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### UPPER ELEMENTARY MATH INTERVENTION OVERVIEW

This intervention curriculum was specifically designed for upper elementary students who need additional math instruction in order to be successful in mastering essential math standards. This curriculum was not designed for students who simply need a bit of extra instruction, time, or practice. Instead, this curriculum was designed for upper elementary students who experience difficulty with number sense, generalizing math concepts, have significant gaps in their math understanding, and are having difficulty keeping up with and understanding their current math curriculum. This may be used as a part of your small group math instruction, math interventions, or math RTT.

This is a very flexible and versatile math intervention curriculum and is best used with small group lessons. The lessons are based on approximately 20 minutes of instruction, but more time can certainly be added to that instruction. Each lesson is broken into three components: review, focus lesson, and practice. There is a similar routine for each lesson to allow the lessons to flow quickly and to provide predictability for students. The review and practice are both very short components to the lesson, because the bulk of the lesson is focused on instruction during the focus lesson. This is NOT a series of practice or review worksheets, as the lessons focus on interaction and discussion with a little practice mixed in.

You may teach the topics in any order and skip around to reflect your math curriculum. However, it is not necessary for these lessons to match your current math workshop lessons. I find that I often need to address gaps in student understanding before students are able to access their grade level curriculum. These lessons emphasize conceptual understanding and each topic's lessons build upon the next for increased difficulty. Before beginning the lessons, I first assess students to determine their placement within each topic of this curriculum.

## UPPER ELEMENTARY MATH INTERVENTION SCOPE AND SEQUENCE

Part I Place Value	2 weeks of instruction
Part 2 Addition	3 weeks of instruction
Part 3 Subtraction	2 weeks of instruction
Part 4 Addition & Subtraction Word Problems	l week of instruction
	5 weeks of instruction (3 <sup>rd</sup> grade skips 3 <sup>rd-5th</sup> week)
Part 6 Division	4 weeks of instruction (3 <sup>rd</sup> grade skips 3 <sup>rd</sup> week)
Part 7 Multiplication & Division Word Problems	
Part 8 Fractions	5 weeks of instruction
Part 9 Decimals	l week of instruction

It is not necessary to follow this pacing guide exactly as—is. While the lessons do build upon each other. I recommend assessing students to find where their needs begin. Some students may not need to start at Week I for each unit, while other students may need to spend two weeks on Week I. Even though I am often tempted, I try to move slowly through the weeks to ensure complete understanding of the lessons before moving forward. The purpose of each lesson is to build foundational and conceptual understanding, which may take extra time.

### UPPER ELEMENTARY MATH INTERVENTION USER GUIDE

How you choose to set up and organize these intervention lessons depends on your personal preferences. I have experienced the most success by assembling an intervention binder. In the intervention binder, I keep all of my lessons and materials for each topic. I love using plastic, pocket dividers to keep all of my materials in. I punch holes in the lesson plans and keep those on the rings, and I place everything else in the pockets.

### UPPER ELEMENTARY MATH INTERVENTION USER GUIDE

I strongly encourage using this program approximately 20 minutes a day, five days a week. I am certainly aware that sometimes it's just not possible to squeeze in that extra time, so don't feel as if the lessons must be completed on Fridays. Whenever, I don't have time to complete all five lessons, I carry the lessons over to the following week, because it is not necessary to begin each new week on Monday. It is also not necessary to begin at week one. Instead, I like to first assess my students to see where their weaknesses are, and I use that information as a starting place for my interventions.

You will notice that these lessons often do not address grade level standards. Instead, they address concepts and foundational skills that are essential for number sense and for students to be able to access grade level standards. I did add an extra week to address algorithms for addition, subtraction, multiplication, and division. Anytime you are teaching a particular concept and you feel that students did not grasp the lesson, be sure to spend another day revisiting that concept before moving on. This is when I take the opportunity to slow down and allow students fully grasp the concept.

