

# MATH PARENT GUIDE – UNIT 2

# 4



## IMPORTANT CONCEPTS YOUR STUDENT SHOULD KNOW AND ACTIVITIES TO DO AT HOME

### MULTIPLICATION AND DIVISION OF WHOLE NUMBERS

#### “I Can” Help My Student

- I can solve multi-step problems using the four operations.
- I can use estimation to solve multiplication and division problems.
- I can find factors and multiples and generate patterns involving factors and multiples.
- I can identify prime and composite numbers.



#### KEY WORDS TO KNOW

**composite:** a number that has at least one divisor other than one or the number itself

**dividend:** a number to be divided by another number

**divisor:** a number by which another number is to be divided

**division (repeated subtraction):** the action of separating something into parts; the process of being separated into equal parts or groups

**estimate:** using math reasoning to come up with a close guess of the actual value of a quantity

**factors:** a number or quantity that when multiplied with another produces a given number or expression

**multiples:** the result of multiplying two factors together

**partition division:** a division into parts; fair sharing

**prime:** a whole number greater than one that can be divided evenly only by 1, or itself.

**product:** the result of or answer to a multiplication problem

**properties:** a character or quality that a number sentence has; specific rules stating how you can add or multiply quantities

**quotient:** the result of or answer to a division problem

**remainder:** the amount left over (fractional remains) after performing division to form equal groups



#### What should my student already know before beginning this unit?


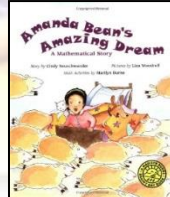
- ✓ Utilize the properties and patterns of multiplication (including the commutative, associative, and identity properties)
- ✓ Mentally solve basic multiplication problems using the distributive property.
- ✓ Fluently multiply within 100.
- ✓ Fluently divide within 100.



# MATH PARENT GUIDE – UNIT 2



## MULTIPLICATION AND DIVISION OF WHOLE NUMBERS

Important Concepts Addressed in this Unit	Sample Problems	How You Can Help Your Student
<p>In this unit, students will develop an understanding of the following:</p> <ul style="list-style-type: none"> <li>• Multiplication and division can be represented using a rectangular area model.</li> <li>• Multiplication may be used in problem contexts involving equal groups, rectangular arrays/area models, or rate.</li> <li>• Multiplying up to a 4-digit number by a 1-digit number using strategies.</li> <li>• Dividing whole-number quotients and remainders with up to four-digit dividends and remainders with up to four-digit dividends and one-digit divisors.</li> </ul> 	<p><b>Sample Problem 1: Factor Trail Game</b>  <a href="http://illuminations.nctm.org/Lesson.aspx?id=2520">http://illuminations.nctm.org/Lesson.aspx?id=2520</a></p> <p><b>Sample Problem 2:</b>            There are 110 clowns at the circus. Each clown is carrying 4 balloons. How many balloons are there altogether? Show your thinking using words, pictures and/or numbers.</p> <p><b>Sample Problem 3:</b>            I'm an odd number between 250 and 700. I am divisible by 5. My tens digit is 3 more than my ones digit. The sum of my digits is 17. What number am I?</p> <p><b>Recommended Children's Literature</b>            The use of children's literature is equally important as problems and deserves some attention. Use this book to enhance both language literacy and mathematical literacy for an interdisciplinary connection during story time.</p> <p><i>Amanda Bean's Amazing Dream</i>            by Cindy Neuschwander</p>  <p><i>This book can be checked out at your local Atlanta-Fulton Public Library System</i></p>	<p><b>Interactive Learning Games</b></p> <p><b>Factor Pairs:</b>  <a href="https://learnzillion.com/lessons/782-find-all-factor-pairs-using-a-rainbow-factor-line">https://learnzillion.com/lessons/782-find-all-factor-pairs-using-a-rainbow-factor-line</a>  <a href="http://illuminations.nctm.org/LessonDetail.aspx?ID=L620">http://illuminations.nctm.org/LessonDetail.aspx?ID=L620</a></p> <p><b>Electronic Sieve:</b>  <a href="http://nlvm.usu.edu/en/NAV/frames_asid_158_g_3_t_1.html">http://nlvm.usu.edu/en/NAV/frames_asid_158_g_3_t_1.html</a></p> <p><b>Prime and Composite Numbers:</b>  <a href="http://www.sheppardsoftware.com/mathgames/numbers/fruit_shoot_prime.htm">http://www.sheppardsoftware.com/mathgames/numbers/fruit_shoot_prime.htm</a>  <a href="https://www.illustrativemathematics.org/content-standards/3/MD/C/7/tasks/1836">https://www.illustrativemathematics.org/content-standards/3/MD/C/7/tasks/1836</a></p> <p><b>Factors and Multiples:</b>  <a href="http://calculationnation.nctm.org/Games/Game.aspx?GameId=A0537FC6-3B08-4AFC-9AD6-0CC5E3BC9B86">http://calculationnation.nctm.org/Games/Game.aspx?GameId=A0537FC6-3B08-4AFC-9AD6-0CC5E3BC9B86</a></p> 