**First Nine Weeks**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sequence** | **Standard Description** | **Resources** | **Assessment** |
| **QUARTER 1****Aug 10 - Oct 13****46 Days****Review & Exam****Oct 10 - 13** | \*[**MAFS.7.NS.1.1**](http://www.cpalms.org/Public/PreviewStandard/Preview/5467) Calculator: NeutralApply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.1. Describe situations in which opposite quantities combine to make 0.Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.
2. Understand subtraction of rational numbers as adding the additive inverse, p – q = p + (–q). Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.
3. Apply properties of operations as strategies to add and subtract rational numbers.

\*[**MAFS.7.NS.1.2**](http://www.cpalms.org/Public/PreviewStandard/Preview/5468) Calculator: NoApply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.1. Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as (–1)(–1) = 1 and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.
2. Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then –(p/q) = (–p)/q = p/(–q). Interpret quotients of rational numbers by describing real-world contexts.
3. Apply properties of operations as strategies to multiply and divide rational numbers.
4. Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.

\*[**MAFS.7.NS.1.3**](http://www.cpalms.org/Public/PreviewStandard/Preview/5469) Calculator: NoSolve real-world and mathematical problems involving the four operations with rational numbers. | **CMP3:**[**Accentuate The Negative**](http://dashweb.pearsoncmg.com/main.html?r=15469&p=652)[Inv 1](http://dashweb.pearsoncmg.com/main.html?r=15469&p=621) (Problems 2-4)Inv 2 (Problems 2-3)Inv 3 (Problems 2-4)Inv 4 (Problems 1-2)**CPALMS Lessons:****(NS.1.1)** [**Add It Up with T-Charts**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/49069)**(NS.1.2)**[**Let's Understand Multiplication of Positive and Negative Numbers**](http://www.cpalms.org/Public/PreviewStandard/Preview/5468)**(N.S.1.3)** [**Johansson Family Travel Plans**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/74474) | [**MATH ITEM SPECIFICATIONS**](http://fsassessments.org/wp-content/uploads/2015/03/Grade-7-Math-Test-Item-Specifications1.pdf)**MFAS Tasks:****NS.1.1****-**[**Finding the Difference**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/57171)**-**[**Exploring Additive Inverse**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/56078)**-**[**Adding Integers**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/56079)**-**[**Rational Addition and Subtraction**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/56080)**NS.1.2****-** [**Applying Rational Number Properties**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/57164)**-**[**Negative Times**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/57094)**-**[**Finding Decimals Using Long Division**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/57170)**-**[**Quotients of Integers**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/57170)**-**[**Understanding Products**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/57060)**N.S.1.3**[**Dividing Fractions Example 2**](http://www.cpalms.org/Public/PreviewResourceUrl/Preview/130430)[**Positive & Negative Fractions**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/114866) |
|  | \*[**MAFS.7.EE.1.1**](http://www.cpalms.org/Public/PreviewStandard/Preview/5470) Calculator: YesApply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.**\***[**MAFS.7.EE.1.2**](http://www.cpalms.org/Public/PreviewStandard/Preview/5471) Calculator: NoUnderstand 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.*\**[**MAFS.7.EE.2.3**](http://www.cpalms.org/Public/PreviewStandard/Preview/5472) Calculator: YesSolve 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.***\****[**MAFS.7.EE.2.4**](http://www.cpalms.org/Public/PreviewStandard/Preview/5473)  Calculator: Yes\*\* (Advanced 7th Grade combine with   [**MAFS.8.EE.3.7**](http://www.cpalms.org/Public/PreviewStandard/Preview/5496) ,[**MAFS.8.EE.3.8**](http://www.cpalms.org/Public/PreviewStandard/Preview/5497) ,[**MAFS.8.F.1.3**](http://www.cpalms.org/Public/PreviewStandard/Preview/5500), [**MAFS.8.F.2.4**](http://www.cpalms.org/Public/PreviewStandard/Preview/5501) and [**MAFS.8.F.2.5**](http://www.cpalms.org/Public/PreviewStandard/Preview/5502) See supplement at end of calendar)Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.1. 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.
