|  |
| --- |
| **Clarity for Learning**  |
| **Standard KY.7.EE.3** Solve real-life and mathematical problems posed with positive and negative rational numbers in any form, using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate, and assess the reasonableness of answers using mental computation and estimation strategies. |
| **Concepts (Nouns)**positive rational numbersnegative rational numbersproperties of operationsforms of numbersreasonablenessmental computationestimation strategies | **Skills (Verbs)**solveuseapplycalculateconvertassess |
| **Learning Progressions***Prerequisite Skills:** fractions, decimals, percents and converting between each
* positive and negative numbers
* expressions, equations, combining like terms
* properties of operations
* order of operations

*Grade Level Skills:** Use hands-on materials (hands-on equations, algebra tiles, etc.) to represent variables and numbers (whole numbers, fractions, decimals, percents, and positive and negative numbers) in expressions, and in a real-world context.
* Use pictures, bar diagrams, and other models to represent variables and numbers in real-life mathematical problems with integers, fractions, decimals, or percents in expressions.
* Apply properties of operations to calculate with the numbers in any form and convert between them. Check solutions for reasonableness using estimation strategies such as rounding, compatible numbers, and benchmark numbers.
* Use expressions and equations that contain integers, fractions and decimals to solve real-life mathematical problems, converting fractions, decimals and percentages and using properties of operations to find equivalent forms of expressions as needed. Assess the reasonableness of answers using mental computation and estimation strategies.

*Clarifications:* Students solve real-world and mathematical problemscontaining integers, fractions, and decimals, using previously acquired skills around converting fractions, decimals and percentages and use properties of operations to find equivalent forms of expressions when needed. Students solidify understanding by checking their solutions for reasonableness using estimation strategies such as rounding, compatible numbers, and benchmark numbers.KY.7.EE.3 →KY.8.EE.4  |
| **Learning Intentions (I am learning to...)** | **Success Criteria (I know I’m successful when...)** |
| Solve problems using integers, fractions and decimals in algebraic expressions and equations.  | * I can write and evaluate expressions with variables, and positive and negative numbers.
* I can write and evaluate expressions with variables, fractions, decimals and integers.
* I can write and evaluate algebraic expressions.
* I can solve a problem with a two-step equation that includes variables, integers, fractions and/or decimals.
 |