In these lessons, the number talk will also serve as a review and will not always follow skill taught during the lesson. Despite the difference, this is an essential part of this intervention program. This is a powerful way to allow students to strengthen students' number sense and reasoning skills. The number talks should be completed orally, and students should be encouraged to use the strategy of the week for the number talk.

# PLACE VALUE-THROUGH 6-DIGIT NUMBERS

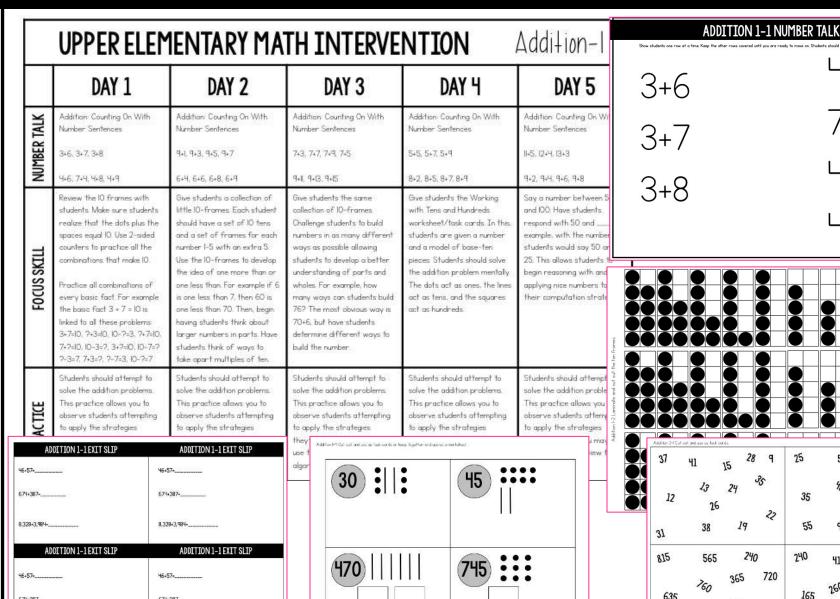
	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5		se Value I-2					
NUMBER TALK	Addition Adding On Ask students how many dots they see and how do they see them. Printable Included	Addition Adding On: Ask students how many dots they see and how do they see them. Printable Included	Addition Adding On: Ask students how many dats they see and how do they see them. Printable Included	Addition Adding students how mo see and how do them Printable I	2 0	4		6		8		
FOCUS SKILL	Explain how each house is braken into hundreds, tens, and ones. Help students read large numbers using the houses. Then, have students write the number in expanded form.  Give the students a number and have them write the number on the houses. Once the students' knowledge is secure ask them to read numbers without houses. If needed, spend multiple days on this lesson, slawly increasing the size of the numbers.	Have students use the fans to show numbers. As the students' knowledge develops, bigger numbers may be used. For example: 134, then 2,345, then 45,702, and 803,856. No digit can be repeated in a number because the fans have no repeated digits.  Have students show the number that comes after or before given numbers. Have students show the number 10/100/1000 after or before given numbers.  *Laminating makes them a little slippery for students.	Point to random spots in the thousands book and have students identify the missing number. Discuss what moving one square to the right or left does to the size of the number (increases/decreases by one). Ask what moving one square down or up does (increases/decreases by 10), and what moving through to the next/previous page does (increases/decreases by 100).  Don't give away books as they will be used again.	Give students an aim of the game every floor of the with numbers in player cannot player to ralling died. For digits ralled, deadigit number the Have students renumber on the le racket where the best fits between number is writte be moved. This can be done with 2, 3, and 4 digit numbers.	T C Serections: Print on cardstock, laminate, and C C C C C C C C C C C C C C C C C C C	d cut out. P	101	Y	10	0	8 9 18 1	H IO P 200 P 300 P
PRACTICE	Students write a four digit number in expanded form, and identify the place value and value of a digit.	Students write a five digit number in expanded form, and identify the place value and value of a digit.	Student write number in expo- identify the pla value of a digit	The Thousands House	ONES	131	102 103	104 II	05 106 105	157	158 15	100   100   120   130   140   150   150   170   180