2. 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.
 | **CMP3:****Moving Straight Ahead**Inv 3 (Problem 1-5)**CPALMS Lessons:****(EE.1.1 )** [**Steps to Solving Equations**](http://www.cpalms.org/Public/PreviewResourceUrl/Preview/32456)[**Total Recall**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/47488)**(EE.1.2)** [**The Distributive Property**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/28078)[**Equivalent Expressions?**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/55124)**(EE.2.3)** [**Car Shopping**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/54258)**-**[**Math In Mishaps**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/37281)**-**[**In Who's Best Interest Is Interest?**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/32884)**(EE.2.4)** [**Understanding Equations Using Perimeter**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/49073)[**Pennies and Post-Its**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/39102)[**Inequal-tile-ies**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/48726) | [**MATH ITEM SPECIFICATIONS**](http://fsassessments.org/wp-content/uploads/2015/03/Grade-7-Math-Test-Item-Specifications1.pdf)**MFAS Tasks:****EE.1.1:**[**Identify Equivalent Multistep Expressions**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/58270)**EE.1.2:**[**Explain Equivalent Expressions**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/66121)**EE.2.3:**[**Discounted Books**](http://www.cpalms.org/Public/PreviewResourceUpload/Preview/42738)**EE.2.4:**[**Write & Solve an Equation**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/60910)[**Gift Card Inequalities**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/60919)[**Write, Solve & Graph an Inequality**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/60917) |
| ***End of First Nine Weeks Exam* QUARTER 1 - Aug 10 - Oct 13 - 46 Days** |
| ***Professional Day*** |

**Second Nine Weeks**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sequence** | **Standard Description** | **Resources** | **Assessment** |
| **QUARTER 2****Oct 17 - Dec 16****40 Days****Review & Exam****Dec 12 - 16** | \*[**MAFS.7.G.2.4**](http://www.cpalms.org/Public/PreviewStandard/Preview/5477) Calculator: YesKnow the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.**\***[**MAFS.7.G.2.5**](http://www.cpalms.org/Public/PreviewStandard/Preview/5478) Calculator: Yes\*\* (Advanced 7th Grade combine with  [**MAFS.8.G.1.5**](http://www.cpalms.org/Public/PreviewStandard/Preview/5507)  See supplement at end of calendar)Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.\*[**MAFS.7.RP.1.1**](http://www.cpalms.org/Public/PreviewStandard/Preview/5464) Calculator: YesCompute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.\*[**MAFS.7.RP.1.2**](http://www.cpalms.org/Public/PreviewStandard/Preview/5465) Calculator: Yes\*\* (Advanced 7th Grade combine with  [**MAFS.8.EE.2.5**](http://www.cpalms.org/Public/PreviewStandard/Preview/5494) and [**MAFS.8.EE.2.6**](http://www.cpalms.org/Public/PreviewStandard/Preview/5495) see supplement at end of calendar)Recognize and represent proportional relationships between quantities.a.             Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.b.            Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.c.             Represent proportional relationships by equations. *For example, if total cost t is proportional to the number n of items purchased at a constant price p, the relationship between the total cost and the number of items can be expressed as t = pn.*d.            Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, r) where r is the unit rate.\*[**MAFS.7.RP.1.3**](http://www.cpalms.org/Public/PreviewStandard/Preview/5466) Calculator: Yes                                                                                                                           Use proportional relationships to solve multistep ratio and percent problems. *Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.**\**[**MAFS.7.SP.1.1**](http://www.cpalms.org/Public/PreviewStandard/Preview/5480) Calculator: NeutralUnderstand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.**\***[**MAFS.7.SP.1.2**](http://www.cpalms.org/Public/PreviewStandard/Preview/5481) Calculator: YesUse data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. | **Filling and Wrapping**Inv 1 (Problem 4)Inv 2 (Problem 2)Inv 3 (Problem 1,4)Inv 4 (Problem 2)**CPALMS Lessons:****(G.2.4)** [**Relationship of Circumference to Diameter ~ Understanding Pi**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/30369)**(G.2.5)** [**Angles, Angles, Everywhere!**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/37261)**CMP3:****Comparing and Scaling**[Inv 1](http://dashweb.pearsoncmg.com/main.html?r=15469&p=920) (Problems 3-4)[Inv 2](http://dashweb.pearsoncmg.com/main.html?r=15469&p=810) (Problem 3)[Inv 3](http://dashweb.pearsoncmg.com/main.html?r=15469&p=810) (Problem 1, 3)**CPALMS Lesson:****(R.P.1.1)**[**Let's Rate It!