Name _____ Date _____

5-4 Automobile Insurance

Exercises

1. Mr. Cousins has 100/300 bodily injury insurance. He was in an auto accident caused by his negligence. Five people were injured in the accident. They sued in court and were awarded money. One person was awarded $150,000, and each of the other two was awarded $95,000. How much will the insurance company pay for these lawsuits?

2. Ronaldo has 50/250 BI liability insurance. He loses control of his car and injures 18 children in a Little League game, and each child is awarded $20,000 as a result of a lawsuit. How much will the insurance company pay in total for this lawsuit? How much will Ronaldo be personally responsible for?

3. Cai's annual premium is p dollars. If she pays her premium semiannually, there is a 1% surcharge on each payment. Write an expression for the amount of her semiannual payment.

4. Jake has $25,000 worth of property damage insurance and $1,000-deductible collision insurance. He caused an accident that damaged a $2,000 sign, and he also did $2,400 worth of damage to another car. His car had $2,980 worth of damage done.
   a. How much will the insurance company pay under Jake's property damage insurance?
   b. How much will the insurance company pay under Jake's collision insurance?
   c. How much of the damage must Jake pay for?

5. Allen Siegell has a personal injury protection policy that covers each person in, on, around, or under his car for medical expenses up to $50,000. He is involved in an accident and five people in his car are hurt. One person has $3,000 of medical expenses, three people each have $500 worth of medical expenses, and Allen himself has medical expenses totaling $62,000. How much money must the insurance company pay out for these five people?

6. The Chow family just bought a second car. The annual premium would have been a dollars to insure the car, but they are entitled to a 12% discount since they have another car insured by the company.
   a. Express their annual premium after the discount algebraically.
   b. If they pay their premium semiannually, and have to pay a b dollars surcharge for this arrangement, express their quarterly payment algebraically.

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Name _____ Date _____

7. Mrs. Lennon has 100/275/50 liability insurance and $50,000 PIP insurance. During an ice storm, she hits a fence and bounces into a store front with 11 people inside. Some are hurt and sue her. A passenger in Mrs. Lennon's car is also hurt.

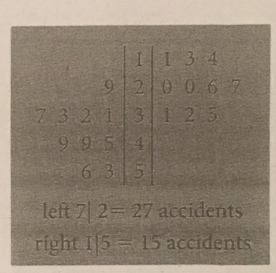
   a. The store front will cost $24,000 to replace. There was $1,450 worth of damage to the fence. What insurance will cover this, and how much will the company pay?

   b. A professional soccer player was in the store, and due to the injuries, he can never play soccer again. He sues for $3,000,000 and is awarded that money in court. What type of insurance covers this, and how much will the insurance company pay?

   c. The passenger in the car had medical bills totaling $20,000. What type of insurance covers this, and how much will the insurance company pay?

   d. The 11 people in the store are hurt and each requires $12,000 or less for medical attention. Will the company pay for all of these injuries?

8. In 2000, Roslyn High School instituted a safe driver course for all students who have licenses. They want to statistically analyze if the course is working. The back-to-back stem-and-leaf plot gives the annual number of car accidents involving Roslyn students. The numbers on the extreme left show the units digit for the years 1990-1999. The numbers on the right show the units digit for the years 2000-2009.



   a. What is the mean number of annual accidents for the years 1990-1999? the years 2000-2009?

   b. What is the range of the annual accident figures for the years 1990-1999? the years 2000-2009?

   e. Draw side-by side box-and-whisker plots based on the stem-and-leaf plot. Copy the boxplots under each other, to scale, so they are lined up.

   f. What do the side-by-side boxplots tell about the safe driver program that Roslyn high School instituted? Explain.

Manuel has x dollar-deductible collision insurance. His car is involved in an accident, and has w dollars worth of damage to it, where $x > w$. How much must the insurance company pay him for the damages?

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