## ADDITION-UP TO ADDING 4-DIGIT BY 4-DIGIT NUMBERS

65

125

350



674+387-\_\_\_

8.328+3,984+\_\_\_\_

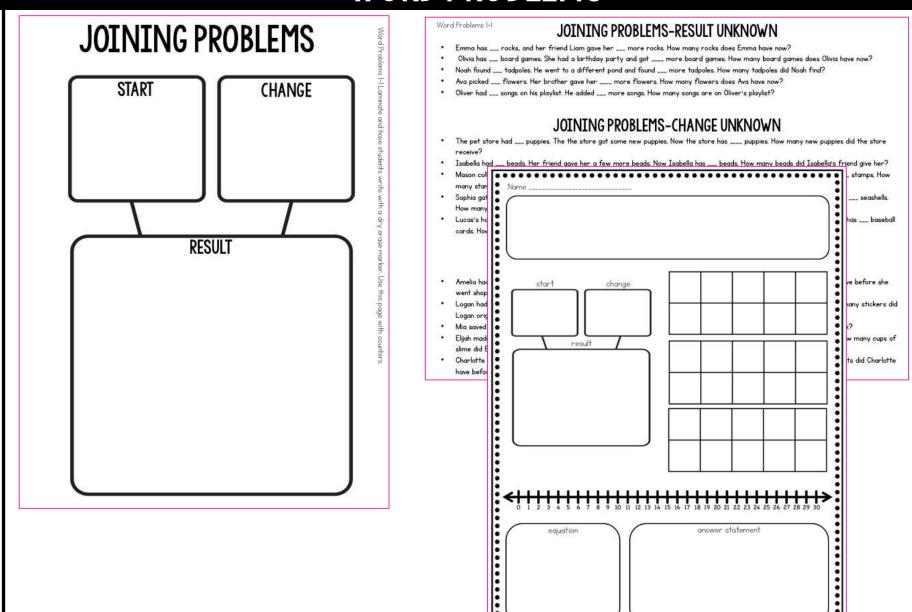
674+387-\_\_\_\_

8.328+3.984-\_\_\_\_\_

# SUBTRACTION-UP TO SUBTRACTING 4-DIGIT BY 4-DIGIT NUMBERS

	UPPER ELE	M	<u>ENIAR</u>	Y MA	IHT	NIERVE	NOTIN		Subtraction	1ens	ones
	DAY 1		DAY	2	1	DAY 3	DAY	4	DAY 5		
NUMBER TALK	Addition: Making Friendly Numbers 10+20, 9+19, 9+29, 9+39		Addition: Making To Sentences 25+25, 26+25, 26+2		Friendly 1	Making Landmark or Numbers 1+29, 18+28, 18+26	Addition: Making I Friendly Numbers 10+20, 9+18, 10+30		Addition Making Lands Friendly Numbers 30+30, 29+29, 28+29, 2		
FOCUS SKILL	Give students a blank ten- frome card and place IO counters on it and ask the students to imagine removing some of the counters for example, ask students to mentally remove four of the counters. Students should image four counters removes and see that there are six	9	Provide a set of lit frame cards for s can use the same s previous lessons or new set. Have one make a 2-digit num both students shou mentally to determ goes with the ten- amount to make 10	students You set from print a student inber Then, ald work nine what frame	ten-fram make a gi with the I cards. Th remove a the ten-f laminated an the te	lents the set of little nes. Have students to riven 2-digit number little ten-frame nen, have students a given amount from frame cards. If d. students can write en-frames to show wal of dots. This will	Provide a set of I frame cards for students One stu make a rumber g 50, and one stude make a rumber le Both number she placed where studently see the car smaller number s'	each of two dent should reater than ent should ess than 50 ould be dents can ds. The hould then	Introduce the concept regrouping with snap and students any 2-di number and I-digit num that requires regroup Students should use the cubes to build the 2-di number on the place withen students should the I-digit number (2-digit number (2	g nt in in in in in in in in in in in in in	
<b>.</b>	counters left. Then have students remove the four counters to check their thinking. Repeat until students feel comfortable with this process.	is .	students check the counting with their frames to see if th IOO. If needed, sta and work students working with IOO.	ten- he total is art with 50 toward	regrouping that is fa	dents to SEE ng in a natural way amiliar to students	be subtracted fro larger number. The students to newer previous lesson.	nts allows w the	the student is ready) students work, show relationship to the als	SUBTRACTION 1-5 EXIT SLIP 643-37= 362-287=	SUBTRACTION 1-5 EXIT SLIP 643-37=
PRACTICE	Have students complete thre subtraction problems. To problems get progressi mare difficult, so you in have students omit problems they are not ready for the students of		46 -39	A STATE OF THE STA	Subtraction 2-1	84 - <u>58</u>	98 -69	s. The essively su may problems for:	Have students comple subtraction problems problems get progre- more difficult, so you have students omit pi they are not ready fi	4,352-168= SUBTRACTION 1-5 EXIT SLIP	4,352-168= SUBTRACTION 1-5 EXIT SLIP
	Guided Practice		80 - <u>37</u>	86 - <u>6</u> 0		95 - <u>48</u>	87 - <u>28</u>			643-37= 362-287= 4,352-168=	643-37=
	Independent	Practice	74 - <u>49</u>	85 - <u>5</u> 0		75 - <u>26</u>	96 - <u>68</u>				

