


 LESSON
9.4

Vehicle Insurance

Vocab:

Liability Insurance - covers damages that you cause.

Collision Insurance - cover the cost of repair after your wreck

Comprehensive Insurance - protects you from: fire, theft, loss of use, etc.

Deductible - what you pay before the insurance pays.

Annual Premium - a yearly fee for having coverage.

| | | |
|---------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------------|
| The insurance company will pay up to \$100,000 to any one person injured. | → 100/300 ← | The insurance company pays up to \$300,000 if more than one person is injured. |
|---------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------------|

LESSON 9.4

EXAMPLE

50/100/50

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.

344
+ 300
+ 113

757 base

| Annual 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 | \$365 | \$374 | \$416 |
| 50,000 | 307 | 326 | 344 | 374 | 383 | 425 |
| 100,000 | 464 | 338 | 357 | 386 | 394 | 437 |

| Collision and Comprehensive Premium | | | | | | | |
|-------------------------------------|-----------|------------------------|-------|-------|-------|-------|-------|
| Coverage | Age Group | Insurance Rating Group | | | | | |
| | | 10 | 11 | 12 | 13 | 14 | 15 |
| Collision \$50 Deductible | A | \$236 | \$257 | \$279 | \$300 | \$322 | \$343 |
| | B | 224 | 243 | 264 | 284 | 305 | 325 |
| | C | 213 | 233 | 253 | 272 | 291 | 310 |
| | D | 203 | 222 | 240 | 259 | 277 | 296 |
| Comprehensive \$50 Deductible | A | \$80 | \$86 | \$99 | \$113 | \$127 | \$142 |
| | B | 68 | 82 | 94 | 107 | 121 | 134 |
| | C | 65 | 77 | 90 | 102 | 115 | 129 |
| | D | 62 | 73 | 86 | 97 | 110 | 122 |

(757)(2.20) = 1665.40

LESSON 9.4

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 \$50-deductible collision. Her car is in age group C and insurance-rating group 10 (or C, 10), and her driver-rating factor is 1.50.

$\$338$
 $+ 213$
 $+ 65$

 $\$616$

$(1.50)(616)$
 $\$924$

| Annual 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 | \$365 | \$374 | \$416 |
| 50,000 | 307 | 326 | 344 | 374 | 383 | 425 |
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| Collision and Comprehensive Premium | | | | | | | |
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LESSON 9.4

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.

Handwritten calculations:

309
 322
 127
 a) \$758
 b) (1.30)(788)
 \$985.40

| Annual 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 | \$365 | \$374 | \$416 |
| 50,000 | 307 | 326 | 344 | 374 | 383 | 425 |
| 100,000 | 464 | 338 | 357 | 386 | 394 | 437 |

| Collision and Comprehensive Premium | | | | | | | |
|-------------------------------------|-----------|------------------------|-------|-------|-------|-------|-------|
| Coverage | Age Group | Insurance Rating Group | | | | | |
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| Comprehensive \$50 Deductible | A | \$80 | \$86 | \$99 | \$113 | \$127 | \$142 |
| | B | 68 | 82 | 94 | 107 | 121 | 134 |
| | C | 65 | 77 | 90 | 102 | 115 | 129 |
| | D | 62 | 73 | 86 | 97 | 110 | 122 |

**LESSON
9.5****Operating and Maintaining a Vehicle**

Vocab:

Variable Costs - gas, oil, tires, brakes
(depends on mileage)

Fixed Costs - taxes, insurance, loan, depreciation
(don't vary mile to mile)

Depreciation - losing value over time.

**LESSON
9.5**

EXAMPLE 1

Chantal Jones purchased a new two-door coupe for \$24,590 two years ago. She drove 14,322 miles last year and kept a record of all auto expenses. She estimates the vehicle's present value at \$19,219. Calculate her (a) depreciation, (b) total variable costs, (c) total fixed costs, and (d) cost per mile to operate her vehicle last year.

| Variable Costs | | Fixed Costs | |
|-----------------------------|--------------|----------------------|--------------|
| Gasoline | \$1,576.24 | Insurance | \$985.00 |
| Oil Changes | 71.85 | License/registration | 125.63 |
| Maintenance | 154.36 | Loan Interest | 380.30 |
| Cleaning, tolls and Parking | 322.65 | Depreciation | a. 2685.50 |
| Total | b. \$2125.10 | Total | c. \$4176.43 |

$$a) \frac{(24590 - 19219)}{2} = 2685.50$$

$$d) \frac{2125.10 + 4176.43}{14322} = \$0.44$$

LESSON
9.5

Complete the problem. Check your answer in the back of the book.

1. DeeDee Farrar purchased a new car 3 years ago for \$33,500.00. Its current value estimate is \$19,900.00. Annual variable costs this year were \$995.60. The cost of insurance this year was \$2,350.00, registration was \$132.50, and loan interest totaled \$1,080.00. She drove 13,540 miles this year. Compute the (a) depreciation, (b) annual fixed costs, and (c) cost per mile.

$$a) \frac{(33500 - 19900)}{3} = \$4533.33$$

$$b) 2350 + 132.50 + 1080 + 4533.33 = \$8095.83$$

$$c) \frac{8095.83 + 995.60}{13540} = \$0.67$$

LESSON
9.5
EXAMPLE 2 Algebra

Tiffany East estimates that she will drive 15,000 miles during the year and will have \$2,400.00 in annual fixed costs. If her goal is to have a cost per mile of \$0.30 or less for her compact car, what is the maximum annual variable cost she can have?

$$\frac{\text{cost}}{\text{mile}} = \frac{\text{V.C.} + \text{f.c.}}{\# \text{ of miles}}$$

$$15000 (0.30) = \left(\frac{X + 2400}{15000} \right) 15000$$

$$4500 = X + 2400$$

$$\begin{array}{r} 4500 \\ -2400 \\ \hline \end{array} = \begin{array}{r} X + 2400 \\ -2400 \\ \hline \end{array}$$

$$X = 2100$$

**LESSON
9.5**

Complete the problem. Check your answer in the back of the book.

2. Anwar Mabak incurs \$2,818.00 in annual fixed costs to operate his car. He estimates that he will drive 22,500 miles during the year. What are his annual variable costs if his cost per mile is \$0.32?

$$\frac{\text{cost}}{\text{mile}} = \frac{\text{V.C.} + \text{f.c.}}{\# \text{ miles}}$$

$$22500(0.32) = \left(\frac{X + 2818}{22500} \right) 22500$$

$$7200 = X + 2818$$

$$X = 4382$$