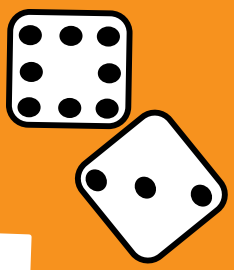
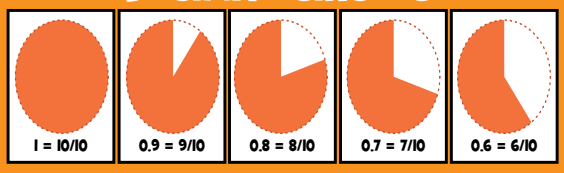
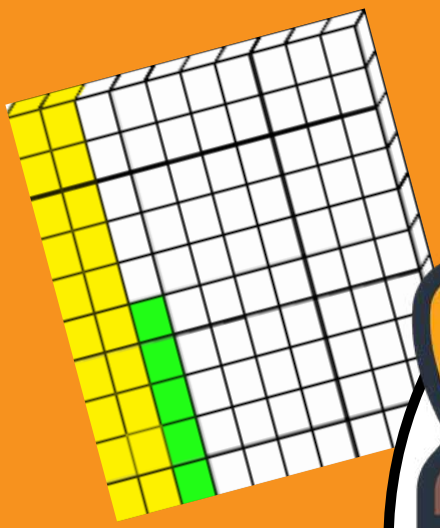
GUIDED MATH TEACHER'S DECIMAL TOOL KIT

3-5



DECIMAL CIRCLES





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0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.20
0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30
0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40
0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50
0.51	0.52	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.60
0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.69	0.70
0.71	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.80
0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.89	0.90
0.91	0.92	0.93	0.94	0.95	0.96	0.97	0.98	0.99	1.00

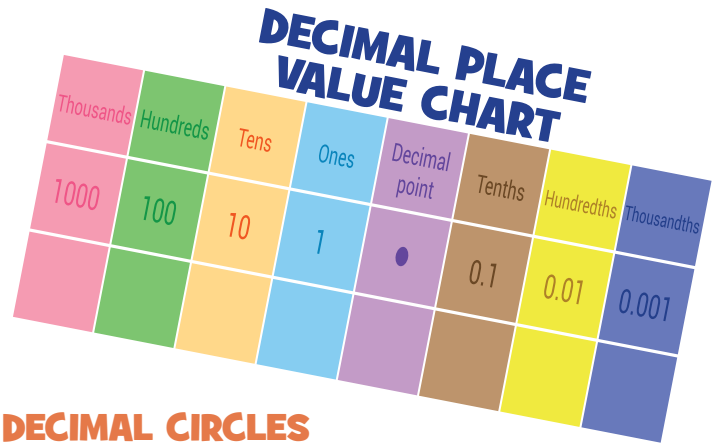
DECIMAL WALL

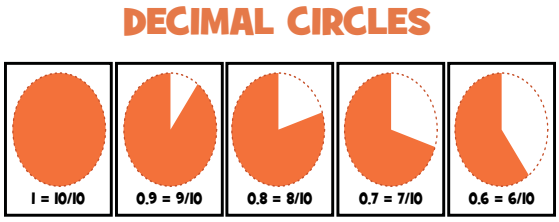
1.0				
0.5				0.5
0.333		0.333		0.333
0.25	0.25		0.25	0.25
0.2	0.2	0.2	0.2	0.2
0.167	0.167	0.167	0.167	0.167
0.125	0.125	0.125	0.125	0.125
0.1	0.1	0.1	0.1	0.1
0.08	0.08	0.08	0.08	0.08

DR. NICKI NEWTON

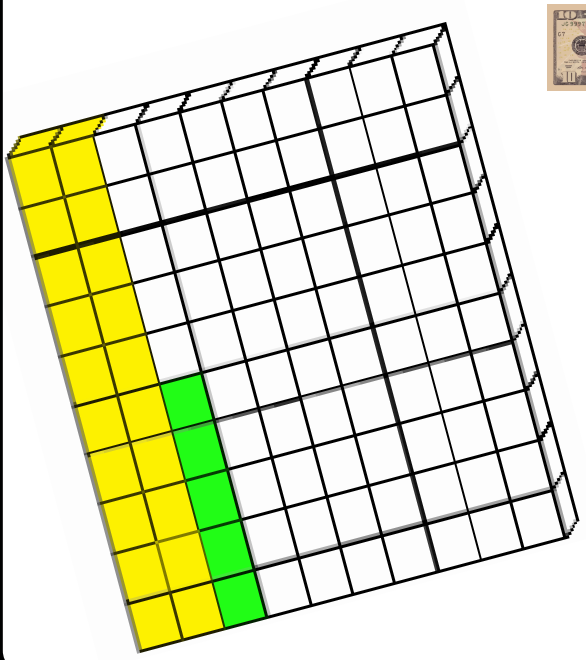
Math Fact Fluency Playground

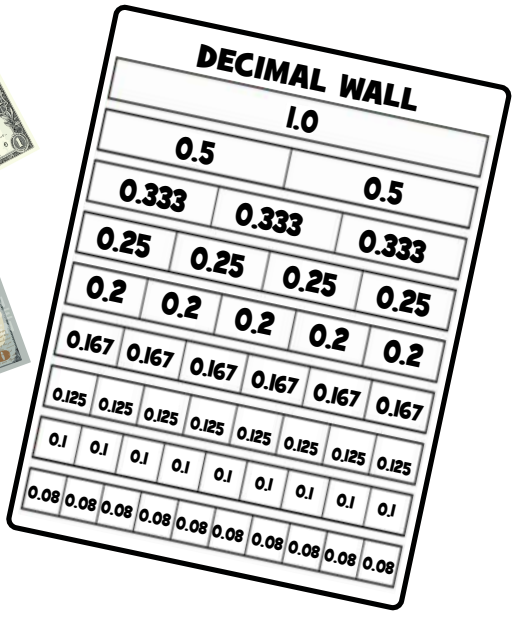
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10
0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.20
0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30
0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40
0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50
0.51	0.52	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.60
0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.69	0.70
0.71	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.80
0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.89	0.90
0.91	0.92	0.93	0.94	0.95	0.96	0.97	0.98	0.99	1.00





DECIMAL TOOL KIT





Guided Math Teacher's Decimal Toolkit

3-5

Dr. Nicki Newton

Math Fact Fluency Playground

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Other Books in this Series

Guided Math Teacher's Addition Toolkit
Guided Math Teacher's Division Toolkit
Guided Math Teacher's Hundred Grid Toolkit
Guided Math Teacher's Multiplication Toolkit
Guided Math Teacher's Number Paths,
Number Ladders, and Number Lines Toolkit
Guided Math Teacher's Subtraction Toolkit

Math Fact Fluency Playground

Dedicated to Mom and Pops, Always

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Acknowledgement

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Author's Note

Welcome to this book!

I am so excited that you are here to share this with me. This is the everything you ever wanted, needed, thought you might need, never even knew that you needed mega book of guided math subtraction templates. This book is organized by the priority standards topics that you will teach in k-2 for adding and subtracting within 20. It is written as a k-2 book in the spirit of acceleration and differentiation. The templates are differentiated along the learning progression so that you can meet your students where they are in small groups.

How to Use this Book!
This book has templates that the teacher can use for guided math groups, whole class activities, workstations and homework! The teacher can pull the different templates and make a binder for each person in the group. In the binder, put the templates in sheet protectors or laminate them so they can be used over and over again! Each student will have their own binder and they can use it as needed!

Big Ideas/Priority Standards
This book is aligned to the Big Ideas/Priority standards in k-2. It can be used as a supplement to any program. We have created a variety of templates to address the variations in state standards. These templates will provide you a way to reach back to catch up as well as extend learning for those students who are ready to go to the next steps.

Learning Trajectories
Speaking of steps, we have based all of our templates with the learning trajectories in mind. A learning trajectory is a developmental path that shows the landscape of learning a particular concept. Clements and Sarama have written extensively about learning trajectories (www.learningtrajectories.org). In the front of each book, you will find the learning trajectories for the topic.

Guided Math

Guided Math is a way of teaching students in small groups. Small groups allow us to get up close and personal with our students and their learning. In a small guided math group, there should be no more than 3-5 students. Groups meet for 10-15 minutes. The focus is on DOING MATH. These templates help you to do just that! They provide a space for students to explore, think, talk and work. In the small guided math group, students will make sense of math through working with their peers, their teacher and the different math materials (thinking mats, manipulatives, vocabulary/language talk frames). While students are working together, the teacher guides them, asks important questions and provides the necessary feedback on their attempts at making sense of the math so that they can make the necessary connections and corrections and build a deeper understanding of the math concepts. The learning spirals and children build on prior knowledge as they engage in new experiences. (Dewey 1933/1998; Piaget, 1972; Vygotsky, 1978; Bruner. 1973, 1990). In the guided math group, the student's should spend most of the time doing math rather than listening to the teacher talk about math.

Experiences are scaffolded in a way to maximize the learning opportunities. Students are working in their Zone of Proximal Development, meaning that they are working at a level that is just right, not too easy and not too difficult (Vygotsky, 1978). Through interaction with more capable peers, adults who are facilitating their learning and artifacts (in this case appropriately selected materials such as manipulatives, books, computer programs etc.), students make meaning of the math (Vygotsky).

Differentiated Instruction

As Coco Aguirre (my mentor teacher) had hanging above the threshold of her door, "If a student doesn't learn the way you teach, then teach the way they learn." This is a simple but powerful truth. Meet the children where they are and then take them to the next level. For me, differentiation is about always asking myself, "If they aren't getting it, what can I do differently?" These templates provide you an option to scaffold the learning so that all students have access to the grade level content!