# WORD PROBLEMS



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# MULTIPLICATION-UP TO 2-DIGIT BY 2-DIGIT

multiplication equation from a

grouping model and represent

a problem with a grouping

	UPPEK ELEI	IENTARY MA	IH TIJI FKAF	NIION Mul	+ipiica+ion-i	MULTIPLICATION GAME MAT SPIN 1-DRAW THAT MANY GROUPS SPIN 2-DRAW THAT MANY DOTS IN EACH GROUP
	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	
NUMBER TALK	Addition: Adding Up In Chunks 26+10, 26+30, 26+50, 26+53	Addition: Adding Up In Chunks: 32+10, 32+14, 32+20, 32+25	Addition Adding Up In Chunks 16+10, 16+20, 16+40, 16+42	Addition: Adding Up In Chunks: 35+10, 35+20, 35+40, 35+42	Addition: Adding Up In Chunks 44+10, 44+12, 44+30, 44+35	
FOCUS SKILL	Give students the Multiplication Game Mat. Students will play this game to begin developing and understanding of multiplication. Students should spin once to determine how many groups they will have. Students will spin again to determine how many counters to place in each group. Students should use repeated addition and a multiplication number sentence to show how many total data there are. Students should also verbalize, there are x groups of x*	Show students the equation card for 3 groups of 2 and have students give a multiplication equation using times and groups. Repeat with all other ways to have 6 in all. Use the equation cards to show students how to fill in the Equation Chart. Have students notice that the first three have been completed for them. Have students use their counters to find all of the possible equations for numbers 1-24.	Read Amanda Bean's Amazing Diream to students (this is a longer than a typical lesson, so this could be broken into two days). After reading, have students look at illustrations and find examples of multiplication situations. After finding an example, have students write a multiplication equation and statement on the Amanda Bean recording sheet. For example, there are five jars of teabags with two teabags in each jar for 10 total feabags.	Show students how to use counters or tiles to represent multiplication problems through arrays. Model an example and show students how to read the array as an addition problem and as a multiplication problem. Refer back to Amanda Bean's Amazing Dream, and have students build arrays to represent the multiplication situations described in the previous lesson. Once students are ready, have them draw concrete representations on the recording sheet.	Have students find multiplication expressions and the corresponding arrays for numbers 12-36. Students should use color tiles to explore the possible arrays and record the rectangles and a multiplication equation on grid paper. Students should group together all arrays with the same number of squares for observations and a discussion about the patterns they notice. For example, all even numbers can be broken into two equal rows.	Use addition to show how many total dats you drew.  Multiplication 1-2: EQUAT  ***

