|  |
| --- |
| **Rational Numbers - Compare and Order** |
| given no more than three sets, each set containing 10 or fewer concrete objects, will compare and describe one set as having more, fewer, or the same number of objects as other sets |
| given no more than three sets, each set containing 10 or fewer concrete objects, will compare and order sets from least to greatest |
| compare two numbers between 0 and 100 represented pictorially or with concrete objects, using the words *greater than, less than* or *equal to* |
| order three or fewer sets from least to greatest and greatest to least |
| compare and order whole numbers between 0 and 999 |
| compare the unit fractions for halves, fourths, eighths, thirds, and sixths, with models |
| compare and order whole numbers, each 9,999 or less |
| compare fractions having like and unlike denominators, using words and symbols (<, >, =, or  ), with models |
| compare and order whole numbers expressed through millions |
| compare and order fractions and mixed numbers, with and without models\* |
| compare and order decimals |
| compare and order fractions, mixed numbers, and/or decimals, in a given set, from least to greatest and greatest to least\* |
| compare and order positive rational numbers\* |
| order and compare integers |
| compare and numbers greater than zero written in scientific notation\* |
| compare and order rational numbers\* |
| compare and order real numbers |

| **EQUALITY/SOLVING EQUATIONS** | |
| --- | --- |
| demonstrate an understanding of equality through the use of the equal symbol | |
| demonstrate an understanding of equality through the use of the equal symbol = and the use of the not equal symbol ≠ | |
| create equations to represent equivalent mathematical relationships | |
| recognize and demonstrate the meaning of equality in an equation | |
| write an equation to represent a given mathematical relationship, using a variable | |
| create a problem situation based on a given equation, using a single variable | |
| solve one-step linear equations in one variable, including practical problems | |
| solve two-step linear equations in one variable, including practical problems | |
| solve systems of linear-quadratic and quadratic-quadratic equations, algebraically and graphically | |
| solve multistep linear equations in one variable with the variable on one and both sides of the equation, including practical problems | |
| solve multistep linear equations in one variable algebraically | |
| solve quadratic equations in one variable algebraically | |
| solve literal equations for a specified variable | |
| solve systems of two linear equations in two variables algebraically and graphically | |
| solve practical problems involving equations and systems of equations | |
| solve absolute value linear equations | |
| solve algebraically and graphically, quadratic equations over the set of complex numbers | |
| solve algebraically and graphically, equations containing rational algebraic expressions | |
|  |

|  |
| --- |
| **Practical Applications – Rational Numbers and Proportional Reasoning** |
| solve practical problems that involve addition and subtraction with proper fractions having like denominators of 12 or less |
| solve single-step practical problems involving addition and subtraction with fractions and mixed numbers |
| solve single-step and multistep practical problems involving addition and subtraction with decimals |
| create and solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of whole numbers |
| create and solve single-step and multistep practical problems involving addition, subtraction, and multiplication of decimals, and create and solve single-step practical problems involving division of decimals |
| solve single-step and multistep practical problems involving addition and subtraction with fractions and mixed numbers |
| solve single-step practical problems involving multiplication of a whole number, limited to 12 or less, and a proper fraction, with models\* |
| solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of fractions and mixed numbers |
| solve multistep practical problems involving addition, subtraction, multiplication, and division of decimals |
| solve practical problems involving operations with integers |
| solve practical problems involving operations with rational numbers |
| solve single-step and multistep practical problems, using proportional reasoning |
| solve practical problems involving consumer applications |

