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| **MT: Expressions and Equations** | | |
|  | **Learn** | **Practice** |
| **Target 1:** Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients. (M.7.EE.1) | * <http://quizlet.com/39675006/expressionsequations-7ee1-flash-cards/> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-manipulating-expressions/v/combining-like-terms> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-manipulating-expressions/v/combining-like-terms-1> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-manipulating-expressions/v/combining-like-terms-2> * <http://learnzillion.com/lessons/1125-add-linear-expressions-by-combining-like-terms> * <http://www.virtualnerd.com/algebra-2/equations-inequalities/associative-property-examples.php> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-manipulating-expressions/v/factoring-a-linear-expression-with-rational-terms> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-manipulating-expressions/v/combining-like-terms-and-the-distributive-property> * <http://learnzillion.com/lessons/1126-expand-linear-expressions-using-the-distributive-property> * <http://learnzillion.com/lessons/1127-expand-linear-expressions-with-fractions-using-the-distributive-property> * <http://www.virtualnerd.com/common-core/grade-7/7_EE-expressions-equations/A/1/distribute-whole-numbers-and-fractions> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-manipulating-expressions/v/distributive-property-with-rational-terms> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-manipulating-expressions/v/combining-like-terms-and-the-distributive-property> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-manipulating-expressions/v/factoring-a-linear-expression-with-rational-terms> * <http://learnzillion.com/lessons/1128-factor-linear-expressions> * <http://www.virtualnerd.com/common-core/grade-7/7_EE-expressions-equations/A/1/distribute-whole-numbers-and-fractions> | * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-manipulating-expressions/e/combining_like_terms_1> * <http://www.aaamath.com/pro74ax2.htm> * <http://www.regentsprep.org/regents/math/algebra/an1/propprac.htm> * <http://www.regentsprep.org/regents/math/algebra/MultipleChoiceReview/RealNumbers.html> * <http://betterlesson.com/document/1387692/combine-like-terms-homework-docx> * <http://betterlesson.com/document/1387682/combine-like-terms-classwork-docx> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-manipulating-expressions/e/combining_like_terms_2> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-manipulating-expressions/e/combining_like_terms_2> * <http://www.ixl.com/math/grade-8/distributive-property> * <http://www.ixl.com/math/grade-7/distributive-property> * <http://www.ixl.com/math/grade-7/simplify-variable-expressions-using-properties> * <http://www.commoncoresheets.com/Math/Properties/Applying%20Properties%20of%20Operations/1.pdf> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-manipulating-expressions/v/distributive-property-with-rational-terms> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-manipulating-expressions/e/combining_like_terms_2> * <http://www.ixl.com/math/grade-8/distributive-property> * <http://www.ixl.com/math/grade-7/distributive-property> * <http://www.ixl.com/math/grade-7/simplify-variable-expressions-using-properties> |
| **Target 2:** Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. (M.7.EE.2) | * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-interpreting-lin-exp/v/interpreting-linear-expressions-example> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-interpreting-lin-exp/v/interpreting-linear-expressions-example-2> * <http://learnzillion.com/lessons/3441-write-an-expression-to-find-the-cost-of-an-item-with-tax> * <http://learnzillion.com/lessons/3310-write-an-expression-to-find-the-cost-of-a-discounted-item> * <http://learnzillion.com/lessons/3442-write-a-percent-markup-expression> * <http://www.ck12.org/section/Writing-Expressions-and-Equations/> | * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-interpreting-lin-exp/e/interpreting-expressions> * <http://www.learnalberta.ca/content/mec/flash/index.html?url=Data/4/A/A4A2.swf> * <http://www.math-play.com/Algebraic-Expressions-Millionaire/algebraic-expressions-millionaire.html> * <http://www.mathopolis.com/questions/q.php?id=1729&site=1&ref=/algebra/introduction-multiply.html&qs=1729_1730_1731_1732_1733_1734_3139_3140_3141_3142> * <http://www.mathsisfun.com/algebra/add-subtract-balance.html> * <http://www.regentsprep.org/regents/math/algebra/AE1/PAlgTrans.htm> |
