SKILL 28: PROBLEM SOLVING: Interpret the Remainder

Sometimes when you solve division problems, you must consider the remainder to find the answer.

Example

Mrs. Golan went to the storeroom to get notebooks for her class of 26 students. The notebooks are packed 8 to a carton. How many cartons does she need?

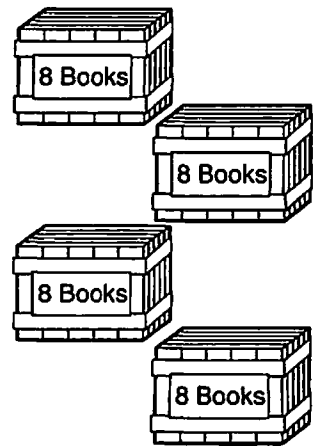**Read** Each carton holds 8 notebooks. Mrs. Golan needs enough cartons for 26 students.

Plan You can draw a diagram to help you solve the problem. Each carton represents 8 notebooks.

Solve Find 26 ÷ 8.

Are 3 cartons enough? 3 × 8 = 24 No.

Are 4 cartons enough? 4 × 8 = 32 Yes.

$$\begin{array}{r} 3\ R2 \\ 8\overline{)26} \\ -24 \\ \hline 2 \end{array}$$

Look Back Since 4 cartons hold 32 books, there will be enough for all the students in the class.

Guided Practice

Mrs. Golan's class is going to the library. Four students will sit at each table. If they completely fill as many tables as possible, how many tables will have 4 students? How many tables will they need so everyone has a seat?

1. How many students will be at one table? _____

2. Draw a picture to show the tables needed.

3. How many tables are needed? _____

4. How many will be full? _____

5. How many students will be at the table that is not full? _____

SKILL 28: Practice

Solve.

1. Each shelf of a CD-ROM rack holds 8 CD ROMs. How many shelves are needed for 92 CD ROMs? _____

2. Parent volunteers are driving 35 students to the museum. Each car holds 4 student passengers, plus the parent driver. How many parent volunteers are needed? _____

3. Maria has 48 yards of yarn. She cuts it into as many 9-yard pieces as possible.
   a. How many pieces will she make? _____
   b. How much yarn will Maria have left over? _____

4. Josie figures she needs 13 quarts of paint to paint her room. Each can of paint holds 4 quarts. How many cans of paint must she buy? _____

5. Mr. Gomez needs markers for his 151 art students. Markers are packaged 6 to a box. How many boxes does he need? _____

6. A blacksmith has 317 horseshoes. If he puts 4 shoes on as many horses as possible, how many shoes will be left over? _____

7. The tailor has 958 buttons. He sews 7 buttons on as many shirts as possible.
   a. How many shirts can he complete? _____
   b. How many buttons will he have left over? _____

8. Nan and Ned baked 63 cookies for a bake sale. They put 5 cookies in each bag.
   a. How many bags will they have to sell? _____
   b. How many cookies will be left? _____

TEST PREP

9. There are 58 people who want to visit the museum. Each shuttle can take 9 passengers at a time. How many shuttles will be needed to take all the people to the museum?

   Skill 28

   A 5   C 7
   B 6   D 8

10. Gina's workout includes 8 minutes warming up, 23 minutes jogging, 7 minutes of push-ups, 9 minutes of sit-ups, and 6 minutes stretching at the end of her workout. How much time does she spend working out?

    Skill 7

    F 43 min   H 60 min
    G 53 min   J 63 min