Tomlinson (1999) speaks of how differentiated instruction results in academically responsive classrooms. In this type of classroom teachers are aware of the academic levels of their students and create curriculum designed to respond to their needs. Tomlinson stated that at its most basic level, differentiating instruction means "shaking up" what goes on in the classroom so that students have multiple options for taking in information, making sense of ideas, and expressing what they learn. In other words, a differentiated classroom provides different avenues to acquiring content, to processing or making sense of ideas, and to developing products so that each student can learn effectively (2001).

While differentiation "advocates attending to students as individuals, it does not assume a separate assignment for each learner"(Tomlinson). "Differentiation needs to be student-centered, rooted in assessment, and dynamic" Serravallo, 2010. We are constantly adjusting our teaching in response to what students are telling and showing us in their work and talk. Teachers who differentiate must take the time to get to know their
students well. They have to understand them as people, learners and know what motivates them to reach their goals. Robb notes that "Differentiation is a way of teaching, it's not a program or a package of worksheets. It asks teachers to know their students well so they can provide each one with experiences and tasks that will improve learning" (2008, p.13).

Math Talk

One of the most important things that happen in the math class is the discussion. We have to teach students to be active participants and engaged listeners. We want them to respect each other deeply and seek to truly understand each other without judgment. They have to learn to develop and defend their thinking, justify their answers and respectfully disagree with each other. The National Council of Teachers of Mathematics (NCTM) defines math talk as "the ways of representing, thinking, talking, and agreeing and disagreeing that teachers and students use to engage in [mathematical] tasks" (NCTM, 1991).

Questioning

It is so important to ask good questions. The questions should reach beyond the answer. As Phil Daro notes, we have togo“beyondanswer-getting(https://vimeo.com/79916037).” The questions in the guided math group should be designed to get students to understand more fundamentally the mathematics of the grade level. Good questions don’t just happen, they are planned for. The teacher should know ahead of time the types of questions that she will ask and why she will ask them. In the plan for the lesson, the teacher should brainstorm some possible questions that push student thinking. These are not yes or no questions, but rather ones that require students to explain themselves, show what they know and defend and justify their thinking.

DECIMAL PROGRESSION

JOURNEY TO FLUENCY

FLUENCY IS

1. EFFICIENCY
2. ACCURACY
3. FLEXIBILITY

(NRC; Kilpatrick et al., 2001; NCTM 2000; NCTM, 2014).

Estimate decimal sums, differences, products and quotients.

Divide a decimal by a whole number using repeated subtraction or area models.

Divide a whole number by a decimal.

Multiply decimals with a product to hundredths and then thousandths using models, drawings, or strategies based on place value.

Solve Real World Problems about decimals.

Add decimals to hundredths and then thousandths using models, drawings or strategies based on place value.

Subtract decimals to hundredths and then thousands using models, drawings or strategies based on place value.

Write decimals using base ten numerals, number names and expanded form.

Round decimals to the nearest tenth, hundredth and thousandth.

Order decimals by tenths, hundredths and thousandths.

Compare 2 decimals to hundredths and then thousandths based on the value of the digits in each place. Use symbols to record the comparisons.

Use decimal notation to represent fractions.

Express, model and explain the equivalence between fractions with denominators of 10 and 100.

Use equivalent fractions to add two fractions with denominators of 10 or 100.

Represent tenths and hundredths with models making connections between fractions and decimals.

Plot tenths and hundredths on the number line.

SET A GOAL. MAKE A PLAN. ACHIEVE YOUR GOAL!

Dr. Nicki Newton 2022

DECIMAL PROGRESSION

FLUENCY IS

1. EFFICIENCY
2. ACCURACY
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(NRC; Kilpatrick et al., 2001; NCTM 2000; NCTM, 2014).

Estimate decimal sums, differences, products and quotients.

Divide a decimal by a whole number using repeated subtraction or area models.

Divide a whole number by a decimal.

Multiply decimals with a product to hundredths and then thousandths using models, drawings, or strategies based on place value.

Solve Real World Problems about decimals.

Add decimals to hundredths and then thousandths using models, drawings or strategies based on place value.

Subtract decimals to hundredths and then thousands using models, drawings or strategies based on place value.

Write decimals using base ten numerals, number names and expanded form.

Round decimals to the nearest tenth, hundredth and thousandth.

Order decimals by tenths, hundredths and thousandths.

Compare 2 decimals to hundredths and then thousandths based on the value of the digits in each place. Use symbols to record the comparisons.

Use decimal notation to represent fractions.

Express, model and explain the equivalence between fractions with denominators of 10 and 100.

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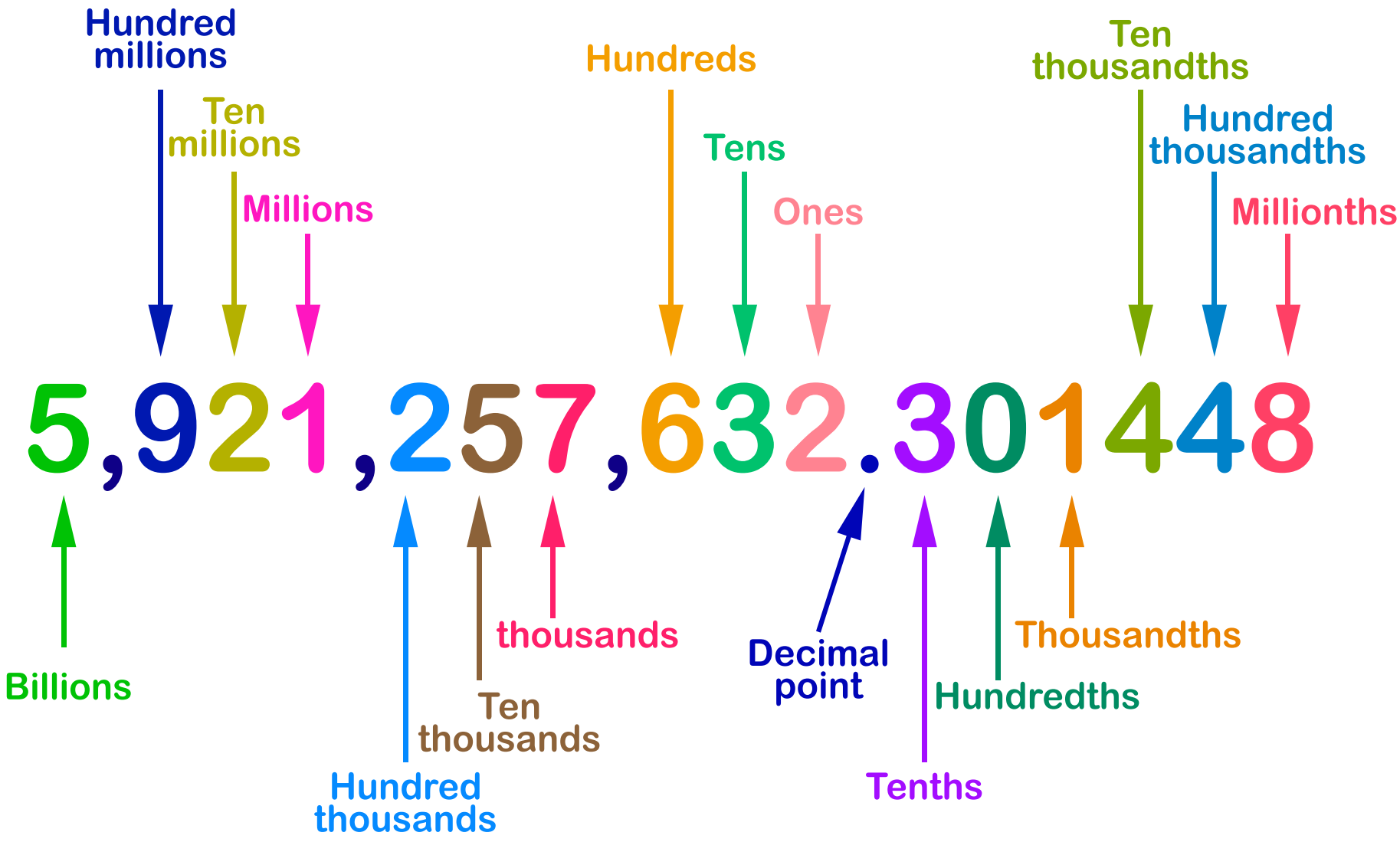
Plot tenths and hundredths on the number line.

SET A GOAL. MAKE A PLAN. ACHIEVE YOUR GOAL!

PLACE VALUE POSTER



DECIMAL PLACE VALUE CHART

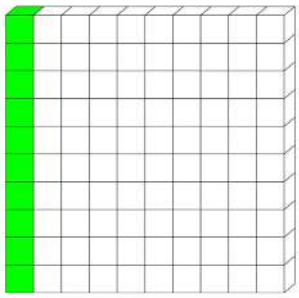
Thousands	Hundreds	Tens	Ones	Decimal point	Tenths	Hundredths	Thousandths
1000	100	10	1	•	0.1	0.01	0.001

