the policy. The face value is the amount of insurance coverage that you buy.

Figure 11.2 shows the premiums per \$1,000 for a 5-year term policy. The rates are lower for females because statistically they have a longer life expectancy.

Need Help? Go to

- Skill 11: Dividing Decimals, p. SK12
- ➤ Skill 8: Multiplying Decimals, p. SK9
- Application C: Tables and Charts, p. AP3

EXAMPLE 1

Kenny Calloway is 30 years old. He wants to purchase a \$50,000, 5-year term life insurance policy. What is his annual premium?

- Step 1: Find the number of units purchased.
 - $\frac{50,000}{1.000}$ = 50 units purchased
- Step 2: Find the premium per \$1,000.

Refer to Figure 11.2. Read the table.

Male, age 30 = \$3.21

Step 3: Find the annual premium.

Number of Units Purchased \times Premium per \$1,000

 $50 \times \$3.21 = \160.50 annual premium

SPREADSHEET APPLICATION

Health Insurance Benefits

You can use a spreadsheet like the partial one below to determine your total health care charges. You will enter the number of visits or cost for network or non-network care, and the spreadsheet will calculate the total cost.



Math Online Go to glencoe.com to download the spreadsheet application.

	Α:	В	- c	· D	E	F	G	H
1		Heal	th Care Benefi	its Schedul	e	krimel wednest		
2		1 8/2	Network	No. of visits cost	Subtotal	Non-Network*	No. of visits cost	Subtotal
3	Annual Deductible	Single	\$1,000	1426	0.00	\$1,500		\$0

Think and Discuss

1. Determine a family's network plan costs. The family had the following co-payments: 24 physician visits, 8 specialist visits, 25 physical therapy appointments at \$90 each, and 2 emergency room visits. There were also these pharmacy charges: 7 local generic drugs, 2 local brand-name drugs, 5 mail-order generic drugs, and 1 mail-order brand-name drug. There is also a hospital charge of \$19,260. Hint: In cell E13 enter: =25*90

2. How much would they have saved if they had purchased all generic instead of brand-name

3. Determine the Weston family's non-network costs. They had the following co-payments: 5 physician visits, 2 specialist visits, 10 physical therapy appointments at \$75 each, and 1 emergency room visit. They also had the following pharmacy charges: 2 local generic, 2 local brand name drugs, 3 mail order generic, and 1 mail order brand name. There is also a hospital charge of \$8,113. Hint: In the physical therapy cell, enter: =10*75

4. How much would the Weston family have saved if they had used the network plan?

Lesson Practice

For Problems 3–10, find the (a) co-payments, (b) co-insurance, and (c) total paid by insured.

	Deductible Amount	Number of Co-payments at \$10.00 Each	Amount of the Co-payments	Amount Subject to Co-insurance	Insured Co-insurance Rate	Amount of Co-insurance	Total Paid by Insured
3.	\$3,000	25	a.	\$12,000	20%	b.	c.
4.	\$2,000	40	a	\$34,600	30%	b.	c.
5.	\$3,500	52	a. **	\$16,980	15%	b.	C.
6.	\$6,000	32	a	\$66,540	10%	b.	с.
7.	\$5,000	30	a.	\$45,000	15%	b.	c.
8.	\$2,500	50	a	\$25,000	25%	b.	c.
9.	\$4,000	35	a.	\$37,500	20%	b.	c.
10.	\$4,500	25	a.	\$22,500	30%	b.	c.

Step 1: Find the deductible.

The deductible is \$1,000.

Step 2: Find the cost of the co-payments.

Physician + Specialist + Physical Therapy + Pharmacy $(20 \times 8) + (30 \times 9) + (85 \times 20\% \times 12) + [(3 \times 10) + 20] =$

160 + 270 + 204 + 50 = \$684

Step 3: Find the hospital co-insurance charges. (Note: The patient pays 10% of the hospital charge and 100% of the admission charge.)

 $(34,560 \times 10\%) + 200 = \$3,456 + 200 = \$3,656$

Step 4: Find the total amount paid by patient.

