8.2 Application Problems

Solve.

21. An express train travels 300 mi in the same amount of time that a freight train travels 180 mi. The rate of the express train is 20 mph faster than the freight train. Find the rate of each train.

22. A postal clerk on vacation took an 8-mile cruise in a sailboat in the same amount of time as a 20-mile cruise on a power boat. The rate of the power boat is 12 mph faster than the rate of the sailboat. Find the rate of each boat.

23. A twin-engine plane can fly 660 mi in the same amount of time as it takes a single-engine plane to fly 330 mi. The rate of the twin-engine plane is 100 mph faster than the single-engine plane. Find the rate of the twin-engine plane.

24. The rate of a motorcycle is 36 mph faster than the rate of a bicycle. The motorcycle travels 192 mi in the same amount of time as the bicycle travels 48 mi. Find the rate of the motorcycle.

25. A sales accountant traveled 1800 mi by jet and 300 mi on a prop plane. The rate of the jet is four times the rate of the prop plane. The entire trip took a total of 5 h. Find the rate of each.

26. A motorist drove 90 mi before running out of gas and then walking 5 mi to a gas station. The rate of the motorist in the car was nine times the rate walking. The time spent walking and driving was 3 h. Find the rate at which the motorist walks.

27. A computer representative traveled 135 mi by train and then an additional 855 mi by plane. The rate of the plane was three times the rate of the train and the total time for the trip was 6 h. Find the rate of the plane.

28. A marketing manager traveled 1080 mi on a corporate jet and then an additional 180 mi by helicopter. The rate of the jet is four times the rate of the helicopter. The entire trip took 5 h. Find the rate of the jet.

29. A freight train and a passenger train leave a town at 10 A.M., and head for a town 300 mi away. The rate of the passenger train is twice the rate of the freight train. The passenger train arrives 5 h ahead of the freight train. Find the rate of each train.

30. A single-engine plane and a corporate jet leave an airport at 1 P.M., and head for another airport 660 mi away. The rate of the corporate jet is three times the rate of the single-engine plane. The single-engine plane arrives 4 h after the corporate jet. Find the rate of each plane.

Content and Format © 1987 HMCo