VOCABULARY CARDS

TENTH

0.1

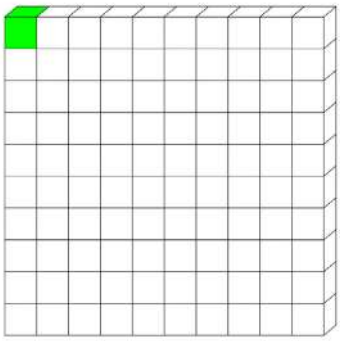
$\frac{1}{10}$



HUNDREDTH

0.01

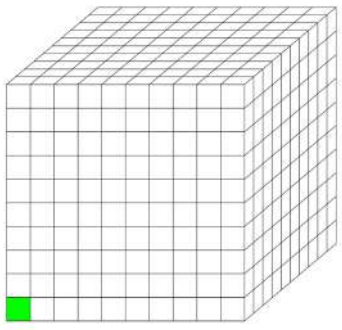
$\frac{1}{100}$



THOUSANDTH

0.001

$\frac{1}{1000}$



DECIMALS

ADDING DECIMALS

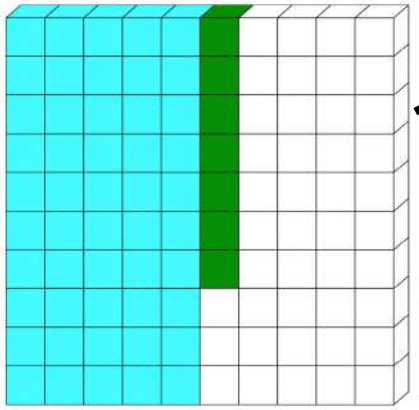
$0.5 + 0.07$

ADDING TENTHS AND HUNDREDTHS

$$\frac{5}{10} + \frac{7}{100}$$

0.57

DECIMAL GRID



WORD FORM

FIFTHY-SEVEN HUNDREDTHS

FRACTION FORM

$$\frac{57}{100}$$

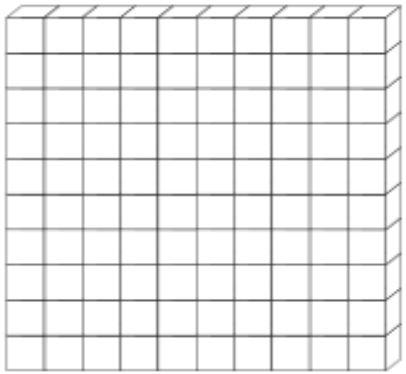
DECIMALS

ADDING DECIMALS

ADDING TENTHS AND HUNDREDTHS

NUMBER

DECIMAL GRID



WORD FORM

FRACTION FORM

DECIMAL PLACE VALUE CHART
THOUSANDS TO THOUSANDTHS

THOUSANDTHS	
HUNDREDTHS	
TENTHS	
ONES	
TENS	
HUNDREDS	
THOUSANDS	

PLACE VALUE CHART

HUNDRED MILLIONS	TEN MILLIONS	MILLIONS	HUNDRED THOUSANDS	TEN THOUSANDS	THOUSANDS	HUNDREDS	TENS	ONES	DECIMAL POINT	TENTHS	HUNDREDTHS	THOUSANDTHS	TEN THOUSANDTHS

PLACE VALUE CHART

1,000,000	100,000	10,000	1,000	100	10	1	.	0.1	0.01
MILLIONS	HUNDRED THOUSANDS	TEN THOUSANDS	THOUSANDS	HUNDREDS	TENS	ONES	.	TENTHS	HUNDREDTHS

DECIMAL PLACE VALUE CHART

ONE MILLIONS	HUNDRED THOUSANDS	TEN THOUSANDS	ONE THOUSANDS	HUNDREDS	TENS	ONES	DECIMAL POINT	TENTHS	HUNDREDTHS	THOUSANDTHS
							.			
							.			
							.			
							.			
							.			
							.			
							.			
							.			
							.			
							.			

PLACE VALUE CHART

THOUSANDTHS	
TENTHS	
DECIMAL POINT	
ONES	
TENS	
HUNDREDS	
THOUSANDS	
TEN THOUSANDS	
HUNDRED THOUSANDS	
MILLIONS	
TEN MILLIONS	
HUNDRED MILLIONS	
BILLIONS	

PLACE VALUE CHART

BILLIONS			
	HUNDRED BILLIONS		
	TEN BILLIONS		
	BILLIONS		

MILLIONS			
	ONE HUNDRED MILLIONS (100,000,000)		
	TEN MILLIONS (10,000,000)		
	MILLIONS (1,000,000)		

THOUSANDS			
	ONE HUNDRED THOUSANDS (100,000)		
	TEN THOUSANDS (10,000)		
	THOUSANDS (1,000)		

ONES			
	HUNDREDS (100)		
	TENS (10)		
	ONES (1)		

DECIMAL PLACE VALUE CHART

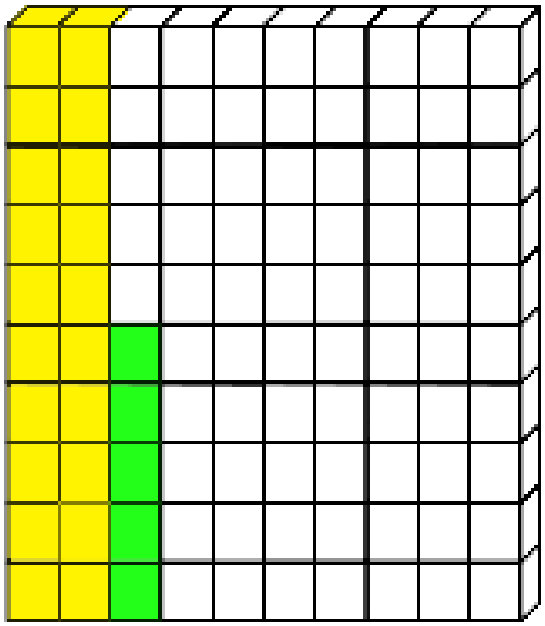
ONE THOUSANDS	HUNDREDS	TENS	ONES	DECIMAL POINT	TENTHS	HUNDREDTHS	ONE THOUSANDTHS
1000s	100s	10s	1s	.	$\frac{1}{10}$s 0.1s	$\frac{1}{100}$s 0.01s	$\frac{1}{1000}$s 0.001s
				.			
				.			
				.			
				.			
				.			
				.			
				.			
				.			
				.			
				.			

PLACE VALUE

	hundred thousands
	ten thousand
	thousand
,	say thousand
	hundreds
	tens
	ones
.	say and
	tenths
	hundredths
	thousandths
	say thousandths

PLACE VALUE

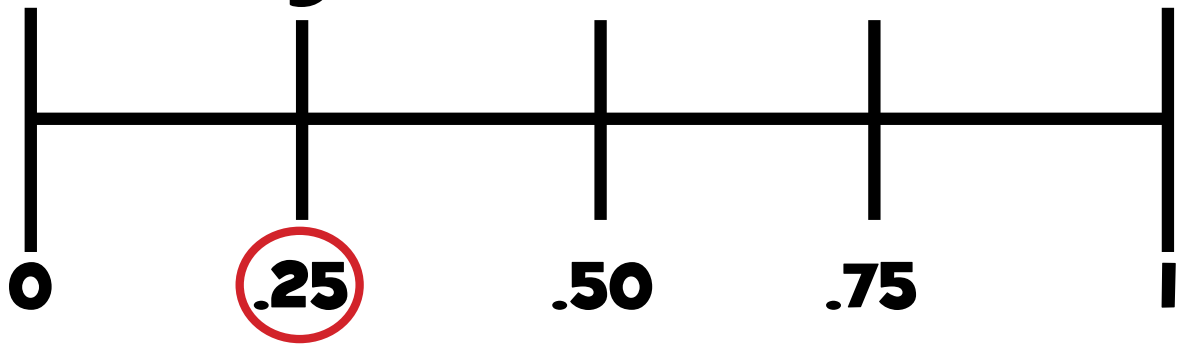
5	millions
,	say million
7	hundred thousands
2	ten thousand
9	thousand
,	say thousand
4	hundreds
1	tens
0	ones
.	say and
3	tenths
6	hundredths
8	thousandths
	say thousandths

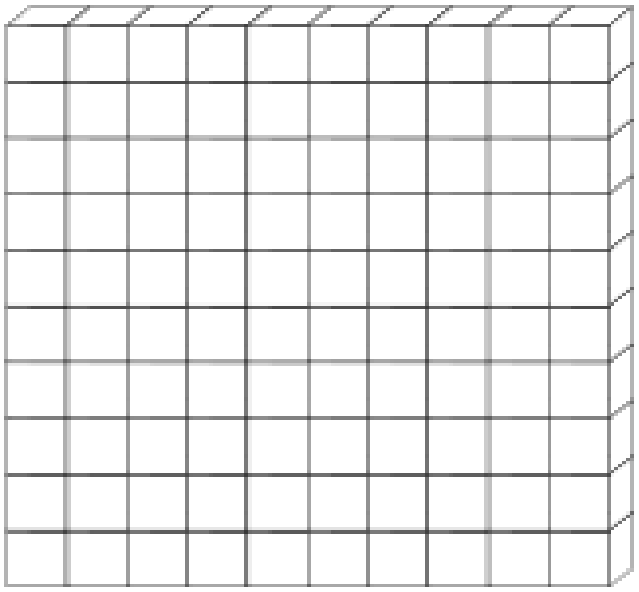


0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10
0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.20
0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30
0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40
0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50
0.51	0.52	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.60
0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.69	0.70
0.71	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.80
0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.89	0.90
0.91	0.92	0.93	0.94	0.95	0.96	0.97	0.98	0.99	1.00