**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/46379)**Moving Straight Ahead**[Inv 1](http://dashweb.pearsoncmg.com/main.html?r=15469&p=797) (Problem 1-2)Inv 2 (Problem 2-3)Inv 4 (Problem 2,4)**CPALMS:****(RP.1.2)** [**Feeding Frenzy**](http://www.cpalms.org/Public/PreviewResourceUrl/Preview/5017)**Stretching and Shrinking**Inv 1 (Problem 2)Inv 3 (Problem 1-3)Inv 4 (Problem 1-3)**CPALMS:****(RP.1.3)** [**Mark Up & Make Money**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/48553)[**Best Day Care Center in the Neighborhoo**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/48863)**d****CMP3:****Shapes and Designs**Inv 1 (Problem 2,4 -  also covers MAFS.7.G.2.5)Inv 1 (Problem 5)Inv 3 (Problem 1-4) | **G.2.4:**[**Broken Circles**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/70722)[**Designing a Sports Bag**](http://www.cpalms.org/Public/PreviewResourceUrl/Preview/31997)**G.2.5:**[**Find the Angle Measure**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/63055)[**Straight Angles**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/63159)[**Solve for the Angle**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/63041)**G.2.6:**[**Chilling Volumes**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/65197)**RP.1.1:**[**Comparing Unit Rates**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/55437)[**Unit Rate Area**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/68419)**RP.1.2:**[**Teacher to Student Ratios**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/60564)[**Babysitting Graph**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/55963)**RP.1.3:**[**Making Cookies**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/60574)[**Finding Fees**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/58124)**S.P.1.1:**[**Ice Cream Survey**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/65207)**S.P.1.2:**[**School Days**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/65790) |
| ***End of Second Nine Week Exam -* QUARTER 2 - Oct 17 - Dec 16 - 40 Days** |
| ***Winter Break: December 19 - January 2*** |
| ***Professional Day*** |

**Third Nine Weeks**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sequence** | **Standard Description** | **Resources** | **Assessment** |
| **QUARTER 3****Jan 3 - Mar 9****46 Days****Review & Exam****Mar 6 - 9** | \*[**MAFS.7.G.1.1**](http://www.cpalms.org/Public/PreviewStandard/Preview/5474) Calculator: YesSolve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.**\***[**MAFS.7.G.1.2**](http://www.cpalms.org/Public/PreviewStandard/Preview/5475) Calculator: NeutralDraw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.**\***[**MAFS.7.G.1.3**](http://www.cpalms.org/Public/PreviewStandard/Preview/5476) Calculator: NeutralDescribe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.**\***[**MAFS.7.G.2.6**](http://www.cpalms.org/Public/PreviewStandard/Preview/5479) Calculator: Yes\*\* (Advanced 7th Grade combine with  [**MAFS.8.G.3.9**](http://www.cpalms.org/Public/PreviewStandard/Preview/5511)  ,[**MAFS.8.G.1.1**](http://www.cpalms.org/Public/PreviewStandard/Preview/5503), [**MAFS.8.G.1.2**](http://www.cpalms.org/Public/PreviewStandard/Preview/5504) ,[**MAFS.8.G.1.3**](http://www.cpalms.org/Public/PreviewStandard/Preview/5505) [**MAFS.8.G.1.4**](http://www.cpalms.org/Public/PreviewStandard/Preview/5506)  See supplement at end of calendar)Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.\*[**MAFS.7.SP.3.5**](http://www.cpalms.org/Public/PreviewStandard/Preview/5484) Calculator: NeutralUnderstand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.\*[**MAFS.7.SP.3.6**](http://www.cpalms.org/Public/PreviewStandard/Preview/5485) Calculator: NeutralApproximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability.  | **CPALMS:** **(G.1.1)** [**Makeover, Home Edition Part III**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/49025)**(G.1.2)** [**Triangle Inequality Investigation**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/40261)**(G.1.3)** [**Plane Slicing**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/72439)**(G.2.6)** [**Makeover, Home Edition Part II**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/48967)**CMP3:*****What Do You Expect?*****Inv 1 (Problem 1,3,4a)****Inv 2 (Problem 2,3,4)****Inv 3 (Problem 1,2cd,3ab,4)****Inv 4 (Problem 1,2,4)****Inv 5 (Problem 1bc,2)****(\*continue into 4th 9 weeks)****CPALMS:****(SP.3.5)** [**Introduction to Probability**](http://www.cpalms.org/Public/PreviewResourceUpload/Preview/35527)**(SP.3.6)** [**Garbage Can Hoops**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/72331) | [**MATH ITEM SPECIFICATIONS**](http://fsassessments.org/wp-content/uploads/2015/03/Grade-7-Math-Test-Item-Specifications1.pdf)**MFAS Tasks:****G.1.1:**[**Space Station Scale**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/65818)**G.1.2:**[**Sides of Triangles**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/70704)**G.1.3:**[**Square Pyramid Slices**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/66127)**G.2.6:**[**Chilling Volumes**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/65197)**S.P.3.5:**[**Likelihood of an Event**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/66141)**S.P.3.6:**[**Probabilities Cubed**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/70680) |
| ***End Third Nine Week Exam -* QUARTER 3 - Jan 3 - Mar 9 - 46 Days** |
| ***Professional Day*** |
| ***Spring Break: March 13 - March 17*** |

**4th Nine Weeks**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sequence** | **Standard Description** | **Resources** | **Assessment** |
| **QUARTER 4****Mar 20 - May 25****48 Days****FSA WINDOW****APR 10 - 28****Review & Exam****May 22 - 25** | \*[**MAFS.7.SP.3.7**](http://www.cpalms.org/Public/PreviewStandard/Preview/5486) Calculator: YesDevelop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.1. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events.
2. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process.

*\**[**MAFS.7.SP.3.8**](http://www.cpalms.org/Public/PreviewStandard/Preview/5487) Calculator: Neutral                                                                                                      Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.1. Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.
2. Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., “rolling double sixes”), identify the outcomes in the sample space which compose the event.
3. Design and use a simulation to generate frequencies for compound events.

*\**[**MAFS.7.SP.2.3**](http://www.cpalms.org/Public/PreviewStandard/Preview/5482) Calculator: NeutralInformally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability.*\**[**MAFS.7.SP.2.4**](http://www.cpalms.org/Public/PreviewStandard/Preview/5483) Calculator: NeutralUse measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. | **CPALMS Lessons:****(S.P.3.7)** [**Probability**](http://www.shodor.org/interactivate/lessons/Probability/)**(S.P.3.8)** [**How to Hit it Big in the Lottery**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/71497)[**Understanding Probability of Compound Events**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/71747)**CMP3:****Samples and Populations****Inv 1 (Problem 1ab,2ad,3,4)****Inv 2 (Problem 1ab,2,3,4)****Inv 3 (Problem 2,3,4)** | **SP.3.7:**[**Errand Runner**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/66147)[**Technical Difficulties**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/66148)**SP.3.8:**[**Coat Count**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/70690)[**Work Clothing**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/72054)**S.P.2.3:**[**TV Ages-1**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/70682)**S.P.2.4:**[**Word Length**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/66146) |
|  | **\***[**MAFS.8.EE.3.7**](http://www.cpalms.org/Public/PreviewStandard/Preview/5496)Solve linear equations in one variable.1. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where a and b are different numbers).
2. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.

\*\* (Advanced 7th Grade please add standards for 4th Nine Weeks -  See supplement at end of calendar)***\*Revisit 7th grade standards including:**** ***Integers***
* ***Graphing on the Coordinate Plane***
* ***Order of Operations***
* ***Fraction-Decimal-Percent conversions***
 | **CPALMS Lessons:**[**The Variable Stands Alone**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/42774)[**Solving Linear Equations in One Variable**](http://www.cpalms.org/Public/PreviewResourceUrl/Preview/31917)[**Company Charges**](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/51051)[**Repeating Decimals**](http://www.cpalms.org/Public/PreviewResourceUrl/Preview/32436) | **MFAS Task:**[**Coupon vs Discount**](http://www.cpalms.org/Public/PreviewResourceUpload/Preview/42395)[**Counting Solutions**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/59450) |
| ***End of Fourth Nine Weeks -* QUARTER 4 - Mar 20 - May 25 - 48 Days** |
| ***End of School Year*** |

**Advanced 7th Grade Curriculum Standards**

|  |  |  |  |
| --- | --- | --- | --- |
| **1st 9 Weeks** | \*[**MAFS.8.EE.3.7:**](http://www.cpalms.org/Public/PreviewStandard/Preview/5496)  Calculator: YesSolve linear equations in one variable.a.    Give examples of linear equations in one variable with one solution, infinitely many solutions,     or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where a and b are different numbers).b.     Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms. | **CMP3:****SWS****Inv. 1 (Problems 1-4)****Inv. 2 (Problems 1-4)****Inv. 3 (Problems 1 & 2)****Inv. 4 (Prob. 1, 2, & 4)****Inv. 5 (Problem 1)****8.EE.3.7 -** [**Building & Solving Equations**](http://www.cpalms.org/Public/PreviewResource/Preview/46854) | ***8.EE.3.7***[**Counting Solutions**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/59450)[**Equation Phototypes**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/59451)[**Linear Equations**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/59188) |