multiplication equation from a

grouping model and represent

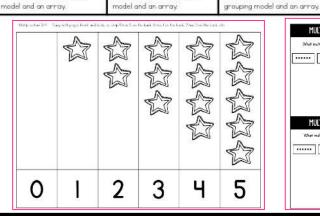
a problem with a grouping

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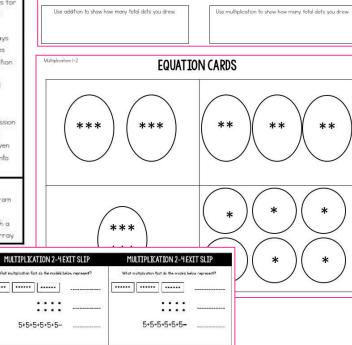
represent a problem with a

MULTIPLICATION 2-4 EXIT SLIP

5+5+5+5+5+5

..... .....

a grouping model and



MULTIPLICATION 2-4 EXIT SLIP

5+5+5+5+5-5-

.....

NUMBER OF GROUPS

NUMBER IN EACH GROUP

# DIVISION-UP TO 4-DIGIT DIVIDED BY 1-DIGIT

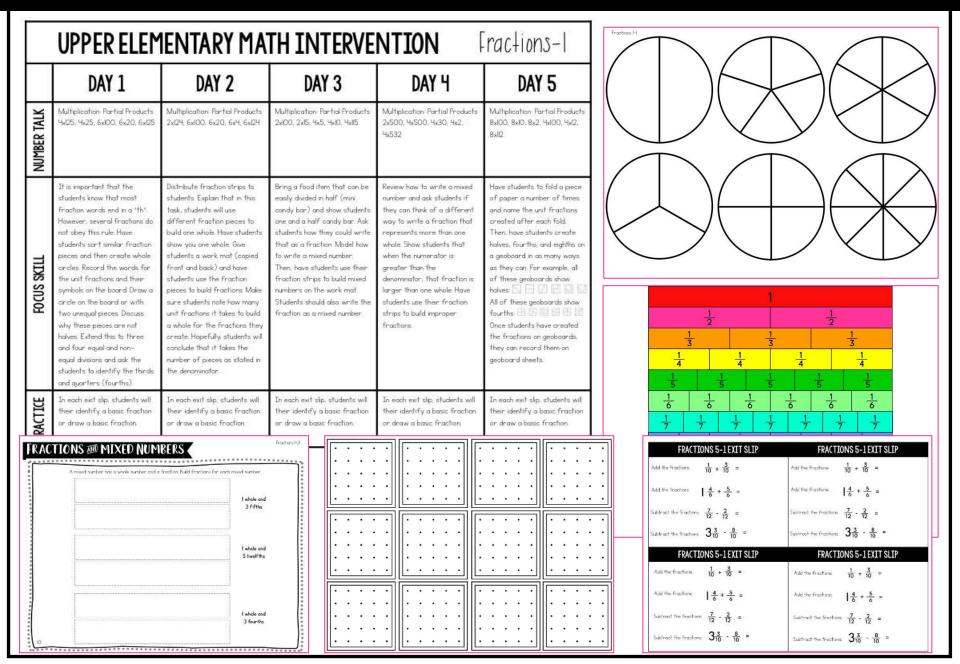
	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
NUMBER TALK	Subtraction: Making Friendly Numbers 34-15, 30-15, 24-15, 32-15	Subtraction Making Friendly Numbers 30-PL 29-PL 40-PL 39-PI	Subtraction Making Friendly Numbers 51-25, 59-25, 49-25, 52-25	Subtraction: Making Friendly Numbers 37-18, 38-18, 44-25, 45-25	Subtraction Making Friendly Numbers 20-5, 21-15, 19-15, 22-15
FOCUS SKILL	Set out 15 counters and give the problem "Five children have 5 coins altogether: How many does each child have?" Without touching the 15 counters, ask students to imagine how many coins each child gets and to discuss why they think this is so Check by sharing out the objects. Write 15-5=3 on the board Link this problem to the multiplication fact \$k3245. Repeat for other multiplication facts that the students know by instant recall. No printable needed.	Give the problem "Seventeen concles are shared among three children. How many will each child get?" By working with counters, students should realize that there is no way to divide the 17 candles equally. Explain to students that in this situation, there is a remainder to the division problem. Model how to write the division equation with a remainder. Repeal by giving both the number of groups and the number in each group.  No printable needed.	Give students a supply of color tiles and small paper cups. Have students count out a number of tiles to be the whole or total set. Students should record this number. Then, give either the number of equal sets to be made. Have students separate their tiles into equal groups and write the division and corresponding multiplication equation for what their materials show. Guide students into making arrays with their tiles. No printable needed.	Present more problems in context and have students move from manipulation with counters to drawing models of counters. Focus on the related multiplication equation to prevent students from building incorrect arrays. For examples in IZ/4, many students will try to build an array of 4xi2, rather than 3x4.	Have students place 3 colored counters on 24 on the number line. Explain that each counter has to jump back to zero. The red counter can jump two numbers at a time, the blue counter can jump from the green counter can jump four numbers at a time, and the green counter can jump four numbers at a time. Have students predict how many jumps will be required for each color and explain their reasoning. Have students to jump pegs along the number line to check their predictions. Ask students to record the number each counter landed on and how many jumps were taken. Ex. blue 1433-3 and 24-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3
H	Students will write equation from division models and will	Students will write equation from division models and will	Students will write equation from division models and will	Students will write equation from division models and will	Students will write equation from division models and will