|  |  |
| --- | --- |
| **SOL** | **Key- Rational Numbers - Compare and Order** |
| K.2a | given no more than three sets, each set containing 10 or fewer concrete objects, will compare and describe one set as having more, fewer, or the same number of objects as other sets |
| K.2b | given no more than three sets, each set containing 10 or fewer concrete objects, will compare and order sets from least to greatest |
| 1.2b | compare two numbers between 0 and 100 represented pictorially or with concrete objects, using the words *greater than, less than* or *equal to* |
| 1.2c | order three or fewer sets from least to greatest and greatest to least |
| 2.1c | compare and order whole numbers between 0 and 999 |
| 2.4c | compare the unit fractions for halves, fourths, eighths, thirds, and sixths, with models |
| 3.1c | compare and order whole numbers, each 9,999 or less |
| 3.2c | compare fractions having like and unlike denominators, using words and symbols (<, >, =, or  ), with models |
| 4.1b | compare and order whole numbers expressed through millions |
| 4.2a | compare and order fractions and mixed numbers, with and without models\* |
| 4.3c | compare and order decimals |
| 5.2b | compare and order fractions, mixed numbers, and/or decimals, in a given set, from least to greatest and greatest to least\* |
| 6.2b | compare and order positive rational numbers\* |
| 6.3b | order and compare integers |
| 7.1b | compare and numbers greater than zero written in scientific notation\* |
| 7.1c | compare and order rational numbers\* |
| 8.1 | compare and order real numbers |

| **SOL** | **KEY-EQUALITY/SOLVING EQUATIONS** |
| --- | --- |
| 1.15 | demonstrate an understanding of equality through the use of the equal symbol |
| 2.17 | demonstrate an understanding of equality through the use of the equal symbol = and the use of the not equal symbol ≠ |
| 3.17 | create equations to represent equivalent mathematical relationships |
| 4.16 | recognize and demonstrate the meaning of equality in an equation |
| 5.19b | write an equation to represent a given mathematical relationship, using a variable |
| 5.19d | create a problem situation based on a given equation, using a single variable |
| 6.13 | solve one-step linear equations in one variable, including practical problems |
| 7.12 | solve two-step linear equations in one variable, including practical problems |
| 8.17 | solve multistep linear equations in one variable with the variable on one and both sides of the equation, including practical problems |
| A.4a | solve multistep linear equations in one variable algebraically |
| A.4b | solve quadratic equations in one variable algebraically |
| A.4c | solve literal equations for a specified variable |
| A.4d | solve systems of two linear equations in two variables algebraically and graphically |
| A.4e | solve practical problems involving equations and systems of equations |
| AII.3a | solve absolute value linear equations |
| AII.3b | solve algebraically and graphically, quadratic equations over the set of complex numbers |
| AII.3c | solve algebraically and graphically, equations containing rational algebraic expressions |
| AII.3d | solve algebraically and graphically, equations containing radical expressions |
| AII.4 | solve systems of linear-quadratic and quadratic-quadratic equations, algebraically and graphically |

|  |  |
| --- | --- |
| **SOL** | **Key- Practical Applications – Rational Numbers and Proportional Reasoning** |
| 3.5 | solve practical problems that involve addition and subtraction with proper fractions having like denominators of 12 or less |
| 4.5c | solve single-step practical problems involving addition and subtraction with fractions and mixed numbers |
| 4.6b | solve single-step and multistep practical problems involving addition and subtraction with decimals |
| 5.4 | create and solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of whole numbers |
| 5.5b | create and solve single-step and multistep practical problems involving addition, subtraction, and multiplication of decimals, and create and solve single-step practical problems involving division of decimals |
| 5.6a | solve single-step and multistep practical problems involving addition and subtraction with fractions and mixed numbers |
| 5.6b | solve single-step practical problems involving multiplication of a whole number, limited to 12 or less, and a proper fraction, with models\* |
| 6.5b | solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of fractions and mixed numbers |
| 6.5c | solve multistep practical problems involving addition, subtraction, multiplication, and division of decimals |
| 6.6b | solve practical problems involving operations with integers |
| 7.2 | solve practical problems involving operations with rational numbers |
| 7.3 | solve single-step and multistep practical problems, using proportional reasoning |
| 8.4 | solve practical problems involving consumer applications |