

# Applications

*Never lend your car to anyone to whom you have given birth.*  
Erma Bombeck, Humor Writer

personal injury protection	\$234
bodily injury liability	\$266
property damage liability	\$190
uninsured motorist protection	\$11
comprehensive insurance	\$344
collision insurance	\$410
emergency road service	\$12

1. Interpret the quote in the context of what you learned.
2. Rachel has \$25,000 worth of property damage insurance. She causes \$32,000 worth of damage to a sports car in an accident.
  - a. How much of the damages will the insurance company have to pay?
  - b. How much will Rachel have to pay?
3. Ronald Kivetsky bought a new car and received these price quotes from his insurance company.
  - a. What is the annual premium?
  - b. What is the semiannual premium?
  - c. How much less would Ronald's semiannual payments be if he dropped the optional collision insurance?
4. Gloria pays her insurance three times each year. The first payment is 40% of the annual premium, and each of the next two payments is 30% of the annual premium. If the annual premium is \$924, find the amounts of the three payments.
5. Ruth Fanelli has decided to drop her collision insurance because her car is getting old. Her total annual premium is \$916, of which \$170.60 covers collision insurance.
  - a. What will her annual premium be after she drops the collision insurance?
  - b. What will her quarterly payments be after she drops the collision coverage?
6. Gary Lieberman has \$10,000 worth of property damage insurance. He collides with two parked cars and causes \$12,000 worth of damage. How much money must Gary pay after the insurance company pays its share?
7. Craig Rosenberg has a personal injury protection policy that covers each person in, on, around, or under his car for medical expenses as a result of an accident. Each person can collect up to \$50,000. Craig is involved in an accident and three people are hurt. One person has \$23,000 of medical expenses, one person has \$500 worth of medical expenses, and Craig himself has medical expenses totaling \$70,000. How much money must the insurance company pay out for these three people?
8. Leslie has comprehensive insurance with a \$500 deductible on her van. On Halloween her van is vandalized, and the damages total \$1,766. Leslie submits a claim to her insurance company.
  - a. How much must Leslie pay for the repair?
  - b. How much must the insurance company pay?

9. Felix Madison has \$10,000 worth of property damage insurance and a \$1,000 deductible collision insurance policy. He had a tire blow-out while driving and crashed into a \$1,400 fire hydrant. The crash caused \$1,600 in damages to his car.
- Which insurance covers the damage to the fire hydrant?
  - How much will the insurance company pay for the fire hydrant?
  - Which insurance covers the damage to the car?
  - How much will the insurance company pay for the damage to the car?
10. Jared's car slides into a stop sign during an ice storm. There is  $x$  dollars damage to his car, where  $x > 1,000$ , and the stop sign will cost  $y$  dollars to replace. Jared has \$25,000 worth of PD insurance, a \$1,000 deductible on his collision and comprehensive insurance, and \$50,000 no-fault insurance.
- Which insurance covers the damage to the sign?
  - How much will his company pay for the stop sign?
  - Which insurance covers the damage to his car?
  - How much will his company pay for the damage to the car?
11. Eric must pay his  $p$  dollar annual insurance premium by himself. He works at a job after school.
- Express how much he must save each month to pay this premium algebraically.
  - If he gets into a few accidents and his company raises his insurance 15%, express how much he must save each month to meet this new premium algebraically.
12. Mollie has 100/300/50 liability insurance and \$50,000 PIP insurance. She drives through a stop sign and hits a telephone pole and bounces into a minivan with 8 people inside. Some are seriously hurt and sue her. Others have minor injuries. Three passengers in Mollie's car are also hurt.
- The pole will cost \$7,000 to replace. Mollie also did \$6,700 worth of damage to the minivan. What insurance will cover this, and how much will the company pay?
  - The minivan's driver was a concert violinist. The injury to his hand means he can never work again. He sues for \$4,000,000 and is awarded that money in court. What type of insurance covers this, and how much will the insurance company pay?
  - The minivan's driver (from part b) had medical bills totaling \$60,000 from his hospital trip and physical therapy after the accident. What type of insurance covers this, and how much will the insurance company pay?
  - The three passengers in Mollie's car are hurt and each requires \$12,000 worth of medical attention. What insurance covers this, and how much will the company pay?
13. Julianne currently pays  $x$  dollars for her annual premium. She will be away at college for the upcoming year and will only use the car when she is home on vacations. Her insurance company offers her a 35% discount for her annual premium. Express algebraically the amount she must save each month to pay the new, lower premium.