Deductible + Co-payments + Co-insurance Amount + Hospital Charges 1,000 + 684 + 3,656 = \$5,340 total paid

Figure 11.1

Health Care Benefits Schedule								
		Network	Non-Network*					
Annual Deductible	Single	\$1,000	\$1,500					
The Handard	Family	\$3,000	\$4,500					
Hospital Charges	10014/2-75-75	10% **	30%**					
Co-insurance/	Physician visit	\$ 20	\$ 30					
Co-payments	Specialist visit	\$ 30	\$ 40					
:	Physical Therapy	20% **	30%**					
Retail Pharmacy	Generic	\$ 10	42770000					
T 15 1 matter	Brand-Name	\$ 20						
Mail-Order Pharmacy	Generic	\$ 25						
(90 day supply)	Brand-Name	\$ 50	and the second					
r - rresp byds	Emergency Room-ER	\$ 100	\$ 100					
	Ambulance	\$ 100	\$ 100					

^{*}Non-Network refers to a health care provider who does not have a contract with the health plan administrator.

Concept CHECK

Using Figure 11.1, complete the problems. Check your answers in the back of the book.

- 1. Determine your network plan costs with the following co-payments: 7 physician visits, 2 specialist visits, 12 physical therapy appointments at \$90 each. You also have the following pharmacy charges: 2 local generic drugs, 1 local brand-name drug, 3 mail-order generic drugs and 1 mail-order brand-name drug. You have no hospital charges and no deductible.
- 2. Determine a family's network plan costs with the following co-payments: 22 physician visits, 12 specialist visits, 15 physical therapy appointments at \$80 each, and 1 emergency room visit plus ambulance fee. The family also had the following pharmacy charges: 9 local generic drugs, 4 local brand-name drugs, 6 mail-order generic drugs, and 2 mail-order brand-name drugs. There was also a hospital charge of \$9,260. The family already met its annual deductible.

^{**}Percent of total cost that you must pay.

Study Tip

Read Twice

The first time you read through a lesson, look for the main ideas. Look for details on the second time through.

- 11. Kelli Lenz has a family plan. Her HMO premium is \$16,850. Her employer pays 65% of the cost. (a) How much does Kelli pay annually? (b) How much is deducted from her semimonthly paycheck?
- 12. Luisa Hernandez has a family membership in her company's traditional group medical insurance program. The total cost is \$12,988 annually and the employer pays 75% of the total cost. She also pays the optional annual dental premium of \$980 and the optional vision premium of \$324. Her contribution is deducted biweekly from her paycheck. (a) How much is her total annual contribution? (b) How much is her biweekly deduction?
- 13. Boris Heban is single and pays into an HMO. The total cost is \$8,190 annually, and the employer pays 90% of the total cost. Boris also pays 50% of the optional annual dental premium of \$662 and 50% of the optional annual vision premium of \$288. How much is deducted each week from his paycheck?
- 14. Rachel and Dustin Lutts are self-employed photographers. They pay 100% of the PPO insurance premium of \$12,640 annually. They also have a dental plan that costs \$866 annually and a vision plan that costs \$444 annually. The premiums are paid quarterly. How much do they pay each quarter?
- 15. CHALLENGE PROBLEM Placido Lucero is retired and covered by Medicare Parts A & B. His retirement plan covers 75% of his Medicare HMO annual premium of \$4,200. His retirement plan also covers 50% of his wife's Medicare HMO annual premium of \$4,200. Also, Placido has a dependent grandchild whose HMO annual premium of \$3,600 is 40% covered by his retirement plan. What is the monthly amount deducted from Placido's retirement check for health care?



Spiral Review

Find the percent. (Skill 30)

- **16.** What percent of \$60 is \$3?
- 17. What percent of \$150 is \$60?
- **18.** What percent of \$475 is \$95?
- **19.** What percent of \$210.00 is \$73.50?
- 20. ALGEBRA The Westmarks expected the automatic withdrawal of their natural gas bill to be more than last month's bill of \$154.65 but did not know by how much. Their account showed a previous balance of \$445.28, cleared checks totaling \$316.79, an automatic deposit of \$300, and interest earned of \$2.56. If the Westmarks' new balance was \$228.58, by how much did this month's natural gas bill exceed last month's bill? (Lesson 4.4)

GET READY for the Next Lesson

PREREQUISITE SKILL Subtracting Whole Numbers (Skill 4)

Subtract.

