Grade 7 Math M-7.1	**KAS Standard:** 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.	**Accommodations and Supports (Should align with IEP)**
KAS-KAAP Content Assessment Standard: Use proportional relationships to solve multistep ratio and percent problems		
What does the student need to know to begin? (pre-requisite skills) parts of a whole, decimal, fractions, rounding, place value to 100s, content specific vocabulary, calculator skills, symbols identification %, solving single step ratio and percent problems (i.e. determining the tax on 1 meal or % off on one purchase),using a key on a chart/map/drawing.		
What will the student be able to do? (student outcomes) solve multistep ratio and percent problems.		
How will you task analyze the skill?		
How will you teach this? (SDI, strategies) regular ed. Text, coach, ladders, work out, fundraising, CBI, sale items and comparison shopping, calculating tips and tax, scale drawings for ratios, recipes, pay checks, bank account, key on a map.		
What materials will be needed? calculator, percent increase chart, formula charts/cue cards, tip charts, graphic organizer, model, number line, ruler, money.		
What will daily checks for understanding look like? (formative assessment)		
What were the outcomes of your practice test (summative assessment)?		
Reflections (what worked well, what will you change next time)		

Grade 7 Math M-7.2	**KAS Standard:** 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. For example: If a woman making $25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or $2.50, for a new salary of $27.50.	**Accommodations and Supports (Should align with IEP)**
KAS-KAAP Content Assessment Standard: Solve real-life and mathematical problems posed with positive and negative rational numbers, (whole numbers, fractions and decimals) converting between forms as appropriate.		
What does the student need to know to begin? (pre-requisite skills) content specific vocabulary/symbols (positive, negative…), parts of a whole, fractions, decimals, equivalence between fractions and decimals, visual interpretations of parts of a whole, place value, understanding the meaning of zero, understand greater/less than , be able to read the question and pull out the equation, adding fractions, decimals and percentage.		
What will the student be able to do? (student outcomes) given a real world math problem, student will be able to determine an appropriate equation to solve the problem using positive and negative rational numbers, converting between forms as appropriate.		
How will you task analyze the skill?		
How will you teach this? (SDI, strategies) coach, ladders, workout, websites/smart apps, CBI, books Elementary and MS Math (Van DeWalle and Karp) and Math Doesn't Suck, How to Survive MS Math (McKellar), salaries, hourly wage, "copy cat" fractions (equivalent fractions, pizza examples), comparing fractions (is your sister trying to cheat you out of your fair share?), conversion model, extreme couponing, doubling and reducing recipes, balancing a check book, teaching temperature.		
What materials will be needed? calculator, computer, websites, model/cue cards, conversion charts, excel, checkbook, recipes, money, number line, graphic organizer, thermometer.		
What will daily checks for understanding look like? (formative assessment)		

What were the outcomes of your practice test (summative assessment)?
Reflections (what worked well, what will you change next time)

Grade 7 Math M-7.3	**KAS Standard:** Apply 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. d. Apply properties of operations as strategies to add and subtract rational numbers.	**Accommodations and Supports (Should align with IEP)**
KAS-KAAP Content Assessment Standard: Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers on a horizontal or vertical number line diagram.		

What does the student need to know to begin? (pre-requisite skills) number line/linear knowledge of numbers, more and less, addition and subtraction, content specific vocabulary, symbols, knowledge of vertical number line, knowledge of rational and irrational numbers, order of operation for addition and subtraction.

What will the student be able to do? (student outcomes) student will be able to add and subtract rational numbers using a number line.

How will you task analyze the skill?

How will you teach this? (SDI, strategies) math balance, coach, ladders, workout, websites, floor number lines, measurement of height, time lines, calendar, temperature, thermometer (for vertical number line), height chart, water levels, bar graphs, real world problems, measuring cups (for measure lines).

What materials will be needed? calculator, manipulatives, graphic organizers, variety of number lines (height chart, measuring cup, thermometer), water level charts, bar graphs.

What will daily checks for understanding look like? (formative assessment)

What were the outcomes of your practice test (summative assessment)?

Reflections (what worked well, what will you change next time)

Grade 7 Math M-7.4	**KAS Standard:** Solve real-world and mathematical problems involving the four operations with rational numbers.	**Accommodations and Supports (Should align with IEP)**
KAS-KAAP Content Assessment Standard: Solve real-world and mathematical problems involving the four operations with rational numbers.		
What does the student need to know to begin? (pre-requisite skills) conceptual understanding of addition, subtraction, multiplication, and division, holistic problem solving, calculator skills, content specific vocabulary.		
What will the student be able to do? (student outcomes)		
How will you task analyze the skill?		
How will you teach this? (SDI, strategies) problems without numbers, math balance, coach, ladders, workout, Elementary and MS Math book, manipulatives, unifix cubes, bingo chips, number cards, ten frames, subsidizing cards, math fact war card game, black jack card games, snap, rummy, building a problem using number cards, dice, comparison models using manipulatives.		
What materials will be needed?		
What will daily checks for understanding look like? (formative assessment)		
What were the outcomes of your practice test (summative assessment)?		

Reflections (what worked well, what will you change next time)

Grade 7 Math M-7.5	**KAS Standard:** Solve 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.	**Accommodations and Supports (Should align with IEP)**
KAS-KAAP Content Assessment Standard: Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas, (triangles and quadrilaterals) from a scale drawing.		
What does the student need to know to begin? (pre-requisite skills) 1) content specific vocabulary, calculator, determine formula needed/recognize formulas, multiply, solve for unknown missing link, knowledge of shapes.		
What will the student be able to do? (student outcomes)		
How will you task analyze the skill?		
How will you teach this? (SDI, strategies) graph paper, geoboards, carpet squares, unit blocks, tiles, online geoboards (NCTM.org), tinker toys to model problems without numbers, coach, workout, ladders, scavenger hunt for shapes throughout building, carpet installation for the room, matching visual representation to number equations.		
What materials will be needed?		
What will daily checks for understanding look like? (formative assessment)		

What were the outcomes of your practice test (summative assessment)?
Reflections (what worked well, what will you change next time)

Grade 7 Math M-7.6	**KAS Standard:** 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.	**Accommodations and Supports (Should align with IEP)**
	KAS-KAAP Content Assessment Standard: Solve real-world or mathematical problems involving volume and surface area of three dimensional objects composed of cubes and right prisms.	
What does the student need to know to begin? (pre-requisite skills) calculator skills, content specific vocabulary, determine formula needed, knowledge of shape properties, relationship of area, surface area, and volume.		
What will the student be able to do? (student outcomes)		
How will you task analyze the skill?		
How will you teach this? (SDI, strategies) coach, ladders, workout, Elementary and MS math book, websites (NCTM.org), manipulatives, use graph paper to determine individual surface are and then fold to create 3-dimensions, filling “fish tank” with unit blocks, match equation cards to visual representation of volume.		
What materials will be needed?		

What will daily checks for understanding look like? (formative assessment)
What were the outcomes of your practice test (summative assessment)?
Reflections (what worked well, what will you change next time)