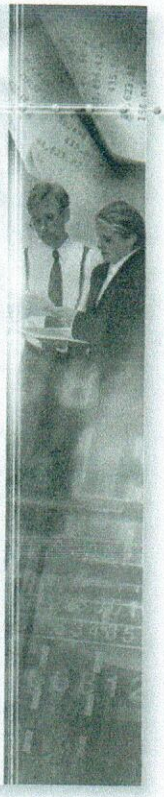
CHAPTER 9

Study Guide a Assessment

337-341

Living in the Real World

A Hard One to Pick



Analyze the Story Gomez's new truck will depreciate in value most rapidly since it's new. You can estimate how your vehicle will depreciate by looking at the value of older vehicles of the same model.

Maintenance and repair costs tend to increase as a vehicle ages. You can estimate these costs by talking with mechanics and with people who own the same model. Consumer and automobile magazines sometimes have articles comparing these costs for various models.

1. **Calculating.** Imagine Gomez loses 18 percent of the truck's purchase price (less tax) the first year, 15 percent of its purchase price (less tax) the second year, and 12 percent the third year.
   - What is the total percent?
   - How much will the truck be worth in 3 years?
   - What is the average depreciation a month?
2. **Determining.** Gomez plans to drive it 12,000 miles per year. Gasoline costs $1.295 per gallon. Her new truck gets 20 miles per gallon. What is the cost of her gasoline per month?

After YOU READ

REVIEW OF KEY WORDS

sticker price (p. 314)
base price (p. 314)
options (p. 314)
destination charge (p. 314)
dealer's cost (p. 317)
used-vehicle guides (p. 320)
liability insurance (p. 323)
comprehensive insurance (p. 323)
collision insurance (p. 323)
deductible clause (p. 323)
variable costs (p. 327)
fixed costs (p. 327)
depreciation (p. 327)
lease (p. 330)
rent (p. 333)

Use one of the key words above in each of the sentences.

1. A decrease in the value of your car because of its age or condition is called _____.
2. If you do not own an automobile but need to use one on occasion, you can _____ one from a rental agency.
3. The _____ in your insurance policy states that you must pay a portion of any repair bill.
4. The _____ is the cost of shipping the vehicle from the factory to the dealership.
6. The _____ is often reported as a percent of the sticker price.
7. The _____ give the average prices for vehicles that were purchased from dealers during the previous month.
8. _____ on your vehicle protects you from losses caused by fire, vandalism, and theft.
9. Gasoline and tires are examples of _____.
10. Insurance, registration fees, and depreciation are examples of _____.

Skills and Concepts

SECTION OBJECTIVE 9-1 AND EXAMPLES

Compute the sticker price of a new vehicle.

Timothy Darling wants to buy a new car. He has been pricing a new car that has a base price of $18,705.00. He is interested in several options that total $4,326.54. The destination charge is $654.00. Find the sticker price.

STEP: Find the sticker price.

Base Price	+	Options	+	Destination Charge	=	
$18,705.00	+	$4,326.54	+	$654.00	=	$23,685.54 sticker price

REVIEW EXERCISES

Find the sticker price.

	Base Price	Options	Destination Charge	Sticker Price
11.	$11,500	$1,750	$450	
12.	12,430	2,390	340	
13.	15,400	3,244	458	
14.	21,000	4,459	654	

SECTION OBJECTIVE 9-2 AND EXAMPLES

Calculate the dealer's cost of a new vehicle.

Hal O'Brien wants to purchase a new sports car. The car has a base price of $25,000, options totaling $2,190, and a destination charge of $643. He read in a consumer magazine that the dealer's cost for the car was about 91 percent of the base price and 87.5 percent of the options price. What should he estimate as the dealer's cost?

STEP 1: Find the percent of the base price. $25,000.00 × 91.0% = **$22,750.00 base price**

STEP 2: Find the percent of the options price. $2,190.00 × 87.5% = **$1,916.25 options price**

STEP 3: Find the dealer's cost.

Percent of Base Price	+	Percent of Options Price	+	Destination Charge	=	
$22,750.00	+	$1,916.25	+	$643.00	=	$25,309.25 dealer's cost

REVIEW EXERCISES

Find the dealer's cost.