21.642 - 195

22. 2,692 – 867

23. 33,579 – 19,668

24. 213,535 – 187,950

25. 678,876 – 39,691

26. 967,852 – 753,918

11.2

Health Insurance Benefits

Lesson Objective

Calculate the amount the patient pays for health care.

Content Vocabulary

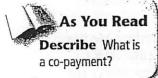
- deductible
- co-insurance
- co-payment

GET READY for the Lesson

How might exercising regularly lower medical costs?

Jason Olsen's employer encourages employees to exercise by offering a 50% discount off membership to a local gym. For the employer, this expense saves money over time because healthy employees are less likely to have expensive hospital visits.





Health Insurance Benefits Just because you have health insurance does not mean all medical procedures are covered. In fact, the insurance plan and the state you live in determine the services provided. For example, you might have difficulty securing health insurance to cover weight loss and pre-existing conditions such as congenital heart disease.

Many health insurance policies have an **annual** deductible, which is the amount of money you must pay each year before your insurance company starts paying. Some health care services also have a co-payment clause or a co-insurance clause. This requires you to pay either a set amount or a certain percent of medical expenses, including prescription drugs.

For example, you might have a \$10 co-payment for visiting the doctor regardless of the type of service provided. A 20% co-insurance clause means your insurance company pays 80% of the cost and you pay 20% of the cost. The following formula is used to calculate the amount the patient pays:

Amount Paid by Patient = Deductible + Co-payments + Co-insurance + Hospital Charges

Need Help? Go to...

- Skill 4: Subtracting Whole Numbers, p. SK5
- Skill 30: Finding the Percentage, p. SK31

EXAMPLE

Brooke Kolodie is single and has a health insurance plan with the benefits shown in Figure 11.1. After meeting her \$1,000 deductible, her recent network health care costs include co-payments for 8 physician visits and 9 specialist visits. Following hospital surgery, she made co-payments for 12 physical therapy visits at \$85 each and she had 4 co-payments at her local pharmacy, for 3 generic drugs and 1 brand-name drug. Her hospital admission charge was \$200 and her hospital bill was \$34,560. What amount did she pay?

Need Help? Co to He

Workshop 7: Dividing Decimals, p. 16

Skill 30: Finding the Percentage, p. SK31

Application K:
 Chronological
 Expressions, p. AP7

Step 1: Find the employee's percent.

100% - 80% = 20% employee's percent

Step 2: Find the employee's annual contribution.

Total Premium × Employee's Percent

 $11,880.00 \times 20\% = 2,376.00$ employee's annual contribution

Step 3: Find the employee's monthly deduction.

Employee's Contribution

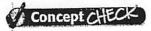
12

 $\frac{\$2,376.00}{12} = \$198.00 \text{ employee's monthly deduction}$



100 = 80 = 20

11880 🗶 20 % 2376 🖶 12 🚍 198



Complete the problems. Find the (a) employee's total annual contribution and (b) employee's monthly deduction. Check your answers in the back of the book.

- 1. Dorsey Williams has a single plan. His PPO annual premium is \$4,325. His employer pays 65%.
- 2. Rubina Shaw has a family plan. Her HMO annual premium is \$11,473. Her employer pays 73%.



Clinical Laboratory Technologist

Technologists play a crucial role in fighting diseases. They perform complex tests to detect microorganisms, test chemical reactions, and match blood samples for transfusions. As a class, brainstorm careers in the medical field.



For more information, go to glencoe.com.



Lesson Practice

For Problems 3–7, find the (a) employee's percent, (b) employee's contribution, and (c) monthly premium.

