

Grade 4 Mathematics Unit Preview

Quarter 1: Number Relationships and Computation (Multiplication)

Objectives: (Your student will be able to)

- **Apply the identity, zero, commutative, and associative properties to multiplication.** For example, the identity property states that any number times 1 is that number ($34 \times 1 = 34$). The zero property states that any number times 0 is 0 ($45 \times 0 = 0$). The commutative property states that $5 \times 7 = 7 \times 5$. The associative property states that $(2 \times 3) \times 4 = 2 \times (3 \times 4)$.
- **Identify multiples of given numbers.** For example, 8, 12, 16, and 20 are multiples of 4.
- **Multiply one-digit numbers by multiples of 10, 100, 1000, using mental computation.** For example, $6 \times 100 = 600$.
- **Multiply a two-digit number by a two-digit number with regrouping.**
- **Estimate the product of two numbers.** For example, 23×19 could have an estimated product of 400 (20×20)

Vocabulary: (Words your student will need to understand)

• Product: The answer to a multiplication problem.	• Multiple: The product of a given whole number and another whole number.
• Factor: A number that is multiplied by another number (factor \times factor = product).	• Array: An arrangement of objects in rows and columns
• Zero Property: (see above)	• Identity Property: (see above)
• Associative Property: (see above)	• Commutative Property: (see above)

Activities to do with your student (in addition to homework, optional):

- Draw an array for a given multiplication fact.
- Use objects to design an array for a given multiplication fact.
- Draw a picture of a multiplication fact.
- Play "Memory" by writing different examples of the multiplication properties on index cards and the names of the properties on index cards.
- Play a guessing game, where one player writes a 2 digit \times 2 digit multiplication problem and writes clues about the product so that the other person can guess the product without doing the problem.
- Practice multiplication facts by playing a game.
- Write story problems that are solved with multiplication.
- Practice multiplication facts.
- See your student's teacher for additional basic fact multiplication games.

