

KEY CONCEPT OVERVIEW

In Lessons 22 through 25, students identify **factors** that make up a number less than 100. They also identify **multiples**, **prime numbers**, and **composite numbers**.

You can expect to see homework that asks your child to do the following:

- Determine and record the factors and multiples of given numbers.
- Determine whether a number is prime or composite.
- Determine whether a given number is a factor of another number.
- Determine whether a given number is a multiple of another number.

SAMPLE PROBLEM (From Lesson 22)

Find all the factors for the following numbers, and classify each number as prime or composite. Explain your classification of each as prime or composite.

| Factor Pairs for 27 | |
|---------------------|----|
| 1 | 27 |
| 3 | 9 |
| | |
| | |
| | |

| Factor Pairs for 31 | |
|---------------------|----|
| 1 | 31 |
| | |
| | |
| | |
| | |

The number 27 is a composite number. It has more than two factors. The number 31 is prime. Its only factors are 1 and itself.

Additional sample problems with detailed answer steps are found in the *Eureka Math Homework Helpers* books. Learn more at GreatMinds.org.

HOW YOU CAN HELP AT HOME

- Create or print a hundreds chart. Have your child use crayons to color all of the multiples of a given number between 1 and 10. Choose a different color for each multiple. Look for and discuss any patterns that your child sees. For example, when coloring multiples of 2, your child should notice that the multiples all appear in the same columns and all end in 0, 2, 4, 6, or 8. When coloring multiples of 9, he should notice that the multiples appear in a diagonal pattern.
- Lay a calendar on the table. Ask your child to close her eyes. Prompt her to circle her pointer finger two times in the air, to place her finger on the calendar, and then to open her eyes. If the number that her finger has landed on is 10 or less, have her list the multiples of that number as high as she can successfully go. If the number is greater than 10, have her list the factors of that number and state whether the number is prime or composite.

TERMS

Associative property (of multiplication): When multiplying three or more numbers, the product will be the same regardless of how the numbers are grouped, for example,
 $6 \times 3 \times 8 = (6 \times 3) \times 8 = 6 \times (3 \times 8)$.

Composite number: A number with three or more factors. For example, 8 is a composite number because it has four factors: 1, 2, 4, and 8.

Factor: A number that is multiplied by another number. For example, in $3 \times 4 = 12$, the numbers 3 and 4 are factors. We can say, therefore, that 3 and 4 are factors of 12.

Multiple: The product of a given number and any other whole number. For example, 20 is a multiple of 10 because $2 \times 10 = 20$.

Prime number: A whole number greater than 1 with only two factors—1 and itself. For example, 3 is a prime number because it has only two factors—1 and 3.