| **2nd 9 Weeks** | \*[**MAFS.8.EE.2.5**](http://www.cpalms.org/Public/PreviewStandard/Preview/5494) Calculator: YesGraph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. \*[**MAFS.8.EE.2.6**](http://www.cpalms.org/Public/PreviewStandard/Preview/5495) Calculator: YesUse similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation y = mx for a line through the origin and the equation y = mx + b for a line intercepting the vertical axis at b.\*[**MAFS.8.F.1.3**](http://www.cpalms.org/Public/PreviewStandard/Preview/5500) Calculator: YesInterpret the equation y = mx + b as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. \*[**MAFS.8.F.2.4**](http://www.cpalms.org/Public/PreviewStandard/Preview/5501) Calculator: YesConstruct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.\*[**MAFS.8.F.2.5**](http://www.cpalms.org/Public/PreviewStandard/Preview/5502) Calculator: NeutralDescribe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally. | **8.EE.2.5 -** [**How Fast Can You Walk?**](http://www.cpalms.org/Public/PreviewResource/Preview/22735)**8.EE.2.6 -** [**Designing a Skateboard Kicker Ramp**](http://www.cpalms.org/Public/PreviewResource/Preview/48005)**8.F.1.3 -** [**Beginning Linear Functions**](http://www.cpalms.org/Public/PreviewResource/Preview/40867)**8.F.2.4 -** [**Getting Graphic with Linear Functions**](http://www.cpalms.org/Public/PreviewResource/Preview/51216)**8.F.2.5 -** [**Interpreting Distance-Time Graphs**](http://www.cpalms.org/Public/PreviewResource/Preview/37479) | ***8.EE.2.5***[**Compare Slopes**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/59187)[**Interpreting Slope**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/58624)[**Proportional Paint**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/58625)***8.EE.2.6***[**Deriving Lines - 1**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/66706)[**Deriving Lines - 2**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/66710)[**Slope Triangles**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/66702)***8.F.1.3***[**Explaining Linear Functions**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/60550)[**Nonlinear Functions**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/60551)***8.F.2.4***[**Construction Function**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/64508)[**Drain the Pool**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/64603)[**Smart TV**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/64596)***8.F.2.5***[**Jet Fuel**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/64660)[**Bacterial Growth Graph**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/64664)[**Graph the Ride**](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/64662) |
| **3rd 9 Weeks** | \*[**MAFS.8.G.3.9**](http://www.cpalms.org/Public/PreviewStandard/Preview/5511)  Calculator: YesKnow the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.\*[**MAFS.8.G.1.1**](http://www.cpalms.org/Public/PreviewStandard/Preview/5503) Calculator: NeutralVerify experimentally the properties of rotations, reflections, and translations: 1. Lines are taken to lines, and line segments to line segments of the same length.
2. Angles are taken to angles of the same measure.
3. Parallel lines are taken to parallel lines.

\*[**MAFS.8.G.1.2**](http://www.cpalms.org/Public/PreviewStandard/Preview/5504) Calculator: NeutralUnderstand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.\*[**MAFS.8.G.1.3**](http://www.cpalms.org/Public/PreviewStandard/Preview/5505) Calculator: NeutralDescribe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.