

17. The degree measure of $\angle A$ is twice the degree measure of $\angle B$ and one less than the degree measure of $\angle C$. If the sum of the degree measures of the 3 angles is at least 61, which is the least possible degree measure of $\angle A$?
18. An airplane on a search mission flies due east from an airport, turns and flies due west back to the airport. The plane cruises at 200 miles per hour when flying due east and 250 miles per hour when flying west. What is the farthest point from the airport the plane can reach if it can remain in the air for 9 hours?
19. Two cars bound for Buffalo on the N. Y. State Thruway leave a service area at the same time. Their average speeds differ by 10 miles per hour. Six hours later the slower car reached an exchange that the faster car reached an hour earlier. Find the average speed of each car.
20. How many pounds of candy worth 90¢ per pound must be added to 10 pounds of candy worth 60¢ per pound to form a mixture worth 80¢ per pound?
21. For two weeks Ruth put all nickels, dimes and quarters she collected from her paper route into a coin bank. She found that she had twice as many quarters as dimes and \$4.65 in all. How many coins of each type did she collect?
22. The difference of the squares of two consecutive odd integers is 40. Find the integers.
23. A one-inch thick circular metal casting has a circular hole in the center with radius 2 inches less than the outer radius of the casting. If the casting is made of a metal weighing $\frac{7}{18}$ pounds per cubic inch, and the casting weighs $14\frac{2}{3}$ pounds, find the interior and exterior radius of the casting (Use $\pi = \frac{22}{7}$).
24. The area of a concrete walk around a rectangular fishpond is equal to the area of the pond. If the pond measures 6 yards by 9 yards, find the width of the walk.
25. Show that the sum of the squares of any two consecutive integers is 1 more than a multiple of 4.
26. Which is a better buy on a canned vegetable, a 16-oz., can at 72¢ or a 12-oz., can at 57¢?
27. In a dry concrete mixture the ratio of sand to cement is 4:1 and the ratio of gravel to sand is 5:4. How many pounds of each are in 1100 pounds of the concrete?
28. A profit of \$1800 is divided among 3 persons in the ratio of 8:5:2. How much does each person receive?
29. How many lbs., of water must be evaporated from 40 lbs., of a 10% salt solution to produce a 25% solution?
30. How many lbs., of a 30% solution of acid must be added to 40 lbs., of a 12% solution to produce a 20% solution?
31. At most, how many qts., of antifreeze solution containing 40% glycerine should be drawn from a radiator containing 32 qts., and replaced with water in order that the radiator be filled with at least a 20% glycerine solution?