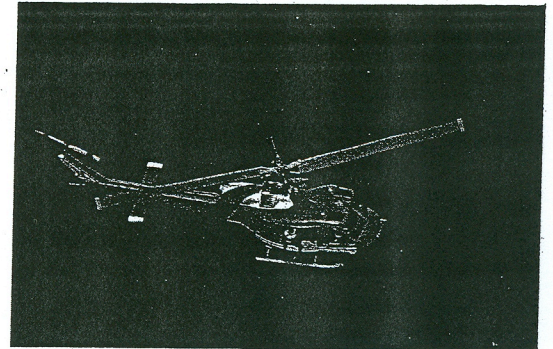


3. Find the measures of the angles of an isosceles triangle if the measure of the vertex angle is 40° less than the sum of the measures of the base angles.
4. Two isosceles triangles have the same base length. The legs of one of the triangles are twice as long as the legs of the other. Find the lengths of the sides of the triangles if their perimeters are 23 cm and 41 cm.
5. On Friday, the With-It Clothiers sold some jeans at \$25 a pair and some shirts at \$18 each. Receipts for the day totaled \$441. On Saturday the store priced both items at \$20, sold exactly the same number of each item, and had receipts of \$420. How many pairs of jeans and how many shirts were sold each day?
6. A grain-storage warehouse has a total of 30 bins. Some hold 20 tons of grain each, and the rest hold 15 tons each. How many of each type of bin are there if the capacity of the warehouse is 510 tons?
7. With a tail wind, a helicopter traveled 300 mi in 1 h 40 min. The return trip against the same wind took 20 min longer. Find the wind speed and also the air speed of the helicopter.
8. With a head wind, a plane traveled 1000 mi in 4 h. With the same wind as a tail wind, the return trip took 3 h 20 min. Find the plane's air speed and the wind speed.
9. An overseas phone call is charged at one rate (a fixed amount) for the first minute and at a different rate for each additional minute. If a 7 min call costs \$10, and a 4 min call costs \$6.40, find each rate.
10. A caterer's total cost for catering a party includes a fixed cost, which is the same for every party. In addition the caterer charges a certain amount for each guest. If it costs \$300 to serve 25 guests and \$420 to serve 40 guests, find the fixed cost and the cost per guest.



17. Davis Rent-A-Car charges a fixed amount per weekly rental plus a charge for each mile driven. A one-week trip of 520 miles costs \$250, and a two-week trip of 800 miles costs \$440. Find the weekly charge and the charge for each mile driven.
18. In a certain mill the cost C in thousands of dollars of producing x tons of steel is given by

$$C = 0.3x + 3.5.$$

The revenue R in thousands of dollars from selling x tons is given by

$$R = 0.5x.$$

- a. Graph each equation in the same coordinate plane. (Let the vertical axis represent cost or revenue in thousands of dollars.)
 - b. Find the point at which $R = C$ (the *break-even point*).
 - c. What does the difference $R - C$ measure for all x greater than the x -coordinate of the break-even point?
19. The *supply* S of a commodity (in thousands of units), if the price is p dollars per unit, is given by the equation

$$S = 0.3p + 3.$$

The *demand* D for that commodity (in thousands of units), if the price is p dollars per unit, is given by the equation

$$D = -0.5p + 9.$$

The value of p for which $S = D$ is called the *equilibrium price*.

- a. Graph both equations in the same coordinate plane. (Let the horizontal axis represent price and the vertical axis represent supply or demand in thousands of units.)
- b. Determine the equilibrium price.
- c. What will happen at prices greater than this price?