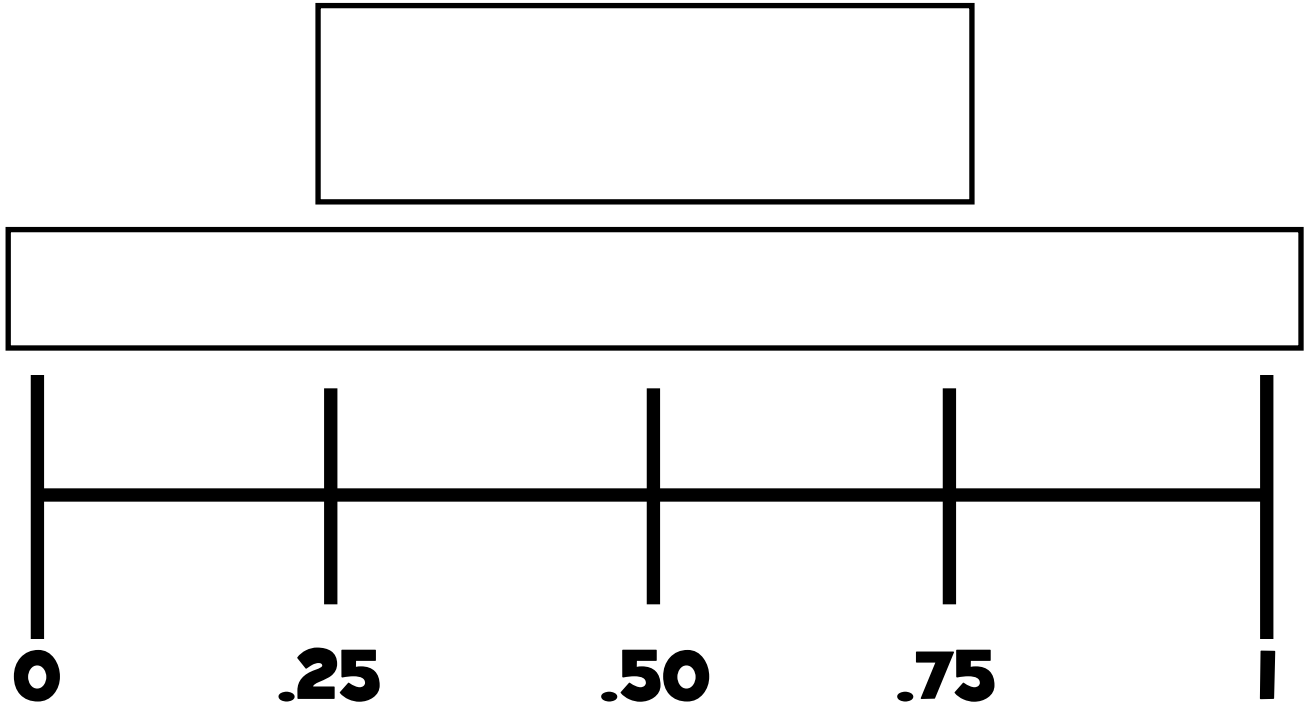
0.25

Twenty-five hundredths





0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10
0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.20
0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30
0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40
0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50
0.51	0.52	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.60
0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.69	0.70
0.71	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.80
0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.89	0.90
0.91	0.92	0.93	0.94	0.95	0.96	0.97	0.98	0.99	1.00



REPRESENTING DECIMALS

DECIMAL

.589

EXPANDED NOTATION

(5 x 1/10) + (8 x 1/100) + (9 x 1/1000)

EXPANDED FORM

.5 +0.08 +0.009

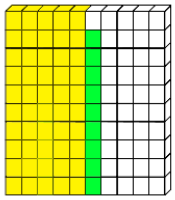
FRACTION FORM

5/10 + 8/100 + 9/1000

FRACTION FORM

589/1000

REPRESENTING DECIMALS

DECIMAL	FRACTION	DECIMAL GRID	MONEY
.59	59/100		

DECIMAL PLACE VALUE

HUNDREDS	TENS	ONES	•	TENTHS	HUNDREDTHS
			•		

REPRESENTING A DECIMAL

MONEY

HUNDREDS	TENS	ONES	•	TENTHS	HUNDREDTHS
			•		

 • 

STANDARD FORM

7.85

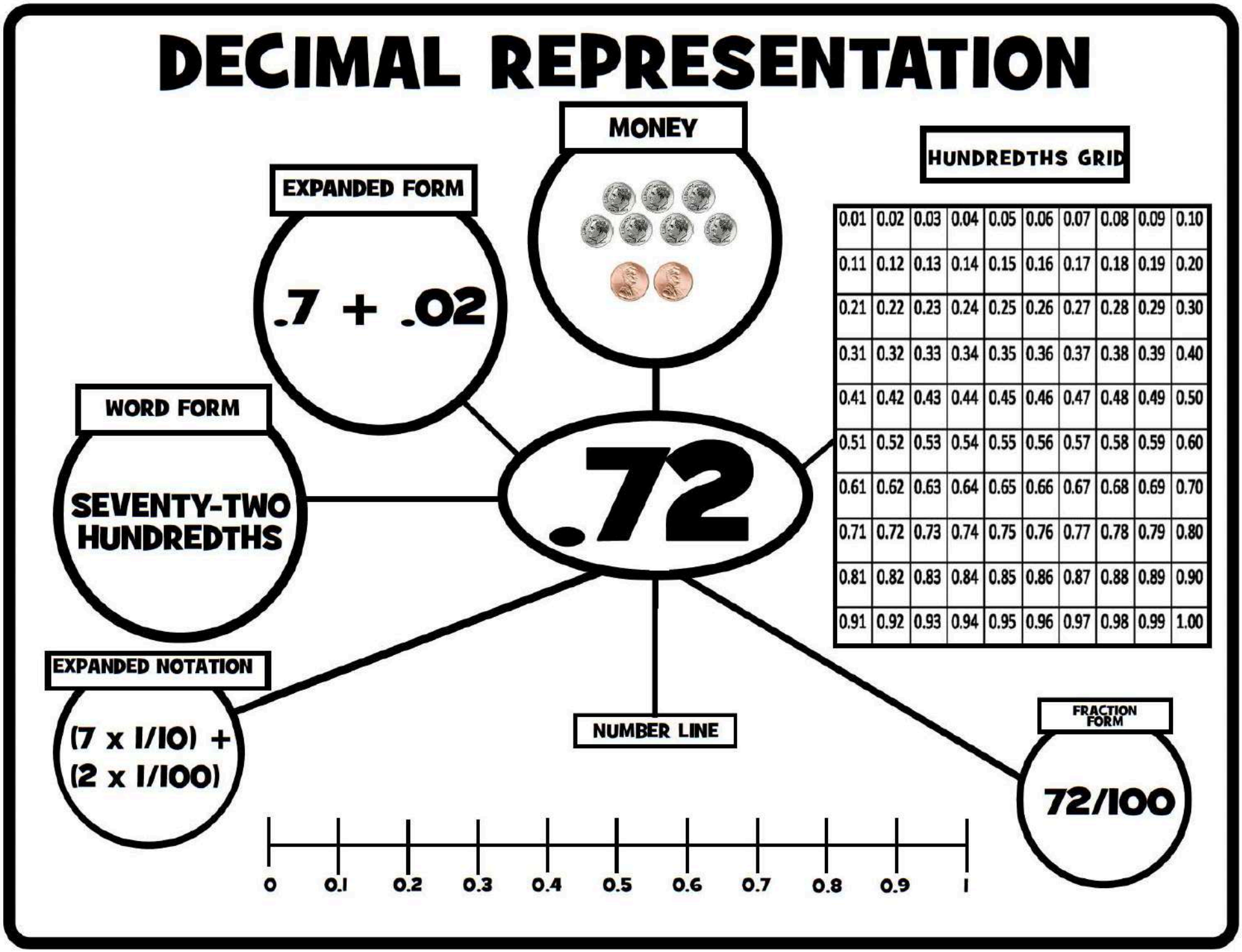
WORD FORM

SEVEN AND EIGHTY-FIVE HUNDREDTHS

EXPANDED FORM

7 + .08 + .005

DECIMAL REPRESENTATION



0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10
0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.20
0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30
0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40
0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50
0.51	0.52	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.60
0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.69	0.70
0.71	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.80
0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.89	0.90
0.91	0.92	0.93	0.94	0.95	0.96	0.97	0.98	0.99	1.00

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DECIMAL REPRESENTATION

MONEY

EXPANDED FORM

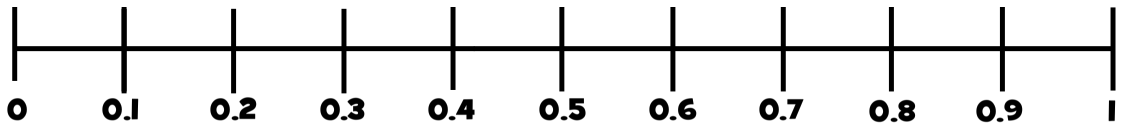
WORD FORM

STANDARD FORM

EXPANDED NOTATION

NUMBER LINE

FRACTION FORM



HUNDREDTHS GRID

0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10
0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.20
0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30
0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40
0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50
0.51	0.52	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.60
0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.69	0.70
0.71	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.80
0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.89	0.90
0.91	0.92	0.93	0.94	0.95	0.96	0.97	0.98	0.99	1.00

COMPARING DECIMALS

HUNDREDTHS GRID

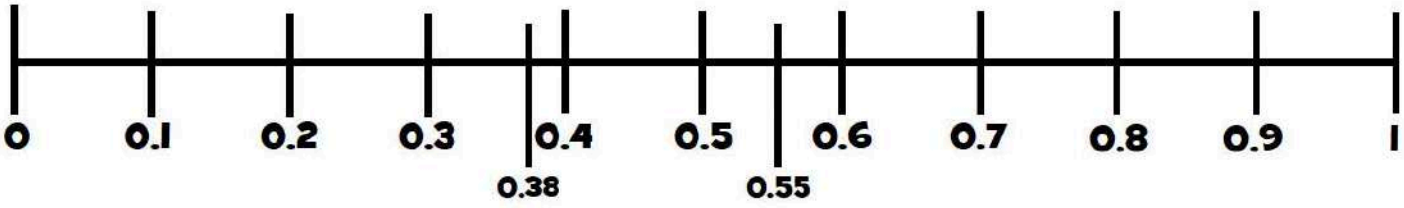
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10
0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.20
0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30
0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40
0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50
0.51	0.52	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.60
0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.69	0.70
0.71	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.80
0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.89	0.90
0.91	0.92	0.93	0.94	0.95	0.96	0.97	0.98	0.99	1.00