	(Base Price	×	Dealer's Percent)	+	(Options Price	×	Dealer's Percent)	+	Destination Charge	=	Dealer's Cost
15.	$13,500	×	90%	+	$3,500	×	85%	+	$450	=	
16.	11,600	×	88%	+	2,300	×	91%	+	362	=	
17.	21,500	×	82%	+	4,500	×	76%	+	782	=	
18.	32,000	×	86%	+	3,400	×	81%	+	654	=	

SECTION OBJECTIVE 9-3 AND EXAMPLES

Figure out the average retail price of a used vehicle.

A used vehicle is advertised for $13,490. It has air-conditioning, power seats, and a power sunroof. These options add an additional $1,020. It has 85,000 miles and the used-vehicle guide recommends $540 be subtracted if the mileage exceeds 30,000. What is the average retail price for this used vehicle?

STEP: Find the average retail price.

Average Retail Value	+	Additional Options	−	Option Deductions	−	Mileage Deduction	
$13,490	+	$1,020	−	$0	−	$540	= **$13,970 average retail price**

REVIEW EXERCISES

19. A four-wheel drive vehicle has an average retail price of $14,500. Add $150 for a tilt steering wheel. Add $700 for air conditioning. Deduct $600 for manual transmission. Deduct $560 for excessive mileage. What is the average retail price?

20. Donald Alsott owns a compact car, which he wants to trade in for a new car. He is interested in knowing the average wholesale price. He uses the Internet and finds out that the average wholesale price is $2,600. He adds $100 for power windows and $50 for a tilt steering wheel. He deducts $600 for no air-conditioning. What is the average wholesale price?

21. A two-year-old convertible has an average retail value of $14,800. Add $300 for a sunroof. Add $150 for a CD player. Deduct $560 for excessive mileage. What is the average retail price?

22. A five-year-old luxury vehicle has an average retail value of $17,800. Add $450 for a tilt steering wheel. Add $400 for a surround-sound speaker system. Deduct $660 for excessive mileage. What is the average retail price?

23. Carol Pelfrey owns a three-year-old sedan. One used-vehicle guide shows that the average retail value of her car is $8,500. She adds $100 for power windows and $125 for power seats. She also adds $450 for low mileage. However, she deducts $150 for a broken trunk lock. What is the average retail price for her car?

SECTION OBJECTIVE 9-4 AND EXAMPLES

Use tables to compute the annual premium for vehicle insurance.

Use Figure 9.3 on page 324 to solve the following problems.

Sheryl Edwards has a driver-rating factor of 2.1. Her insurance includes 100/200 bodily injury and $25,000 property damages. Her vehicle is in age group C and insurance-rating group 12 (C, 12). She has a $50-deductible comprehensive and $50-deductible collision insurance. What is her annual base premium? What is her annual premium?

STEP 1: Find the annual base premium.

Liability Premium + Comprehensive Premium + Collision Premium

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STEP 1: Find the annual base premium.

Liability Premium + Comprehensive Premium + Collision Premium

$241.60 = $570.60 annual

STEP 2: Find the annual premium.

Base Premium	×	Driver-Rating Factor	
$579.60	×	2.10	= $1,217.16 annual premium

REVIEW EXERCISES

Use Figure 9.3 on page 324 to solve these problems.

24. Driver-rating factor is 1.45. Age and rating group is B, 11. Coverage: 50/100 bodily injury. $50,000 property damage. $50-deductible comprehensive. $50-deductible collision. What is the annual base premium? What is the annual premium?

25. Yvette Ramirez uses her car to drive to and from work. Her driver-rating factor is 3.85. Her insurance coverage includes 100/300 bodily injury and $100,000 property damage. Her car is in age group A and insurance-rating group 14. What is her annual base premium? What is her annual premium?

	Driver-Rating Factor	Age, Rating Group	Bodily Injury	Property Damage	Comprehensive (Deductible)	Collision (Deductible)	Annual Base Premium	Annual Premium
26.	3.2	B, 12	50/100	$ 50,000	$50	$50	a.	b.
27.	1.2	D, 14	100/300	100,000	50	50	a.	b.

SECTION OBJECTIVE 9-5 AND EXAMPLES

Compute the total cost per mile of operating and maintaining a vehicle.

