

Practice B

For use with pages 33–40

Land Speed Record In Exercises 1–4, use the following information.

The land speed record was broken in 1997 by a British car called the Thrust SSC. The Thrust SSC traveled at a rate of 763 miles per hour. This was accomplished by using a jet engine. How long would it take the Thrust SSC to travel 100 miles? Use the following verbal model.

$$\boxed{\text{Distance}} = \boxed{\text{Rate}} \cdot \boxed{\text{Time}}$$

1. Assign labels to the parts of the verbal model.
2. Use the labels to translate the verbal model into an algebraic model.
3. Solve the algebraic model.
4. Answer the question.

New Carpeting In Exercises 5–9, use the following information. You just added a family room to your home. You have budgeted \$450 for carpeting. If you need 30 square yards of carpeting, how much can you spend per square yard?

5. Write a verbal model.
6. Assign labels to the parts of the verbal model.
7. Use the labels to translate the verbal model into an algebraic model.
8. Solve the algebraic model.
9. Answer the question.

Sharing the Driving In Exercises 10–14, use the following information.

You and a friend share the driving on a 300 mile trip. Your friend drives for 3 hours at an average speed of 52 miles per hour. How fast must you drive for the remainder of the trip if you want to reach your hotel in 3 more hours?

10. Write a verbal model.
11. Assign labels to the parts of the verbal model.
12. Use the labels to translate the verbal model into an algebraic model.
13. Solve the algebraic model.
14. Answer the question.

Time Management In Exercises 15–19, use the following information.

You need to do an experiment at home for your science class and write a lab report on your findings. The experiment involves trials that take 5 minutes each to perform. You want to watch a basketball game that starts in $1\frac{1}{2}$ hours. If it takes about 30 minutes to write the lab report, how many trials can you perform before the game starts?

15. Write a verbal model.
16. Assign labels to the parts of the verbal model.
17. Use the labels to translate the verbal model into an algebraic model.
18. Solve the algebraic model.
19. Answer the question.