

CP Algebra 2
Word Problems

Name: _____

Write an equation and solve each problem. Show your work (on additional paper if necessary).

1. On a weekend trip, you average 35 miles per hour in the city and 60 miles per hour on the highway. If the 150 mile trip took 3 hours, how much of the time were you driving in the city?
2. Next weekend you drove 280 miles using 15 gallons of gasoline that cost \$2.29 per gallon. If you get 24 miles per gallon on the highway and 16 in the city, how much did you spend for fuel for highway driving?
3. Cyclists A and B each average 30 km/h for the first hour of a 100 km race. At the end of the first hour, B has a mishap and loses 12 minutes. Cyclist A finishes the race at an average rate of 25 km/h. If cyclist B averages 27.5 km/h after resuming, will B catch A before the finish line? If so, how many km will be left in the race when B catches A? If not, how many km in front was A?
4. The ratio of an angle to its complement is 5 : 7. Find the measure of the angle and its complement.
5. Lefty and Bucky sold tickets to the basketball game. "Good" seats were \$5 each and poor seats were only \$2. If 210 people attended and paid \$660, how many people bought "good" seats?
6. A motorboat's speed in calm water is 9 miles per hour. The rate of the river current is 3 mph. The boat takes 4 hours to go upstream from dock A to dock B and to return to dock A. How far is dock A from dock B?
7. The sum of 4 consecutive even integers is 180. Find the 4 integers.

8. Find three consecutive odd integers such that the sum of the first and third is 7 greater than the second decreased by 18.

9. Two sides of an isosceles triangle are each 5 cm longer than the base. The perimeter of the triangle is 100 cm. What are the lengths of the sides and the base?

10. A stockbroker earns a base salary of \$40,000 plus 5% of the total value of the stocks, mutual funds, and other investments that the stockbroker sells. Last year, the stockbroker earned \$71,750. What was the total value of the investments the stockbroker sold?

11. You are building a walkway of uniform width around a 100 foot by 60 foot swimming pool. After completing the walkway, you want to put a fence along the outer edge of the walkway. You have 450 feet of fencing to enclose the walkway. What is the maximum width of the walkway?

12. Box A holds twice as many jars as box B, and box C holds one dozen fewer jars than box A. Ten size A boxes, 5 size B boxes, and 3 size C boxes will hold a total of 522 jars. Find the number of jars that each type of box will hold.

13. Painter A can paint a small auditorium in 6 hours. Painter B can paint it in 8 hours. If they work together, how long will it take them to paint the auditorium.

14. Working by herself April can distribute a batch of advertising posters in 6 hours. Whitney can do the same job in 4 hours. Annabeth, fastest of all, can do the job in 3 hours. If all three girls work on the same job, how long will it take?