MONEY

USING SYMBOLS

.38 < .55

NUMBERLINE



COMPARING DECIMALS

HUNDREDTHS GRID

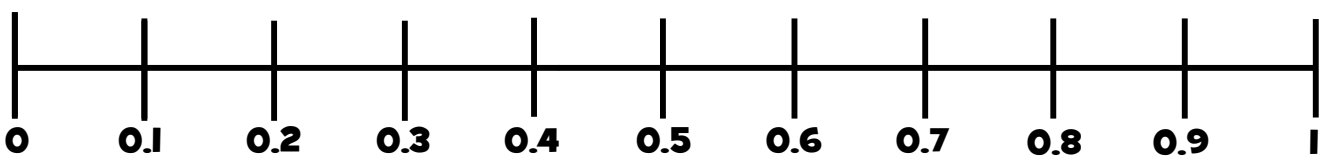
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10
0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.20
0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30
0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40
0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50
0.51	0.52	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.60
0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.69	0.70
0.71	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.80
0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.89	0.90
0.91	0.92	0.93	0.94	0.95	0.96	0.97	0.98	0.99	1.00

MONEY

USING SYMBOLS

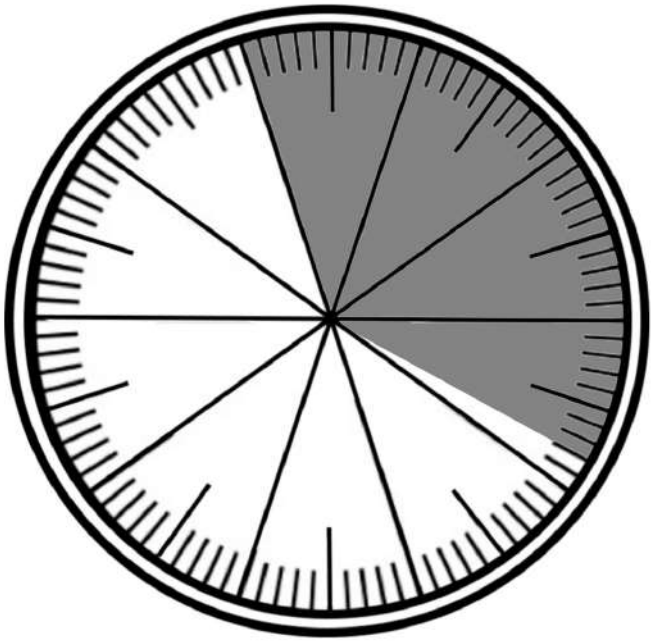
_____ ☐ _____

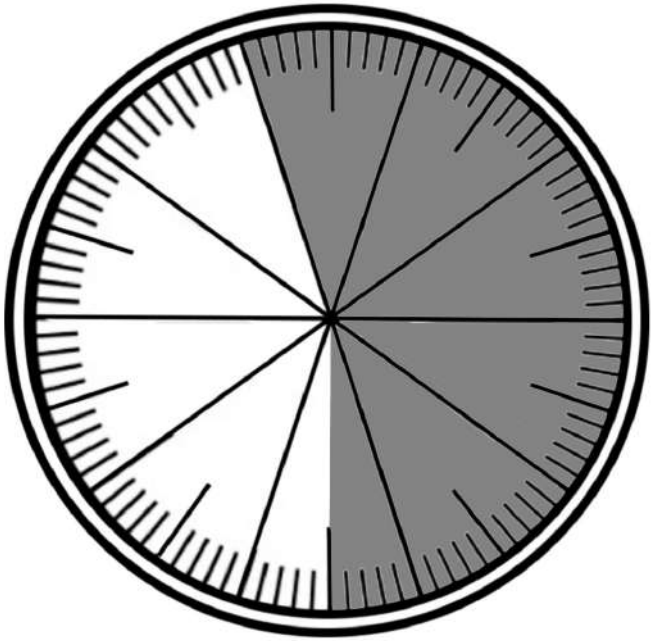
NUMBERLINE



Comparing Decimals

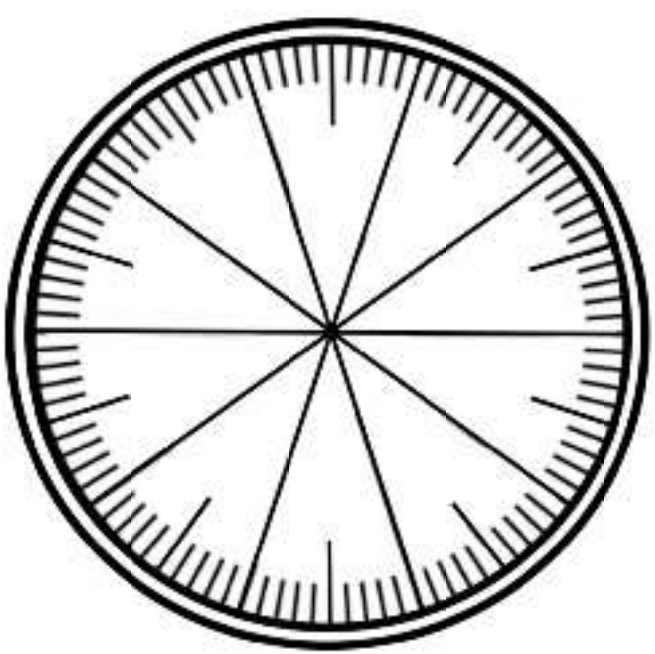
>, <, =

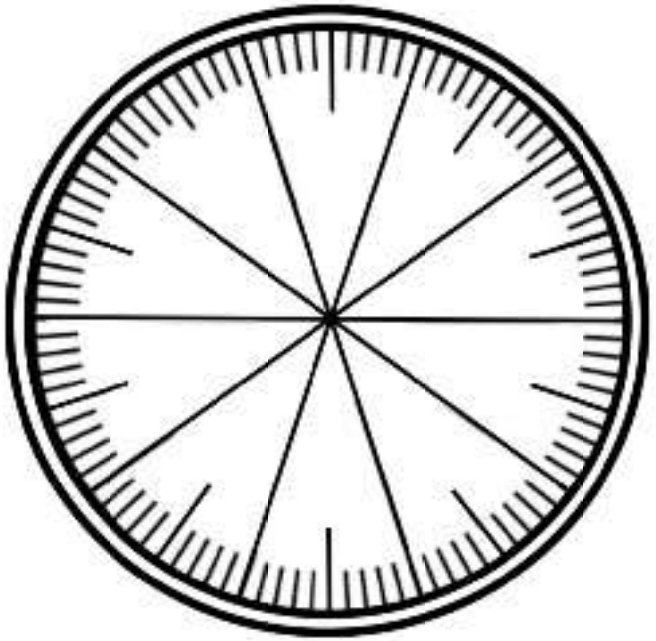




COMPARING DECIMALS

>, <, =





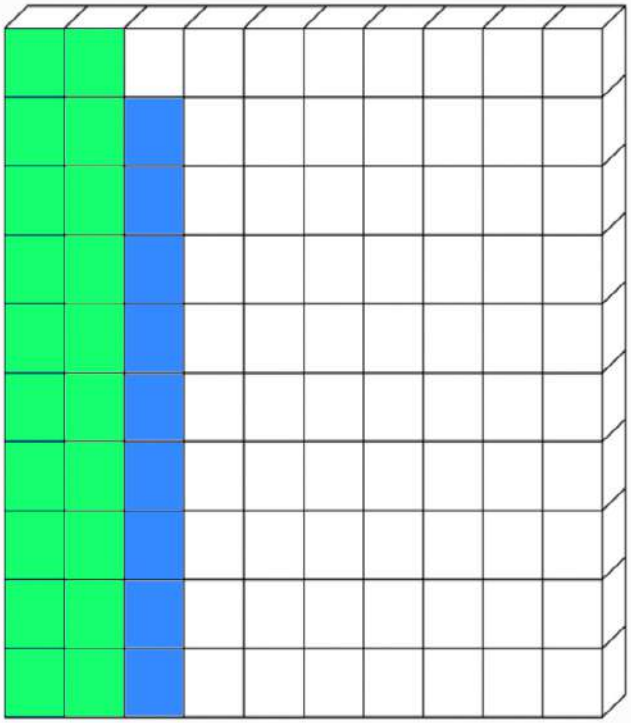
ROUNDING DECIMALS

.29

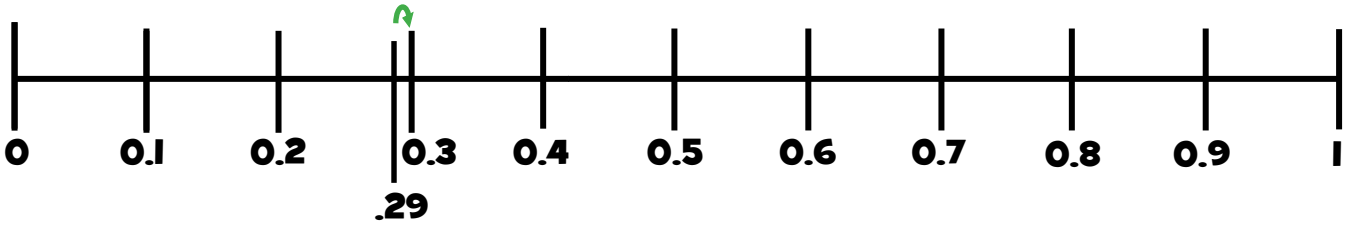
CHART

0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10
0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.20
0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30
0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40
0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50
0.51	0.52	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.60
0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.69	0.70
0.71	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.80
0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.89	0.90
0.91	0.92	0.93	0.94	0.95	0.96	0.97	0.98	0.99	1.00

