

Math 2-5: Operations and Algebraic Thinking: Represent and Solve Problems

Properties and Relationships of Operations

Students **Learning Continuum Statements:**

Students:

RIT 171-180:

- Applies the commutative property of multiplication to whole numbers
- Identifies the missing equation in whole-number addition and subtraction fact families
- Understands the inverse relationship between addition and subtraction, whole numbers within 20

Students:

RIT 181-190:

- Applies the zero property of multiplication to whole numbers
- Identifies the missing equation in whole-number addition and subtraction fact families
- Represents multiplication as repeated addition
- Represents multiplication as skip-counting
- Understands the inverse relationship between addition and subtraction, whole numbers within 20
- Understands the inverse relationship between multiplication and division

Students:

RIT 191-200:

- Applies the associative property of multiplication to whole numbers
- Represents division as repeated subtraction
- Represents multiplication as repeated addition
- Represents multiplication as skip-counting
- Represents subtraction equations with whole numbers as part-unknown addition equations
- Understands multiplication as a comparison of sizes
- Understands multiplication as many groups of equal size
- Understands the inverse relationship between addition and subtraction, whole numbers within 20
- Understands the inverse relationship between multiplication and division

Students:

RIT 201-210:

- Applies the associative property of multiplication to whole numbers
- Decomposes numbers to simplify whole-number multiplication
- Represents division as repeated subtraction
- Represents division equations with whole numbers as part-unknown multiplication equations
- Represents multiplication as repeated addition
- Represents subtraction equations with whole numbers as part-unknown addition equations
- Understands division as equal sharing
- Understands multiplication as a comparison of sizes
- Understands multiplication as many groups of equal size
- Understands the inverse relationship between multiplication and division

Students:

RIT 211-220:

- Applies the distributive property of multiplication to whole numbers
- Decomposes numbers to simplify whole-number multiplication
- Identifies the missing value in an equation to show that a number and its opposite have a sum of 0
- Represents division equations with whole numbers as part-unknown multiplication equations
- Understands division as equal sharing
- Understands multiplication as a comparison of sizes
- Understands the inverse relationship between multiplication and division

Students:

RIT 221-230:

- Applies the distributive property of multiplication to whole numbers