	-Insurance Plan	Annual [:]	Employer's Percent	Employee's Percent	Employee's Contribution	Monthly Premium
3.	Single PPO	\$ 4,980	60%	a.	b.	c.
4.	Single HMO	\$ 4,368	80%	a.	b. .	c.
5.	Family Trad.	\$10,666	75%	a.	b.	c.
6.	Family HMO	\$12,540	85%	a.	b.	C.
7.	Family PPO	\$14,600	75%	a.	b.	С.

- 8. Sing-Chi Chow has a single plan. The PPO annual premium is \$12,436. The employer pays 85% of the cost. (a) How much does Sing-Chi pay annually? (b) How much is deducted from his weekly paycheck?
- 9. Lance Alpern has a single plan. The HMO annual premium is \$9,255. His employer pays 70% of the cost. (a) How much does Lance pay annually? (b) How much is deducted from his weekly paycheck?
- 10. Darrell Morris has a family plan. The HMO annual premium is \$12,240. The employer pays 90% of the cost. (a) How much is Darrell's annual contribution? (b) How much is his semimonthly deduction?

LESSON 11.1

Health Insurance Premiums

Lesson Objective

Compute health insurance premiums.

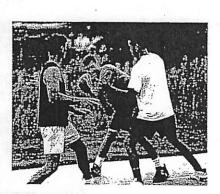
Content Vocabulary

- health insurance
- traditional plan
- preferred provider organization (PPO)
- health maintenance organization (HMO)



Do young, healthy people really need health insurance?

André Batista regularly plays basketball with his friends. Last week, he hurt his ankle and had to go to the hospital. André wondered how much the treatment would cost.



As You Read
Identify What is
the purpose of health
insurance?

Determining Health Insurance Premiums An accident or illness could take away your income, deplete your savings, and leave you in debt. Just as important as vehicle insurance is health insurance. It protects *you* against overwhelming medical expenses.

Many types of health care coverage plans exist. We will focus on just three group health insurance plans: a traditional plan, a preferred provider organization (PPO), and a health maintenance organization (HMO).

A traditional plan offers health care coverage where the health care provider is paid a predetermined dollar amount for the service given. You may use any health care provider.

A PPO is a group of selected health care providers who offer **comprehensive** services at preset reimbursement levels. You are required to use these "network" providers (that is, a selected group of doctors) unless you are willing to pay additional costs to non-network providers.

An HMO is a prepaid health plan in which care providers contract with (or are) employees of the HMO. You may select a "primary care" physician and agree to receive all non-specialist and non-emergency services from that physician. The physician may refer you to a specialist (an obstetrician, a psychiatrist, or a cardiologist, for example).

Often the employer pays 75% to 80% of the premiums and the employee pays the remaining 20% to 25% in the form of a payroll deduction. The health insurance premium you pay is determined by the following formulas:

Employee's Percent = 100% – Employer's Percent Employee's Contribution = Total Premium × Employee's Percent

EXAMPLE

Sean Derricotte has a family membership in a group medical insurance program. The annual premium is \$11,880. Sean's employer pays 80% of the total cost. His contribution is deducted monthly from his paycheck. What is Sean's annual contribution? What is his monthly deduction?

Step 1: Find the annual base premium.

Liability + Collision + Comprehensive Premium + Premium

\$344 + \$300 + \$113 = \$757 annual basic premium

Step 2: Find the annual premium.

Base Premium × Driver-Rating Factor

\$757.00

2.20

= \$1,665.40 annual premium

344 **3**00 **1**13 **7**57 **2**.2 **1**665.40

THE PROPERTY OF THE PARTY OF TH

Concept CHECK

Use Figure 9.3 on page 351 to find the (a) annual base premium and (b) annual premium. Check your answers in the back of the book.

1. Fran Nader's insurance covers bodily injury 25/100 and \$100,000 property damage. It has a \$50-deductible comprehensive and a \$50deductible collision. Her car is in age group C and insurance-rating group 10 (or C, 10), and her driver-rating factor is 1.50.

Reading Math*=

Words for Time Periods

Remember that annual means "once yearly."

Lesson Practice

For Problems 2-10, determine the (a) annual base premium and (b) the annual premium. Use Figure 9.3 on page 351 for insurance premiums. All policies have a \$50 deductible for both comprehensive and collision.