GRID



NUMBERLINE



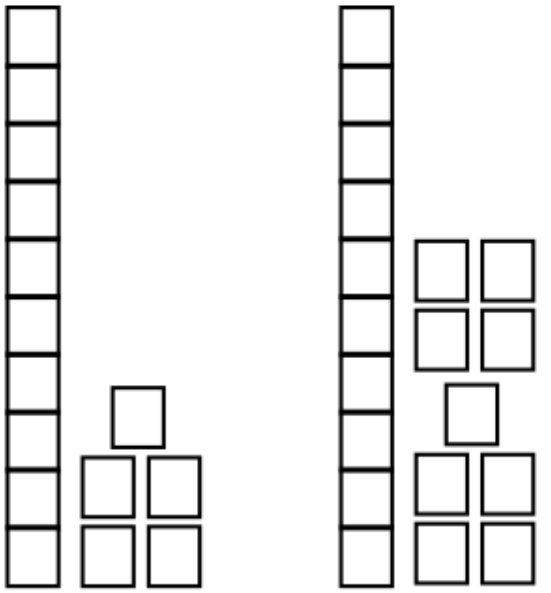
ROUNDING DECIMALS

0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
1	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2
2	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3
3	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4
4	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5
5	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6
6	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7
7	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8
8	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9
9	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10