\*[**MAFS.8.G.1.4**](http://www.cpalms.org/Public/PreviewStandard/Preview/5506) Calculator: NeutralUnderstand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them. | **CMP3****BPW****Inv. 1 (Problems 1-4)****Inv. 2 (Problems 1 & 2)****Inv. 3 (Problems 1-3, & 5)****Inv. 4 (Problems 1,3, & 4)****CPALMS:****8.G.3.9 -** [**Volume Cylinder**](http://www.cpalms.org/Public/PreviewResource/Preview/11712)**8.G.1.1 -** [**Transformations - Rotation**](http://www.cpalms.org/Public/PreviewResource/Preview/11262)**8.G.1.2 -** [**Triangles on a Lattice**](http://www.cpalms.org/Public/PreviewResource/Preview/10037)**8.G.1.3 -** [**Slide to the Left... Slide to the Right!**](http://www.cpalms.org/Public/PreviewResource/Preview/43569)**8.G.1.4 -** [**Dilly Dallying with Dilations**](http://www.cpalms.org/Public/PreviewResource/Preview/49913) | **MFAS Tasks:*****8.G.3.9***[**Cone Formula**](http://www.cpalms.org/Public/PreviewResource/Preview/70911)[**Cylinder Formula**](http://www.cpalms.org/Public/PreviewResource/Preview/70924)***8.G.1.1***[**Angle Transformations**](http://www.cpalms.org/Public/PreviewResource/Preview/66721)[**Parallel Line Transformation**](http://www.cpalms.org/Public/PreviewResource/Preview/66724)[**Segment Transformations**](http://www.cpalms.org/Public/PreviewResource/Preview/66714)***8.G.1.2***[**Multistep Congruence**](http://www.cpalms.org/Public/PreviewResource/Preview/66741)[**Proving Congruence**](http://www.cpalms.org/Public/PreviewResource/Preview/66726)[**Rigid Motion**](http://www.cpalms.org/Public/PreviewResource/Preview/66727)***8.G.1.3***[**Dilation Coordinates**](http://www.cpalms.org/Public/PreviewResource/Preview/64604)[**Reflection Coordinates**](http://www.cpalms.org/Public/PreviewResource/Preview/64656)[**Rotation Coordinates**](http://www.cpalms.org/Public/PreviewResource/Preview/64655)[**Translation Coordinates**](http://www.cpalms.org/Public/PreviewResource/Preview/64654)***8.G.1.4***[**Proving Similarity**](http://www.cpalms.org/Public/PreviewResource/Preview/69403)[**Similarity - 1**](http://www.cpalms.org/Public/PreviewResource/Preview/69425) |
| **4th 9 Weeks** | \*[**MAFS.8.EE.3.8**](http://www.cpalms.org/Public/PreviewStandard/Preview/5497)Calculator: YesAnalyze and solve pairs of simultaneous linear equations. 1. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.
2. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection.
3. Solve real-world and mathematical problems leading to two linear equations in two variables.
 | **CMP3****IITS****Inv. 1 (Problems 1-3)****Inv. 2 (Problems 1-3)****CPALMS Lessons:****8.EE.3.8 -** [**A Scheme for Solving Systems**](http://www.cpalms.org/Public/PreviewResource/Preview/54390) | ***8.EE.3.8***[**Identify the Solution**](http://www.cpalms.org/Public/PreviewResource/Preview/59689)[**Solving Real-Life Problem**](http://www.cpalms.org/Public/PreviewResource/Preview/32028)[**System Solutions**](http://www.cpalms.org/Public/PreviewResource/Preview/59693) |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **PREVIOUS ADVANCE CONCEPTS** **(Not Assigned)** |  |  |
|  | [**MAFS.7.EE.2.4**](http://www.cpalms.org/Public/PreviewStandard/Preview/5473) *(a)expand with 8th grade standards* :[**MAFS.7.RP.1.2**](http://www.cpalms.org/Public/PreviewStandard/Preview/5465)(b) *expand with 8th grade standards* :[**MAFS.7.EE.2.4**](http://www.cpalms.org/Public/PreviewStandard/Preview/5473) *(a)expand with 8th grade standards* :[**MAFS.7.G.2.6**](http://www.cpalms.org/Public/PreviewStandard/Preview/5479)*expand with 8th grade standards* :[**MAFS.7.G.2.5**](http://www.cpalms.org/Public/PreviewStandard/Preview/5478)*expand with 8th grade standards* :[**MAFS.8.G.1.5**](http://www.cpalms.org/Public/PreviewStandard/Preview/5507) Calculator: YesUse informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angle created when parallel lines are cut by a traversal, and the angle-angle criterion for similarity of triangles. For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so. | **CMP3:****TWMM****Inv. 2 (Problems 1-5)****Inv. 5 (Problems 1-3)****CPALMS:**[**How Fast Can You Walk?**](http://www.cpalms.org/Public/PreviewResource/Preview/22735)**8.G.1.5 -** [**Angle Relationships**](http://www.cpalms.org/Public/PreviewResource/Preview/39484) | ***8.G.1.5***[**Justifying Angle Relationships**](http://www.cpalms.org/Public/PreviewResource/Preview/70163)[**Justifying the triangle sum**](http://www.cpalms.org/Public/PreviewResource/Preview/70728)[**Justifying the Exterior**](http://www.cpalms.org/Public/PreviewResource/Preview/70182)  |