- 2. Pierce Keenan has a 1.30 driver-rating factor and his car is in age group A and insurance-rating group 14. The coverage he wants is 50/100 bodily injury and \$25,000 for property damage.
- 3. Danielle Cecil's driver-rating factor is 1.60 and her car is in age group D and insurance-rating group 12. She wants 100/300 bodily injury and \$50,000 property damage coverage.
- 4. Marcy Kirkpatrick uses her vehicle primarily for pleasure. She has 100/200 bodily injury and \$25,000 property damage coverage. Because of her excellent driving record, her driver-rating factor is 1.00. Her vehicle is classified as D, 14.
- 5. Jill Wilson uses her vehicle primarily for pleasure. She has 100/300 bodily injury, and \$50,000 property damage coverage. Because of her excellent driving record, her driver-rating factor is 1.00. Her vehicle is classified as A, 14.
- 6. Samuel Haskins uses his minivan primarily for his delivery business. He has 100/300 bodily injury, and \$100,000 property damage coverage. Because of his business use, his driver-rating factor is 3.55. His vehicle is classified A, 15.
- 7. Ruby Mason uses her sports car mainly for pleasure. She has 100/200 bodily injury, and \$100,000 property damage coverage. Her driverrating factor is 2.65 and her sports car is classified as B, 15.



Did You Know?

Favorite Vehicle Colors
According to a recent
survey, silver was
the most popular
automobile color in
North America for
five years in a row,
covering 26%
of yehicles.

H.O.T. Problems

- -8. Deon Hanson uses his silver minivan primarily for business. He has 300/300 bodily injury and \$100,000 property damage coverage. Because of his business use, his driver-rating factor is 3.35. His vehicle is classified B, 15.
- Magdalena Castillo uses her SUV mainly for pleasure. She has 100/300 bodily injury and \$50,000 property damage coverage. Her driver-rating factor is 2.15, and her SUV is classified as C, 15.
- 10. Carl Adams uses his minivan to deliver office supplies. He has 100/200 bodily injury and \$50,000 property damage coverage. Because of the business use of his van, his driver-rating factor is 3.10. His van is classified as D, 14.
- 11. CHALLENGE PROBLEM Ned Bishop delivers firewood to retail outlets in his truck. His driver-rating factor is 3.15. His insurance coverage includes 25/100 bodily injury and \$25,000 property damage. He has \$50-deductible comprehensive and \$50-deductible collision. His truck is in age group D and insurance-rating group 10. Calculate his annual (a) base premium and (b) premium and then (c) his annual premium if he gets a 20% discount by increasing his deductible to \$200.
- 12. CHALLENGE PROBLEM Pamela Kruse drives to and from work in her red sports car. Her driver-rating factor is 4.85. Her insurance coverage includes 100/200 bodily injury and \$100,000 property damage. She has \$50-deductible comprehensive and \$50-deductible collision coverage. Her car is in age group A and insurance-rating group 13. How much more will her annual premium be if she increases the liability coverage to 300/300/100?

Spiral Review

Multiply. (Skill 8)

13. 1.25×79.90

14. 2.40×360

15. 3.90×67.70

- 16. Ona Scully's charge account statement showed a previous balance of \$523.94, a finance charge of \$8.96, new purchases of \$154.21, \$34.28, and \$75.21, a credit of \$45.16, and a \$250.00 payment. What is her new balance? (Lesson 7.1)
- 17. ALGEBRA Matthew Epstein sells appliances. He receives weekly pay on a straight commission of 5% on sales up to \$5,000 and 6% on sales over \$5,000. One week Matthew had a gross pay of \$652. What was his sales total for that week? (Lesson 1.7)

GET READY for the Next Lesson

PREREQUISITE SKILL Dividing (Decimal Remainder) (Skill 10)

Divide. Round answers to the nearest hundredth.