DECIMALS OPERATIONS

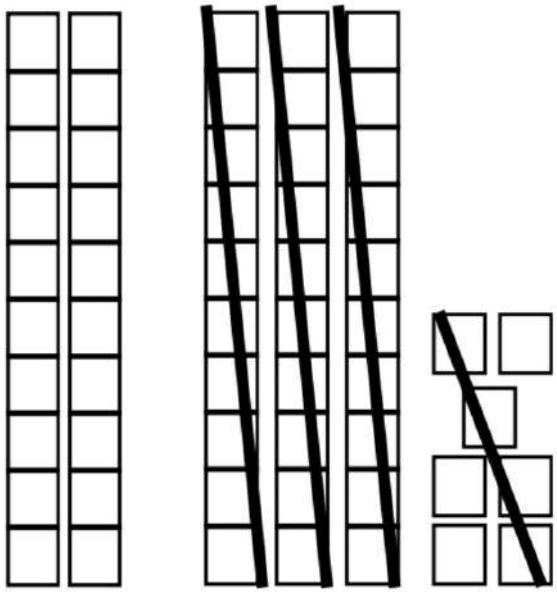
ADDING DECIMALS

.15 + .19



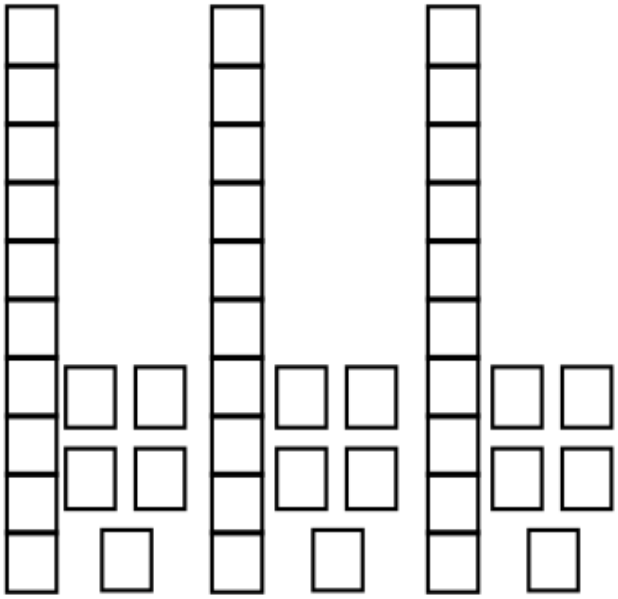
SUBTRACTING DECIMALS

.57 - 37



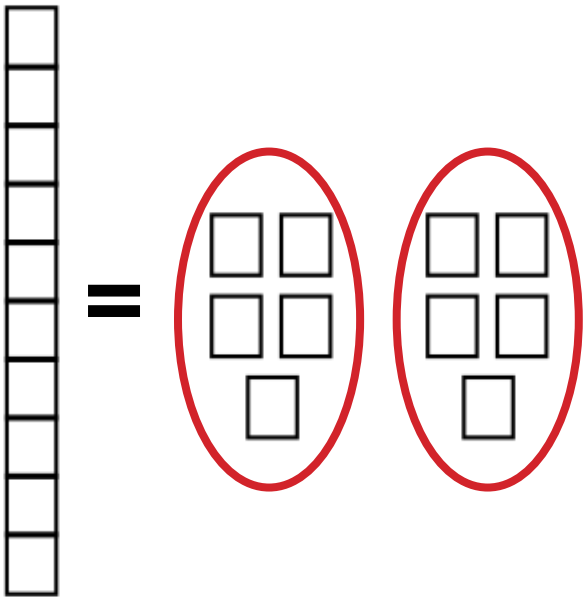
MULTIPLYING DECIMALS

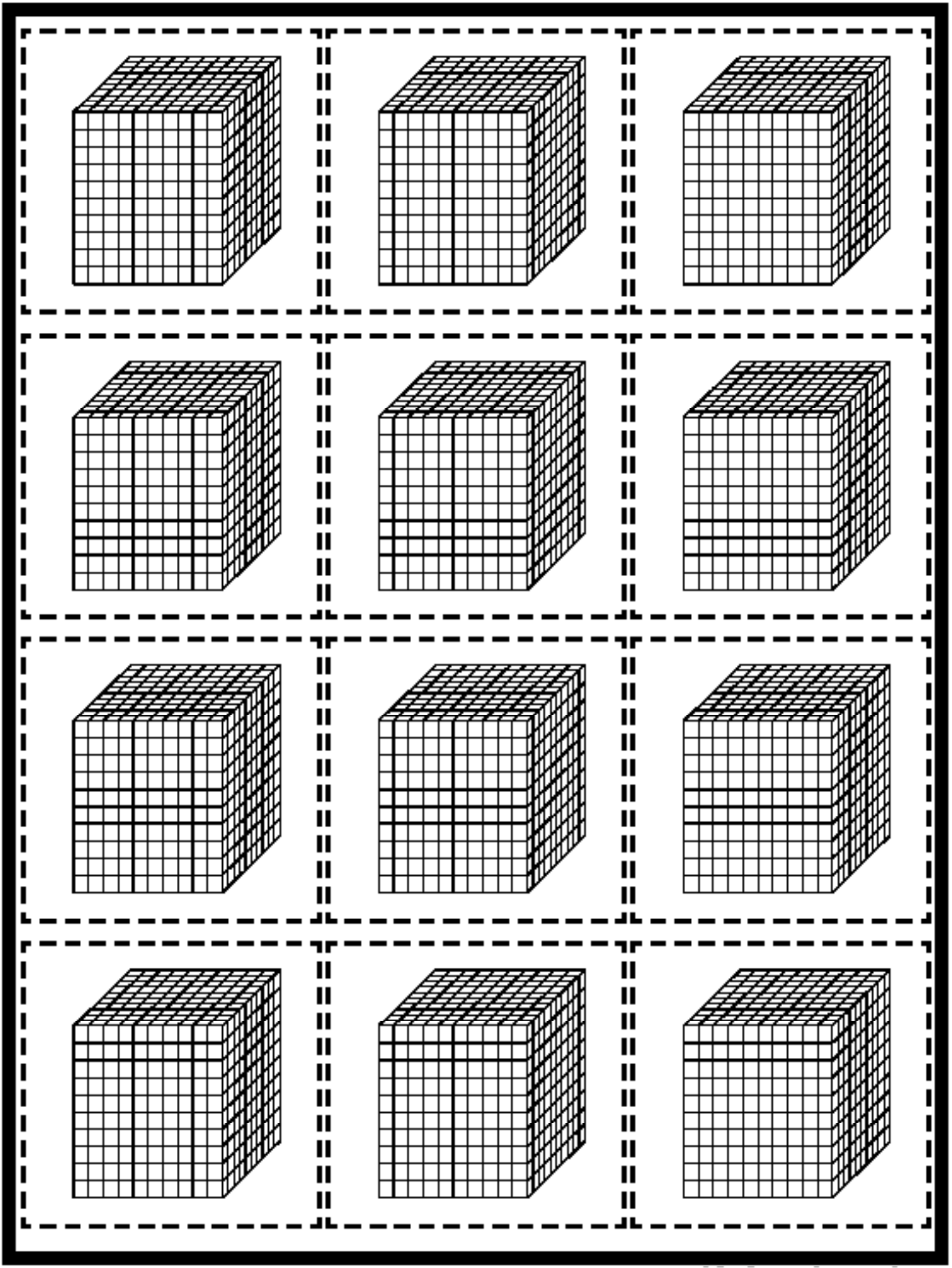
3 x .15

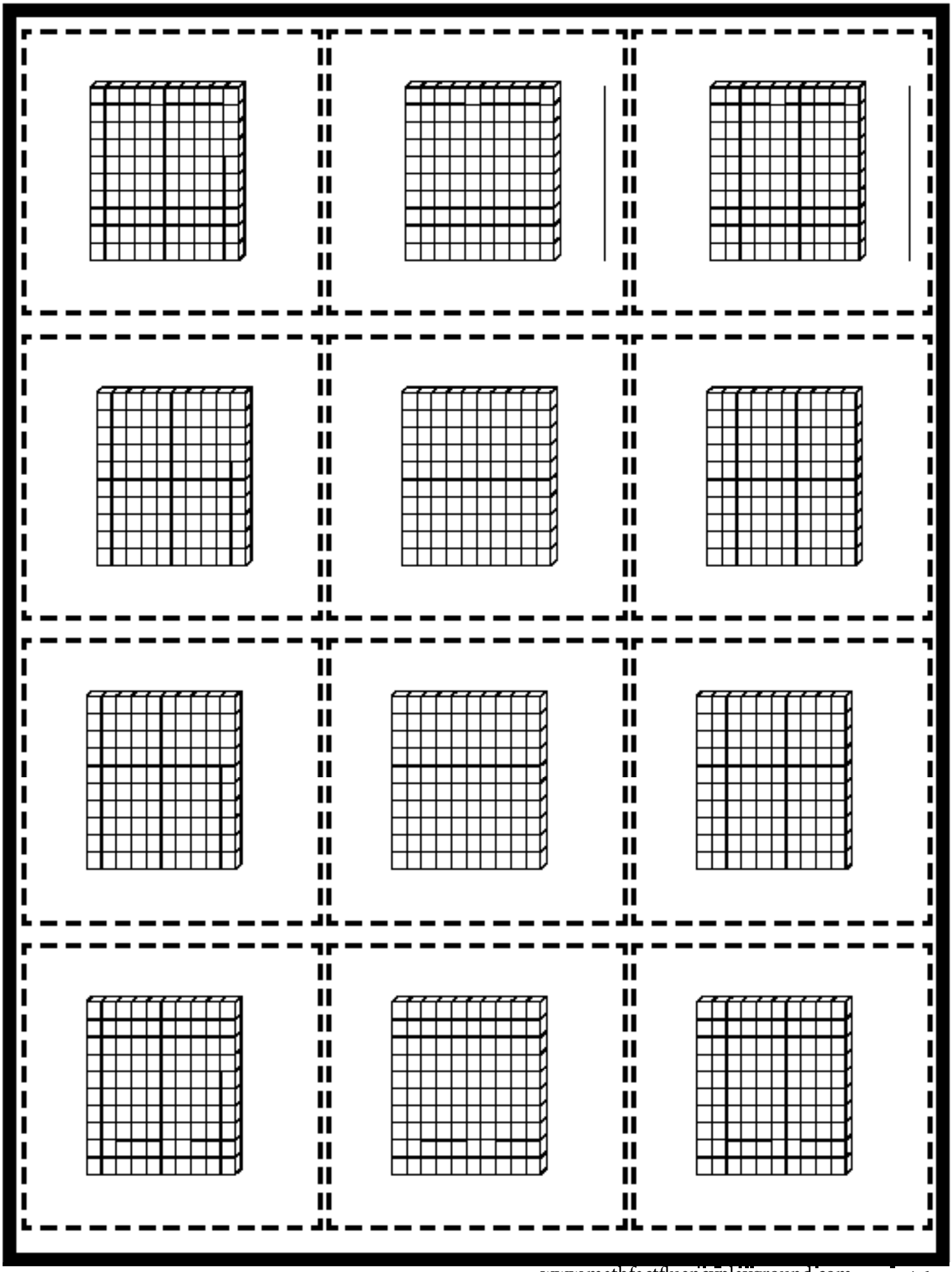


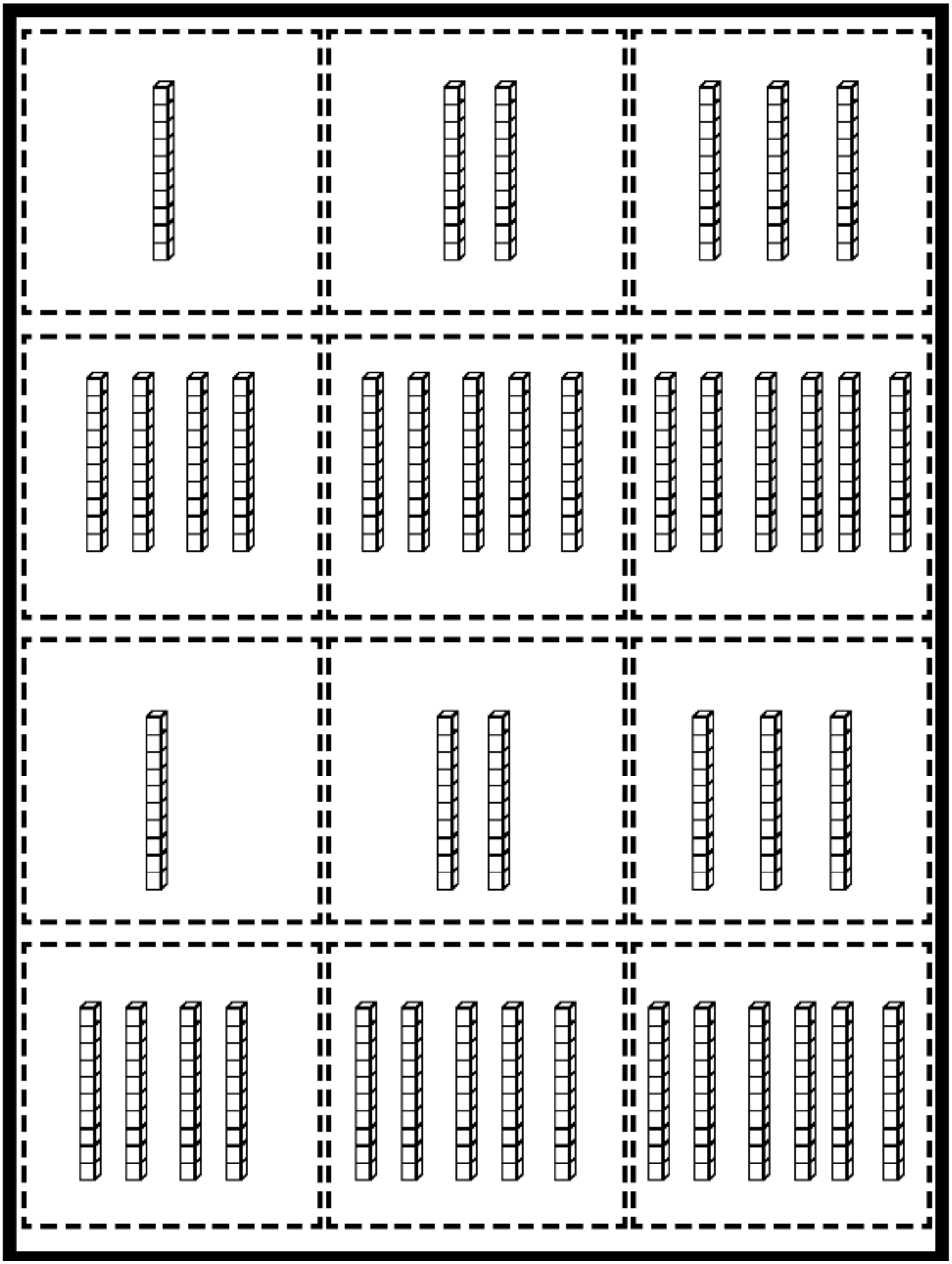
