

Key Education Publishing
Standards Correlation for *Multiplication Facts Tips and Tricks:*
Practice Pages and Classroom Games for Understanding and Memorizing Facts

This book supports the NCTM *Principles and Standards for School Mathematics*.

This book supports the following Number and Operations Standard Expectations for Grades 3–5:

- 1. Students recognize equivalent ways to represent the same number and generate equivalent numbers by composing or decomposing.** In this book, students learn that a number can be represented by different multiplication problems and addition problems with repeated addends.
- 2. Students understand the meanings of multiplication and division.** The focus of this book is learning multiplication facts, so the activities in it support students in understanding the meaning of multiplication.
- 3. Students understand the effects of multiplying and dividing whole numbers.** All of the activities in *Multiplication Facts Tips and Tricks* support this standard.
- 4. Students understand and use properties of operations such as the distributive property of multiplication over addition.** In this book, students learn about the zero, identity, and commutative properties of multiplication.
- 5. Students become fluent in basic number combinations for multiplication and division and use these to mentally compute related problems.** The focus of this book is developing fluency in basic multiplication facts, so all of the activities in this book support this standard.
- 6. Students become fluent in adding, subtracting, multiplying, and dividing whole numbers.** This book supports students becoming fluent in basic multiplication.
- 7. Students select appropriate computation methods and tools from among mental math, estimation, calculators, and paper and pencil according to the context and then use the selected methods and tools.** *Multiplication Facts Tips and Tricks* presents a wide variety of methods and tools for multiplication and enables students to learn when to choose particular methods.

Certain activities in this book support the following Algebra Standard Expectations for Grades 3–5:

- 1. Students describe, extend, and generalize about geometric and numeric patterns.** Skip counting and pattern activities in this book, which form a basis for multiplication, support this standard.
- 2. Students represent and analyze patterns and functions with words, tables, and graphs.** Several activities in this book require students to describe numeric patterns using words.
- 3. Students identify the commutative, associative, and distributive properties and use them to compute with whole numbers.** Students use the commutative property to multiply in several activities.
- 4. Students use model problems with objects and use graphs, tables, and equations to draw conclusions.** Students use pictures and arrays to model multiplication in several activities in this book.