

Name \_\_\_\_\_

## Unveiling the Mystery of Variables: Keys to Algebraic Expressions

### Short Answer Key

1. A variable in algebra is a symbol, usually a letter, that represents an unknown quantity. Example:  $x$  in the expression  $2x + 3$ .
2. Variables are used to represent unknown quantities by allowing us to write expressions and equations that describe relationships between numbers.
3. Variables allow us to generalize patterns and relationships by representing a wide range of possible values and exploring how changing the value of the variable affects the expression or equation.
4. Example:  $3x + 2 = 14$ , where  $x$  represents the unknown number that, when multiplied by 3 and added to 2, equals 14.
5. Variables are essential for solving equations and inequalities because they allow us to set up mathematical statements that describe relationships between quantities and find solutions that satisfy certain conditions.