| **Target 3:** Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), 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. (M.7.EE.3) | * <http://quizlet.com/39675268/expressionsequations-7ee3-flash-cards/> * <http://www.mathsisfun.com/algebra/proportions.html> * <http://www.youtube.com/watch?v=yq5Z3iwLhVw> * <http://learnzillion.com/lessons/330-identify-equivalent-representations-of-rational-numbers> * <http://www.ck12.org/book/CK-12-Middle-School-Math-Concepts-Grade-8/r18/section/2.15/> * <http://learnzillion.com/student/lessons/2718-convert-fractions-and-mixed-numbers-to-decimals> * <http://learnzillion.com/lessons/3361-estimate-to-check-reasonableness> * <http://learnzillion.com/student/lessons/3399-solve-problems-using-a-chart> * <http://www.khanacademy.org/math/cc-fifth-grade-math/cc-5th-place-value-decimals-top/cc-5th-rounding-decimals/v/estimation-with-decimals> * <http://www.youtube.com/watch?v=-JYjayBQP60> * <http://www.youtube.com/watch?v=ohEKROY1POI> * <http://learnzillion.com/lessons/3203-approach-a-multistep-problem-using-steps> * <http://learnzillion.com/lessons/3399-solve-problems-using-a-chart> * <http://www.ck12.org/algebra/Solving-Real-World-Problems-Using-Multi-Step-Equations/lesson/Solving-Real-World-Problems-Using-Multi-Step-Equations/r12/> * <http://www.virtualnerd.com/common-core/grade-7/7_EE-expressions-equations/B/3/fractions-whole-numbers-arithmetic-word-problem> * <http://learnzillion.com/student/lessons/3278-solve-problems-by-writing-and-solving-equations> | * <http://www.mathplayground.com/shuttle_mission_math/shuttle_mission_math_game.html> * <http://www.mathplayground.com/wangdoodles.html> * <http://www.mangahigh.com/en_us/games/algebrameltdown> * <http://www.mathplayground.com/algebraic_reasoning.html> * <http://www.learner.org/courses/learningmath/algebra/session6/part_c/index.html> * <http://www.xpmath.com/forums/arcade.php?do=play&gameid=64> * <http://www.mathplayground.com/shuttle_mission_math/shuttle_mission_math_game.html> * <http://www.mathplayground.com/wangdoodles.html> * <http://www.bbc.co.uk/schools/mathsfile/shockwave/games/equationmatch.html> * <http://www.mathplayground.com/algebraic_reasoning.html> * <http://www.mathplayground.com/algebra_puzzle.html> * <http://www.mathplayground.com/math_millionaire.html> * <http://www.mathplayground.com/mathatthemall2.html> * <http://www.xpmath.com/forums/arcade.php?do=play&gameid=64> * <http://www.map.mathshell.org/materials/download.php?fileid=1042> * <http://www.map.mathshell.org/materials/download.php?fileid=1086> * <http://senseanddollars.thinkport.org/games/home.html> |
| **Target 4:** Solve word problems leading to equations of the form px+q=r and p(x+q)=r , where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. (M.7.EE.4a) | * <http://quizlet.com/39675476/expressionsequations-7ee4a-flash-cards/> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-linear-eq-word-probs/v/linear-equation-word-problem-example> * <http://www.youtube.com/embed/XoEn1LfVoTo> * <http://www.youtube.com/embed/_1UvlBtaNLo> * <http://www.ck12.org/algebra/Solving-Real-World-Problems-Using-Multi-Step-Equations/enrichment/Solving-Word-Problems-Involving-Writing-Equations-Example-1/r1/> * <http://www.virtualnerd.com/common-core/grade-7/7_EE-expressions-equations/B/4/4a/decimals-word-problem-two-steps> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-linear-eq-word-probs/v/basic-linear-equation-word-problem> * <http://www.youtube.com/embed/XoEn1LfVoTo> * <http://www.ck12.org/algebra/Applications-of-One-Step-Equations/lecture/Solving-Real-World-Problems-Using-Equations%253A-An-Explanation-of-the-Concept/> * <http://www.virtualnerd.com/common-core/grade-7/7_EE-expressions-equations/B/4/4a/rectangle-length-from-area-and-width> * <http://www.virtualnerd.com/common-core/grade-7/7_EE-expressions-equations/B/4/4a/word-problem-addition-example> * <http://www.virtualnerd.com/common-core/grade-7/7_EE-expressions-equations/B/4/4a/word-problem-subtraction-example> * <http://www.virtualnerd.com/common-core/grade-7/7_EE-expressions-equations/B/4/4a/word-problem-multiplication-example> * <http://www.virtualnerd.com/common-core/grade-7/7_EE-expressions-equations/B/4/4a/word-problem-division-example> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-linear-eq-word-probs/v/segment-addition> * <http://www.ck12.org/algebra/Applications-of-One-Step-Equations/lecture/Solving-Real-World-Problems