|  | [**MAFS.8.G.2.6**](http://www.cpalms.org/Public/PreviewStandard/Preview/5508) Calculator: YesExplain a proof of the Pythagorean Theorem and its converse.[**MAFS.8.G.2.7**](http://www.cpalms.org/Public/PreviewStandard/Preview/5509) Calculator: YesApply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.[**MAFS.8.G.2.8**](http://www.cpalms.org/Public/PreviewStandard/Preview/5510)Calculator: YesApply the Pythagorean Theorem to find the distance between two points in a coordinate system.[**MAFS.8.SP.1.1**](http://www.cpalms.org/Public/PreviewStandard/Preview/5512) Calculator: NeutralConstruct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.[**MAFS.8.SP.1.2**](http://www.cpalms.org/Public/PreviewStandard/Preview/5513) Calculator: NeutralKnow that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.[**MAFS.8.SP.1.3**](http://www.cpalms.org/Public/PreviewStandard/Preview/5514) Calculator: NeutralUse the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. [**MAFS.8.SP.1.4**](http://www.cpalms.org/Public/PreviewStandard/Preview/5515)Calculator: YesUnderstand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. [**MAFS.8.NS.1.1**](http://www.cpalms.org/Public/PreviewStandard/Preview/5488)  Calculator: NoKnow that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.[**MAFS.8.NS.1.2**](http://www.cpalms.org/Public/PreviewStandard/Preview/5489)  Calculator: NoUse rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π2). [**MAFS.8.EE.1.2**](http://www.cpalms.org/Public/PreviewStandard/Preview/5491) Calculator: YesUse square root and cube root symbols to represent solutions to equations of the form x² = p and x³ = p, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that √2 is irrational.[**MAFS.8.F.1.2**](http://www.cpalms.org/Public/PreviewStandard/Preview/5499) Calculator: YesCompare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). [**MAFS.8.EE.1.3**](http://www.cpalms.org/Public/PreviewStandard/Preview/5492) Calculator: NoUse numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. [**MAFS.8.EE.1.4**](http://www.cpalms.org/Public/PreviewStandard/Preview/5493) Calculator: NoPerform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities.[**MAFS.8.F.1.1**](http://www.cpalms.org/Public/PreviewStandard/Preview/5498)  Calculator: YesUnderstand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.\*[**MAFS.8.EE.3.8**](http://www.cpalms.org/Public/PreviewStandard/Preview/5497)Calculator: YesAnalyze and solve pairs of simultaneous linear equations. 1. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.
2. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection.
3. Solve real-world and mathematical problems leading to two linear equations in two variables.
 | **CPALMS:****8.G.2.6 -** [**Proving Pythagoras**](http://www.cpalms.org/Public/PreviewResource/Preview/32241)**8.G.2.7 -** [**Keep Calm and Hypotenuse On**](http://www.cpalms.org/Public/PreviewResource/Preview/71389)**8.G.2.8 -** [**Square Areas**](http://www.cpalms.org/Public/PreviewResource/Preview/32505)**8.SP.1.1 -** [**Finding the Hottest Trend**](http://www.cpalms.org/Public/PreviewResource/Preview/51374)**8.SP.1.1 -** [**Guess the Celebrities’ Heights!**](http://www.cpalms.org/Public/PreviewResource/Preview/47910)**8.SP.1.2 -** [**Creating a Linear Model**](http://www.cpalms.org/Public/PreviewResource/Preview/71179)**8.SP.1.3 -** [**Linear Statistical Models**](http://www.cpalms.org/Public/PreviewResource/Preview/71178)**8.SP.1.4 -** [**Tackling 2 Way Tables**](http://www.cpalms.org/Public/PreviewResource/Preview/71656)**8.NS.1.1 -** [**Repeating Decimals**](http://www.cpalms.org/Public/PreviewResource/Preview/32104)**8.NS.1.2 -** [**It's Hip to Be (an Imperfect) Square!