**Operation Terminology**

|  |  |
| --- | --- |
| **Addition*** Sum
* Total
* Gain
* Raise
* More
* Increase
* Plus
 | **Subtraction*** Difference between
* Minus
* Decreased
* Loss
* Less
* Fewer
* Take Away
 |
| **Multiplication*** Multiple
* Product of
* # of times
* Double
* Twice Triple
* Percent of
* Fraction of
 | **Division*** Quotient of
* Divide
* Per
* Percent
* Ratio of
* Out of
 |

**Writing Words and Phrases as Algebraic Expressions**

|  |  |  |
| --- | --- | --- |
| **Operation** | **Word Phrase** | **Algebraic Expression** |
| Addition | a number plus 45the sum of a number and 4545 more than a number |  m + 45 |
| Subtraction | A number minus 6The difference of a number and 66 subtracted from a number |  p – 6 |
| Multiplication | 4 times a numberthe product of 4 and a number | 4k |
| Division | The quotient of a number and 25A number divided by 25 | z/25 |

**Algebraic Expressions**

|  |  |  |
| --- | --- | --- |
| **Term** | **Definition** | **Example** |
| **Variable** | A letter or symbol that represents an unknown value |  x, y, a, b |
| **Substitution** | Replacing a variable with a value | 4x where x = 8 |
| **Term** | Part of an algebraic expression that can be a number, variable, or a product of both |  In the expression 2x + 14, the terms are 2x and 14 |
| **Coefficient** | The numerical factor in the term of an algebraic expression | In 3x the coefficient is 3 in 16b the coefficient is 16 |
| **Expression** | A group of terms (the terms are separated by + or - signs) |  In the equation 2x + 9 = 8  the expression is 2x + 9 |
| **Like Terms** | Terms that have the same variables with the same corresponding exponents | In the expression 2x + 4 + x + 1, the terms 2x and x are like terms, as are 4 and 1 |
| **Equivalent Expressions**  | Expressions that are equal for all values of the variable | 6x + 2 = 14 |
| **Simplify** | To write an equivalent expression by combining like terms |  2x + 4 + x + 1 = 3x + 5 |