I bought 12 pencils and placed them in packages of three. How many pencils are in each package?	I have 16 pencils and equally placed them into two packages. How many pencils are in each package?	I have 18 pencils and placed them into grou of three. How many groups of pencils do have?		
Grouping Model:	Grouping Model	Grouping Model		
Array:	Array:	Array:		
Equation	Equation	Equation		
There are 20 counters divided among four children. How many tiles does each child get?	There are 24 counters in groups of six. How many groups of counters are there?	There are 25 counters placed into four equiposes. How many counters are in each group?		
Grouping Model:	Grouping Model	Grouping Model  Array:		
Array:	Aeray:			
Equation:	Equation:	Equation		

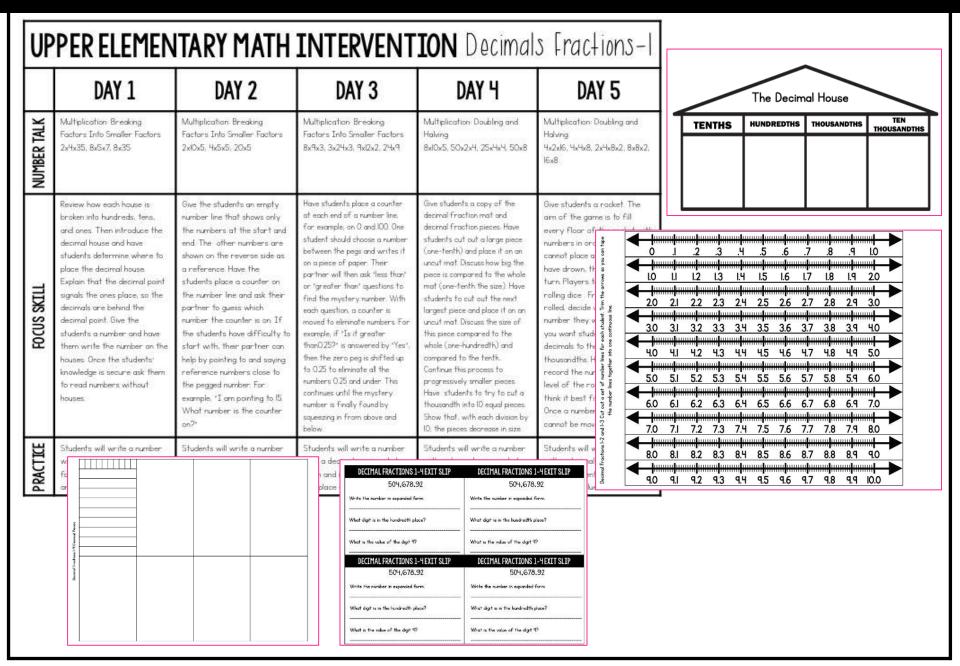
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3		Number of Rows		Number	en Each i	inu					N	enter in fi	ach Row		
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		Number of Rows	sk the arro				bolve 85 + 5		f Rows	eak the				olve 72+	4
		Number of Rows	ak the arro				tolve 85+5		f Rows	esk the				alve 72+	4
		Number of Rows	ak the arro				todive BS+5		f Rows	eak the				olve 724	4
		Number of Rows	ak the arro				solve 85÷5		f Rows	esk the				alve 72+	4
		Number of Rows	ak the arro	and ten	s and or	nes to s			f Rows	esk the	array in	to tiens an	id over to s		4
		Number of Rows	sk the arro		s and or	nes to s			f Rows	ask the	array in	to tiens an			4

