

# Operations and Algebraic Thinking

## Grade 5

### Vocabulary Words Your Student Will Learn

**Ordered pairs:** A pair of numbers where order is important, (4,6) is different to (6,4). Often used to indicate on a coordinate plane, graph, or map.

**Coordinates:** Shown as pairs of letters and/or numbers, e.g. (2,4). Used to show position on a coordinate plane or map.

**Patterns:** A sequence of shapes or numbers that follow a logical rule.

**Function:** A mathematical relationship between two values. The second value depends on (is a function of) the first one.

**Expression:** A mathematical combination of numbers, variables, and operations.

**Equation:** A number sentence with an equal sign.  $5 \times 4 = 20$ .

### What Your Student Will Learn:

- ◆ Use parenthesis, brackets or braces in numerical expressions
- ◆ Write and understand equations without solving for them
- ◆ Use number patterns to solve equations involving input/output machines

### Everyday Activities You Can Do At Home:

- ◆ Make up numbers, roll numbers with dice, or find numbers (on labels) and compare them.
- ◆ Create rules (ex.  $n = 3$ ) and have your student extend the number pattern (3, 6, \_\_, \_\_).
- ◆ Create a number pattern and have your student write the rule.
- ◆ Create an input/ output machine (function table) for a given rule and have the student fill in the missing Inputs and Outputs.
- ◆ Create an input/ output machine (function table) for an unknown rule and have the student fill in the missing Inputs and Outputs and write the rule.
- ◆ Find numbers and write them in expanded form.
- ◆ Draw pictures and make models of numbers.
- ◆ Practice addition, subtraction, multiplication and division facts.