**](http://www.cpalms.org/Public/PreviewResource/Preview/47332)**8.EE.1.2 -** [**Difference of Two Squares**](http://www.cpalms.org/Public/PreviewResource/Preview/46134)**8.F.1.2 -** [**The Linear Function Connection**](http://www.cpalms.org/Public/PreviewResource/Preview/49314)**8.EE.1.3 & 1.4 -** [**Estimating Length Using Scientific Notation**](http://www.cpalms.org/Public/PreviewResource/Preview/32519)**8.F.1.1 -** [**Function or No Function?**](http://www.cpalms.org/Public/PreviewResource/Preview/49409)**CMP3****IITS****Inv. 1 (Problems 1-3)****Inv. 2 (Problems 1-3)****CPALMS Lessons:****8.EE.3.8 -** [**A Scheme for Solving Systems**](http://www.cpalms.org/Public/PreviewResource/Preview/54390) | **8.G.2.6**[**Converse of the Pythagorean Theorem**](http://www.cpalms.org/Public/PreviewResource/Preview/70752)***8.G.2.7***[**Distance Between Two Points**](http://www.cpalms.org/Public/PreviewResource/Preview/64705)***8.G.2.8***[**Coordinate Plane Triangle**](http://www.cpalms.org/Public/PreviewResource/Preview/64711)***8.SP.1.1***[**Bungee Cord Data**](http://www.cpalms.org/Public/PreviewResource/Preview/68337)[**Cheesy Statistics**](http://www.cpalms.org/Public/PreviewResource/Preview/69235)[**Population Density**](http://www.cpalms.org/Public/PreviewResource/Preview/69284)***8.SP.1.1***[**Sleepy Statistics**](http://www.cpalms.org/Public/PreviewResource/Preview/69222)[**Infectious Statistics**](http://www.cpalms.org/Public/PreviewResource/Preview/69265)[**Population Density**](http://www.cpalms.org/Public/PreviewResource/Preview/69284)***8.SP.1.2***[**Line of Good Fit - 1**](http://www.cpalms.org/Public/PreviewResource/Preview/66792)[**Two Scatterplots**](http://www.cpalms.org/Public/PreviewResource/Preview/66801)***8.SP.1.3***[**Developmental Data**](http://www.cpalms.org/Public/PreviewResource/Preview/69364)[**Foot Length**](http://www.cpalms.org/Public/PreviewResource/Preview/69361)[**Stretching Statistics**](http://www.cpalms.org/Public/PreviewResource/Preview/69377)***8.SP.1.4***[**Music and Sports**](http://www.cpalms.org/Public/PreviewResource/Preview/69380)[**School Start Time**](http://www.cpalms.org/Public/PreviewResource/Preview/66803)[**Two-Way Relative**](http://www.cpalms.org/Public/PreviewResource/Preview/69381)***8.NS.1.2***[**Approximating Irrational**](http://www.cpalms.org/Public/PreviewResource/Preview/56086)[**Comparing Irrational**](http://www.cpalms.org/Public/PreviewResource/Preview/56089)***8.EE.1.2***[**Roots and Radicals**](http://www.cpalms.org/Public/PreviewResource/Preview/71078)[**The Root of the Problem**](http://www.cpalms.org/Public/PreviewResource/Preview/58622)***8.F.1.2***[**Competing Functions**](http://www.cpalms.org/Public/PreviewResource/Preview/57920)[**Innovative Functions**](http://www.cpalms.org/Public/PreviewResource/Preview/57918)[**Interpreting Distance-Time Graphs**](http://www.cpalms.org/Public/PreviewResource/Preview/32106)[**Speed Reading**](http://www.cpalms.org/Public/PreviewResource/Preview/57919)***8.EE.1.3***[**Compare Numbers**](http://www.cpalms.org/Public/PreviewResource/Preview/55434)[**Estimating Extreme Values**](http://www.cpalms.org/Public/PreviewResource/Preview/55431)[**Estimating Length Using Scientific Notation**](http://www.cpalms.org/Public/PreviewResource/Preview/32148)***8.EE.1.4***[**Scientific Mult. and Div.**](http://www.cpalms.org/Public/PreviewResource/Preview/62549)[**Sums and Diff. in Scientific Notation**](http://www.cpalms.org/Public/PreviewResource/Preview/62509)***8.F.1.1***[**What is a Function?**](http://www.cpalms.org/Public/PreviewResource/Preview/57732)**I**[**dentifying Algebraic Functions**](http://www.cpalms.org/Public/PreviewResource/Preview/57845)[**Recognizing Functions**](http://www.cpalms.org/Public/PreviewResource/Preview/57846)[**Tabulating Functions**](http://www.cpalms.org/Public/PreviewResource/Preview/57848)***8.EE.3.8***[**Identify the Solution**](http://www.cpalms.org/Public/PreviewResource/Preview/59689)[**Solving Real-Life Problem**](http://www.cpalms.org/Public/PreviewResource/Preview/32028)[**System Solutions**](http://www.cpalms.org/Public/PreviewResource/Preview/59693) |