HOW CAN EXCHANGE 24 PENNIES FOR DIMES? Parture Model	HOW CAN EXCHANGE 32 PENNITES FOR DIMES? Picture Model	HOW CAN EXCHANGE 18 PENNIES FOR DIMES Firsture Model		
Serlence Stem	Senfence Stem	Sentence Stem		
24 permies equals groups of with left over:	24 pernies equals groups of with left over.	24 pernies equals groups at with left over.		
Division Equation	Division Equation	Division Equation		
HOW CAN EXCHANGE 45 PENNIES FOR DIMES? Parture Model	HOW CAN EXCHANGE 29 PENNIES FOR ILLYESP Parture Model	HOW CANEXCHANGE 31 PENNIES FOR DITIES Picture Model		
Sections Stem	Servence Stem	Sentence Stem		
24 pervies equals groups of with left over	24 pernies equals groups of with left over.	24 pernies equals groups with left over.		
Enisian Equation	Division Equation	Division Equation		

## FRACTIONS-COMPARING, EQUIVALENT, ADDING, & SUBTRACTING



### **DECIMALS**



# DECIMAL-FRACTIONS 1-5 NUMBER TALK

Show students one row at a time. Keep the other rows covered until you are ready to move on. Students should explain how they used the strategy.

4x2x16

4x4x8

2x4x8x2

8x8x2

16x8

	Decimal Fr	actions I-5 Cut	out a strip for	each student.		

DECIMAL FRACTIONS 1-5 EXIT SLIP	DECIMAL FRACTIONS 1-5 EXIT SLIP
67,346.850	67,346.850
Write the number in expanded form.	Write the number in expanded form.
What digit is in the hundredth place?	What digit is in the hundredth place?
What is the value of the digit 8?	What is the value of the digit 8?
DECIMAL FRACTIONS 1-5 EXIT SLIP	DECIMAL FRACTIONS 1-5 EXIT SLIP
DECIMAL FRACTIONS 1-5 EXIT SLIP 67,346.850	DECIMAL FRACTIONS 1-5 EXIT SLIP 67,346.850
67,346.850	67,346.850

## Thank You!

Thank you so much for your purchase. I hope that you are thrilled with this product! If you have any questions or concerns, feel free to email me at <a href="mailto:ashleigh\_60@hotmail.com">ashleigh\_60@hotmail.com</a>. You can visit my blog ashleigh-educationjourney.com for lots of ideas, pictures of instructional ideas and products in use, and bonus freebies!

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# Facebook Group

You may join a Facebook group to work with other upper elementary teachers. This groups offers product support and general classroom help as well.

upperelementaryeducators.com

## About Ashleigh



Ashleigh has taught upper elementary school for the past 15 years. Ashleigh has a Bachelors of Science in Elementary Education, and a Masters Degree in Curriculum and Instruction. She also has an Education Specialist in Brain Research, and she has earned her Gifted Endorsement. She is currently working toward her Google Classroom Certification.