18. $751 \div 305$

19. $846 \div 120$

20. 688 ÷ 321

21. 5,489 ÷ 294

22. $776 \div 492$

23. 963 ÷ 3,500

The annual premium is the amount you pay each year for insurance coverage. These factors determine your annual premium:

- 1. The cost of the annual base premium, which depends on the amount and type of coverage you carry.
- 2. The *driver-rating factor*, which depends on your age, marital status, number of miles you drive each week, whether you drive a long distance to work, and if you use your vehicle for pleasure or business.

If several people drive your vehicle, the insurance company uses the highest driver-rating factor among them to determine the annual premium. Insurance companies use tables to determine your basic premium. You use these two formulas to determine the annual premium:

Comprehensive Collision Liability Annual Base Premium = Premium + Premium Premium

Annual Premium = Annual Base Premium \times Driver-Rating Factor

EXAMPLE

Della Welch is the principal operator of her vehicle. Her driver-rating factor is 2.20. Her insurance includes 50/100 bodily injury and \$50,000 property damage. Her vehicle is in age group A and insurance-rating group 13 (or A, 13). She has \$50-deductible comprehensive and \$50-deductible collision insurance. What is her annual base premium? What is her annual premium? Use Figure 9.3 to find insurance rates.

Figure 9.3

			Sharp to be of	and the same of		April now	
		Annua	l Liability	Premium			
Property Damage Limits	Bodily Injury Limits						
	25/50	25/100	50/100	100/	200	100/300	300/300
\$ 25,000	\$299	\$319	\$309	\$3	\$365		\$416
50,000	307	7 326 344		} =	374	383	425
100,000	464	(338)	357	Sant Sant	386	394	437
	Col	lision and	Compreh	ensive P	remium		
Coverage	Age	Insurance Rating Group					
	Group	10	11	12	13	14	15
Collision \$50 Deductible	А	\$236	\$257	\$279	\$300	\$322	\$343
	В	224	243	264	284	305	325
	>C	213	233	253	272	291	.310
	D	203	222	240	259	277	296
Comprehensive \$50 Deductible	Α	\$80	\$86	\$99	\$113	\$127	-\$142
	В	68	82	94	107	121	134
	C	65	77	90	102	115	129
	D	62	73	86	97	110	122

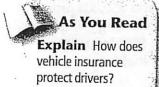
Vehicle Insurance

Lesson Objective

Use tables to compute the annual premium for vehicle insurance.

Content Vocabulary

- · liability insurance
- collision insurance
- comprehensive insurance
- deductible clause
- · annual premium



GET READY for the Lesson

Why does a car owner need insurance?

Judy Watson's car hit another car. She was glad she had good insurance when she found out how much the repairs would cost.



Buying Vehicle Insurance If your vehicle is involved in an accident, it can cause bodily **injury** to the people involved, property damage to other vehicles or property, such as light poles, and collision damage to your vehicle. Vehicle owners carry insurance to cover the costs associated with an accident.

Liability insurance coverage provides financial protection to the policyholder against claims for bodily injury and property damage as a result of an accident. The combined coverage is often listed as 100/300/50. The 100/300 refers to the bodily injury coverage and means:

The insurance company will pay up to \$100,000 to any one >100/300 up to \$300,000 if more person injured.

The 50 refers to a property damage limit of \$50,000.

In addition to liability insurance, you also will need to consider carrying two other types of insurance on your vehicle. Collision insurance pays for damage to the insured vehicle caused by a collision with another motor vehicle or an object such as a telephone pole. Comprehensive insurance pays for damage to the insured vehicle from losses due to fire, vandalism, theft, and just about any cause other than a collision.

Both collision and comprehensive insurance may have a deductible clause. This is a clause in an insurance policy that requires the insured to pay a certain amount to cover repairs before the insurance company pays. For example, if your insurance policy states that you have a \$500-deductible clause, this means that you pay the first \$500 of the repair bill. If your total repair bill is \$4,400, you have to pay \$500 and the insurance company pays the remaining amount (\$3,900 in this example).

The annual *base premium* determines the cost of your vehicle insurance. It involves three factors:

- the amount of insurance you carry,
- how old your vehicle is, and
- the insurance-rating group depending on the size and value of your vehicle.