-Using-Equations%253A-An-Explanation-of-the-Concept/> * <http://www.youtube.com/embed/XoEn1LfVoTo> * <http://www.virtualnerd.com/common-core/grade-7/7_EE-expressions-equations/B/4/4a/rectangle-length-from-area-and-width> * <http://www.virtualnerd.com/common-core/grade-7/7_EE-expressions-equations/B/4/4a/word-problem-multiplication-example> * <http://www.virtualnerd.com/common-core/grade-7/7_EE-expressions-equations/B/4/4a/word-problem-division-example> | * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-linear-eq-word-probs/e/linear-equation-world-problems-2> * <http://www.math-play.com/Two-step-equations-game.swf> * <http://www.xpmath.com/forums/games/equ2step.swf> * <http://www.math-play.com/soccer-math-one-step-equations-game/one-step-equations-game.html> * <http://www.math-play.com/7th-Grade-Algebra-Jeopardy/7th-Grade-Algebra-Jeopardy.html> * <http://www.ixl.com/math/algebra-1/write-variable-equations> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-linear-eq-word-probs/e/linear_equation_word_problems> * <http://www.mathplayground.com/algebraic_reasoning.html> * <http://www.mathplayground.com/mathatthemall2.html> * <http://www.mathplayground.com/MTV/mathtv15.html> * <http://www.math-play.com/7th-Grade-Algebra-Jeopardy/7th-Grade-Algebra-Jeopardy.html> * <http://www.map.mathshell.org/materials/download.php?fileid=1086> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-linear-eq-word-probs/e/segment_addition> * <http://www.youtube.com/embed/BH0ACyaOas0> * <http://www.xpmath.com/forums/arcade.php?do=play&gameid=105> * <http://www.mathplayground.com/make_24.html> * <http://www.mathworksheetsland.com/7/19wordtoequa/ip.pdf> |
| **Target 5:** Solve word problems leading to inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. (M.7.EE.4b) | * <http://quizlet.com/39675643/expressionsequations-7ee4b-flash-cards/> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-inequalities/v/inequalities-using-multiplication-and-division> * <http://www.youtube.com/embed/pbLiN8D9gAk> * <http://www.ck12.org/section/Solving-Inequalities/> * <http://www.regentsprep.org/regents/math/algebra/AE8/PSolvIn.htm> * <http://www.regentsprep.org/regents/math/algebra/AE8/PracIneqD.htm> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-inequalities/v/one-step-inequalities-2> * <http://www.youtube.com/embed/mCdqgwWuNBk> * <http://www.youtube.com/embed/pbLiN8D9gAk> * <http://www.ck12.org/section/Solving-Inequalities/> * <http://www.virtualnerd.com/common-core/grade-7/7_EE-expressions-equations/B/4/4b/number-line-graph-inequality> * <http://www.virtualnerd.com/common-core/grade-7/7_EE-expressions-equations/B/4/4b/word-problem-subtract-example> * <http://www.virtualnerd.com/common-core/grade-7/7_EE-expressions-equations/B/4/4b/word-problem-add-example> * <http://www.virtualnerd.com/common-core/grade-7/7_EE-expressions-equations/B/4/4b/word-problem-divide-positive-example> * <http://www.virtualnerd.com/common-core/grade-7/7_EE-expressions-equations/B/4/4b/word-problem-multi-step-inequality-example> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-inequalities/v/inequalities> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-inequalities/v/interpreting-inequalities> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-inequalities/v/writing-and-using-inequalities-2> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-inequalities/v/writing-and-using-inequalities-2> * <http://learnzillion.com/lessons/1660-write-an-inequality-from-a-word-problem> * <http://www.youtube.com/embed/mCdqgwWuNBk> * <http://www.mathsisfun.com/equal-less-greater.html> | * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-inequalities/e/one_step_inequalities> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-linear-eq-word-probs/e/linear_equation_word_problems> * <http://www.math-play.com/Inequality-Game.html> * <http://www.ixl.com/math/grade-8/graph-inequalities-on-number-lines> * <http://www.ixl.com/math/algebra-1/write-inequalities-from-graphs> * <http://www.regentsprep.org/regents/math/algebra/AE8/PSolvIn.htm> * <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-inequalities/e/interpretting-solving-linear-inequalities> * <http://www.math-play.com/Inequality-Game.html> * <http://www.mathopolis.com/questions/q.php?id=5250&site=1&ref=/equal-less-greater.html&qs=5250_5251_5252_5253_5254_5255_5256_5257_5258_5259> * <http://www.ixl.com/math/grade-7/solutions-to-variable-inequalities> * <http://www.ixl.com/math/grade-8/solutions-to-variable-inequalities> |