Jackson McCormick purchased a used car a year ago. He drove 8,564 miles during the year and kept a record of all his expenses. He figured the annual variable cost to be $1,342.90. His annual fixed costs were $905.44. Find the cost per mile.

STEP: Find the cost per mile.

$$\frac{\text{Annual Variable Cost} + \text{Annual Fixed Cost}}{\text{Number of Miles Driven}}$$

$$\frac{\$1{,}342.90 + \$905.44}{8{,}564} = \frac{\$2{,}248.34}{8{,}564} = \$0.2625 \text{ or } \$0.26 \text{ per mile}$$

REVIEW EXERCISES

28. Two years ago Ernest Dorsey purchased a 1997 vehicle for $8,000.00, and it is worth $6,000.00 today. Last year he drove it 13,569 miles and kept a record of all his expenses. His variable costs included gasoline, $1,589.56; oil changes, $245.98; and repairs, $548.11. His fixed costs were insurance, $1,105.32; and license, $85.00. What is the cost per mile?

	Annual Variable Cost	Annual Fixed Cost	Total Annual Cost	Miles Driven	Cost per Mile
29.	$1,300.00	$3,287.33	a.	9,500	b.
30.	1,549.98	1,200.31	a.	11,500	b.
31.	1,139.45	2,300.88	a.	14,546	b.

Study Guide and Assessment

CHAPTER 9

SECTION OBJECTIVE 9-6 AND EXAMPLES

Calculate the total cost of leasing a vehicle.

Penny Fountain leased a vehicle. She pays $403.50 per month for 48 months. Her deposit was $1,600. She paid a $75 title fee and a $55 license fee. What is her total lease cost?

STEP: Find the total lease cost.

$$\left(\begin{matrix}\text{Number of}\\ \text{Payments}\end{matrix} \times \begin{matrix}\text{Amount of}\\ \text{Payment}\end{matrix}\right) + \text{Deposit} + \begin{matrix}\text{Title}\\ \text{Fee}\end{matrix} + \begin{matrix}\text{License}\\ \text{Fee}\end{matrix}$$

$$(48 \times \$403.50) + \$1{,}600 + \$75 + \$55 = \$21{,}098 \text{ total least cost}$$

REVIEW EXERCISES

Find the total of payments and the total lease cost.

	(Number of Payments	×	Amount of Payment	=	Total of Payments)	+	Deposit	+	Title Fee	+	License Fee	=	Total Lease Cost
32.	(24	×	$189	=	a.	)	+	$ 660	+	$10	+	$35	=	b.
33.	(24	×	208	=	a.	)	+	590	+	15	+	39	=	b.
34.	(30	×	316	=	a.	)	+	1,240	+	35	+	55	=	b.
35.	(36	×	185	=	a.	)	+	1,500	+	65	+	89	=	b.

SECTION OBJECTIVE 9-7 AND EXAMPLES

Figure out the cost per mile of renting a vehicle.

Wheels & Deals had a rental car special last weekend on sedans for $9.99 per day plus $0.33 per mile. If Tonya Strickler rented one for 3 days, drove 865 miles, and paid $62.08 for gas, what was the total cost of renting the sedan? What was the total cost per mile to rent the vehicle?

STEP 1: Find the total cost.

$9.99 × 3 days = $ 29.97
$0.33 × 865 miles = 285.45
Gasoline = 62.08
$377.50 total cost

STEP 2: Find the cost per mile.

$$\frac{\text{Total Cost}}{\text{Number of Miles Driven}}$$

$377.50 ÷ 865 =
$0.44 cost per mile

REVIEW EXERCISES

Find the cost per mile to the nearest cent.

	(Total Daily Cost	+	Total Mileage Cost	+	Gasoline Cost	=	Total Cost)	÷	Miles Driven	=	Cost per Mile
36.	($ 45.95	+	$35.00	+	$32.54	=	a.	÷	365	=	b.
37.	(110.00	+	39.95	+	58.87	=	a.	÷	865	=	b.

Find the cost per mile to the nearest cent (no mileage charge).

	Rental Cost	Gasoline Cost	Total Cost	Miles Driven	Cost per Mile
38.	$ 65.35	$25.49	a.	409	b.