DIVIDING DECIMALS

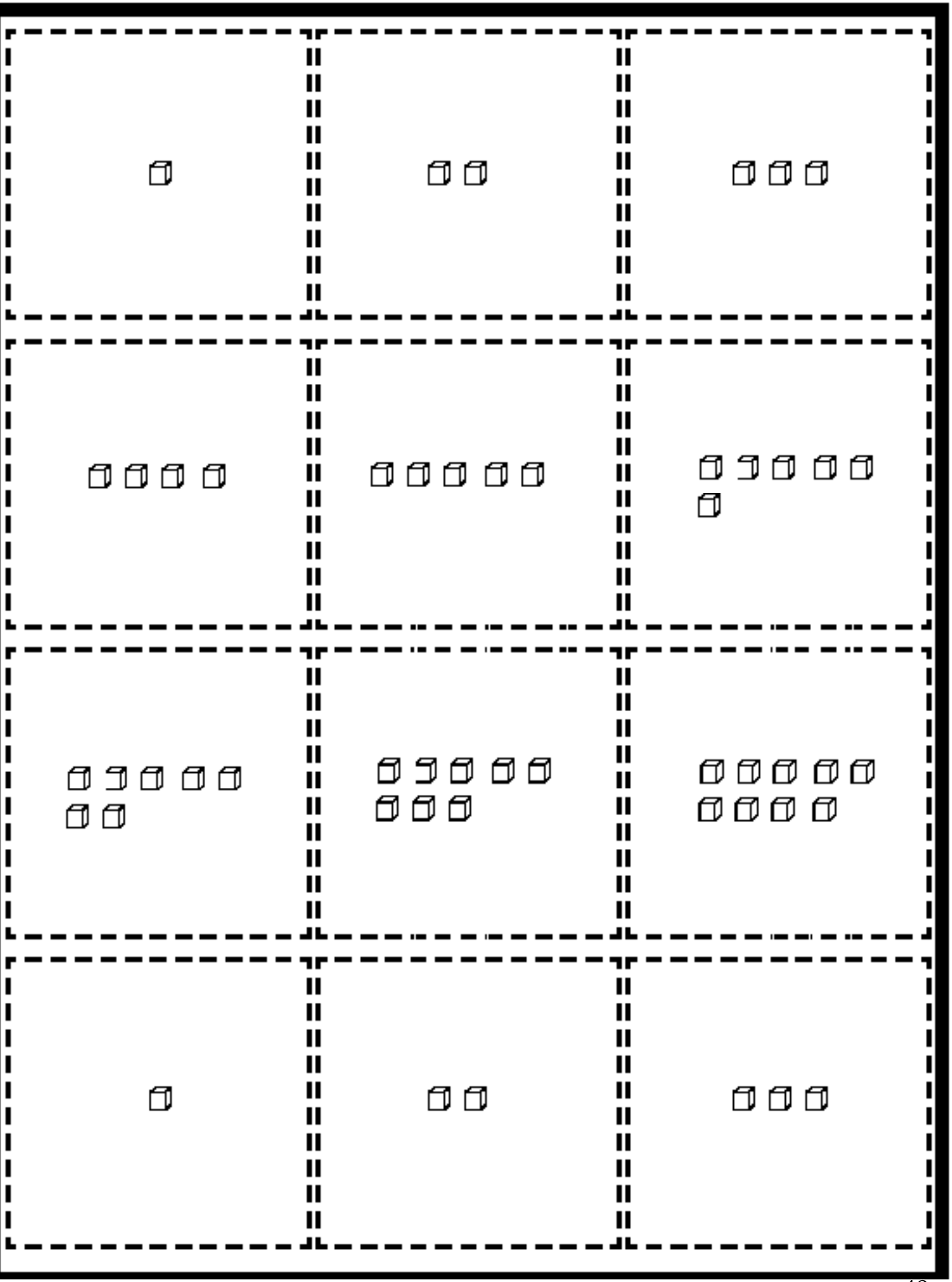
.10 ÷ 2 =



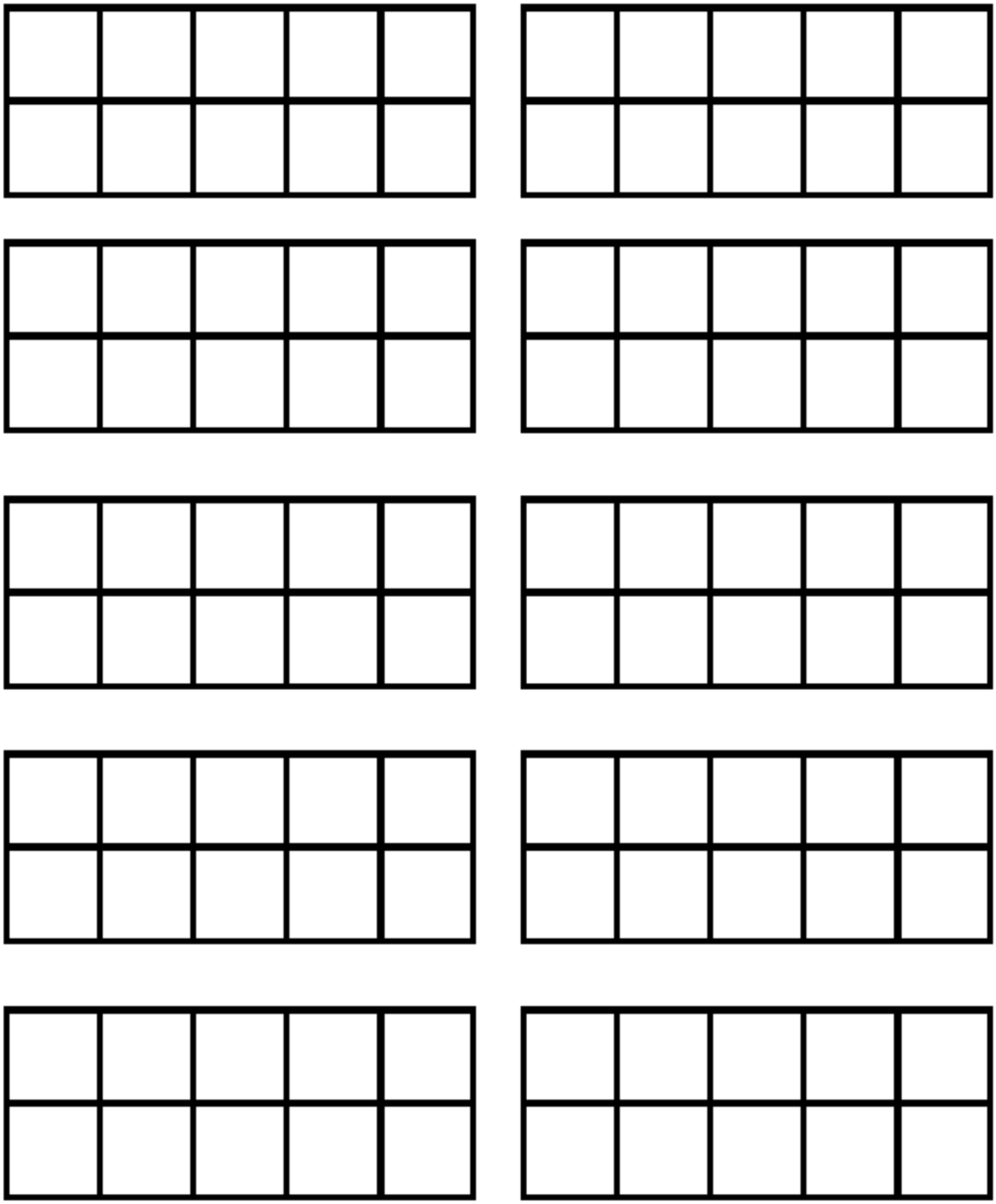








MODELING DECIMALS



MODELING DECIMALS

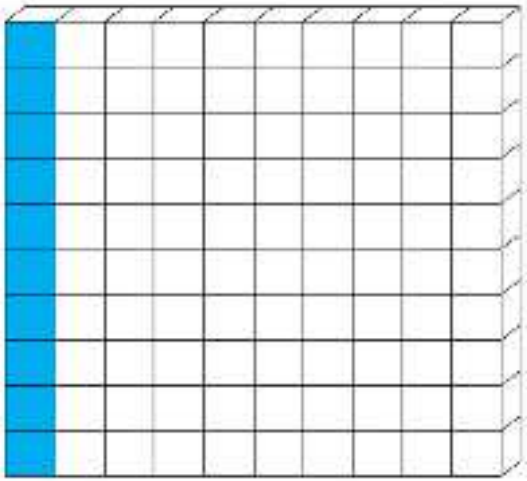
DECIMALS

ONE WHOLE

1

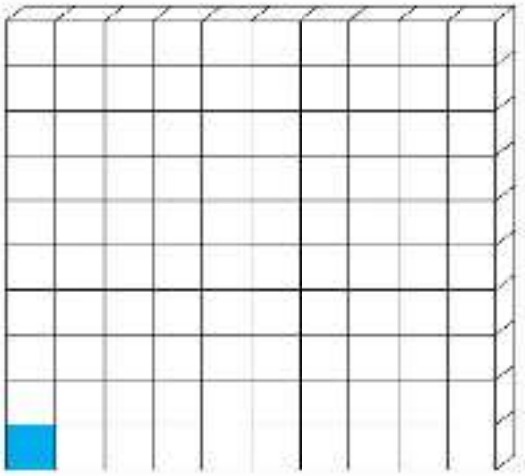
ONE TENTH

0.1

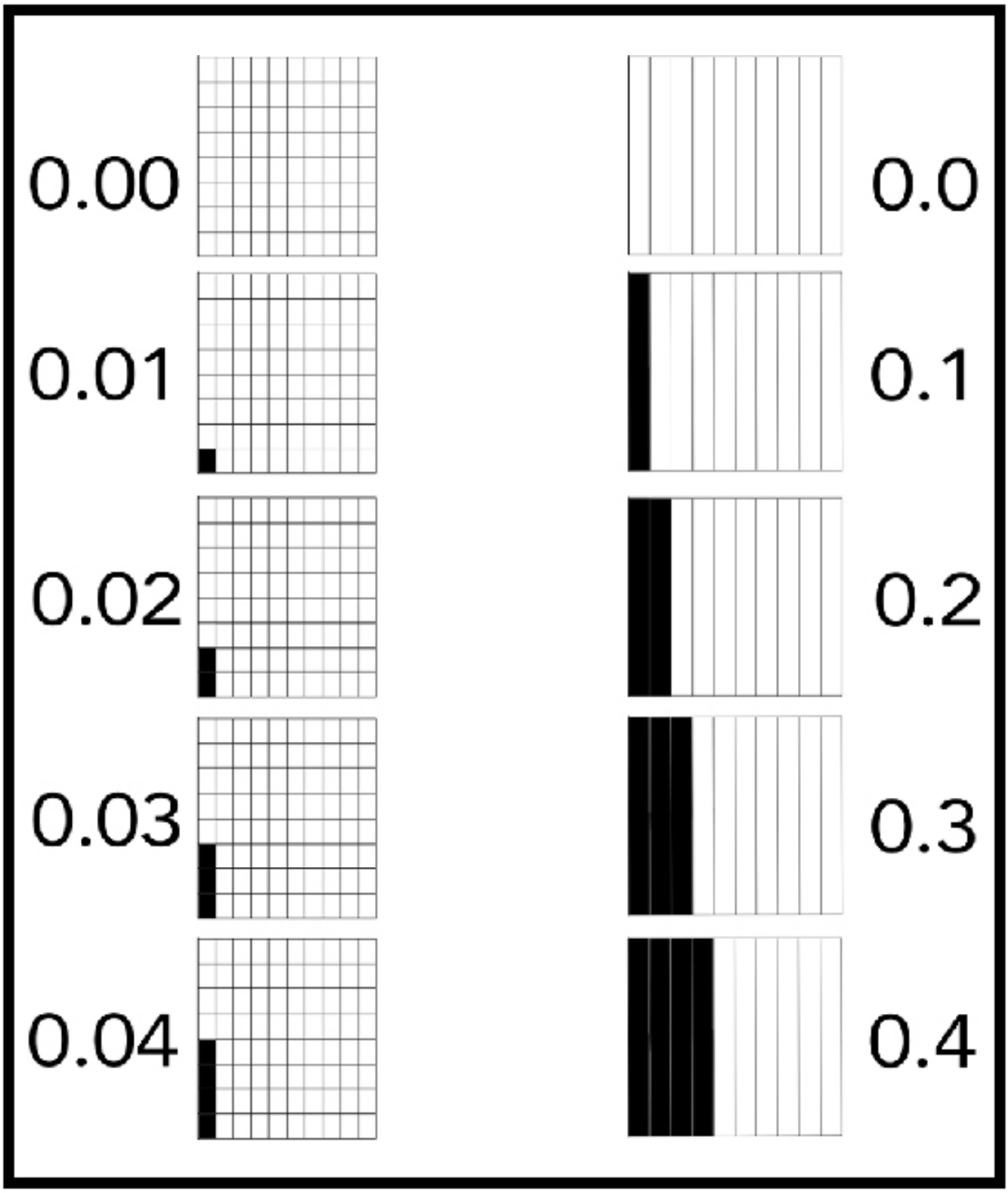


ONE HUNDREDTH

0.01



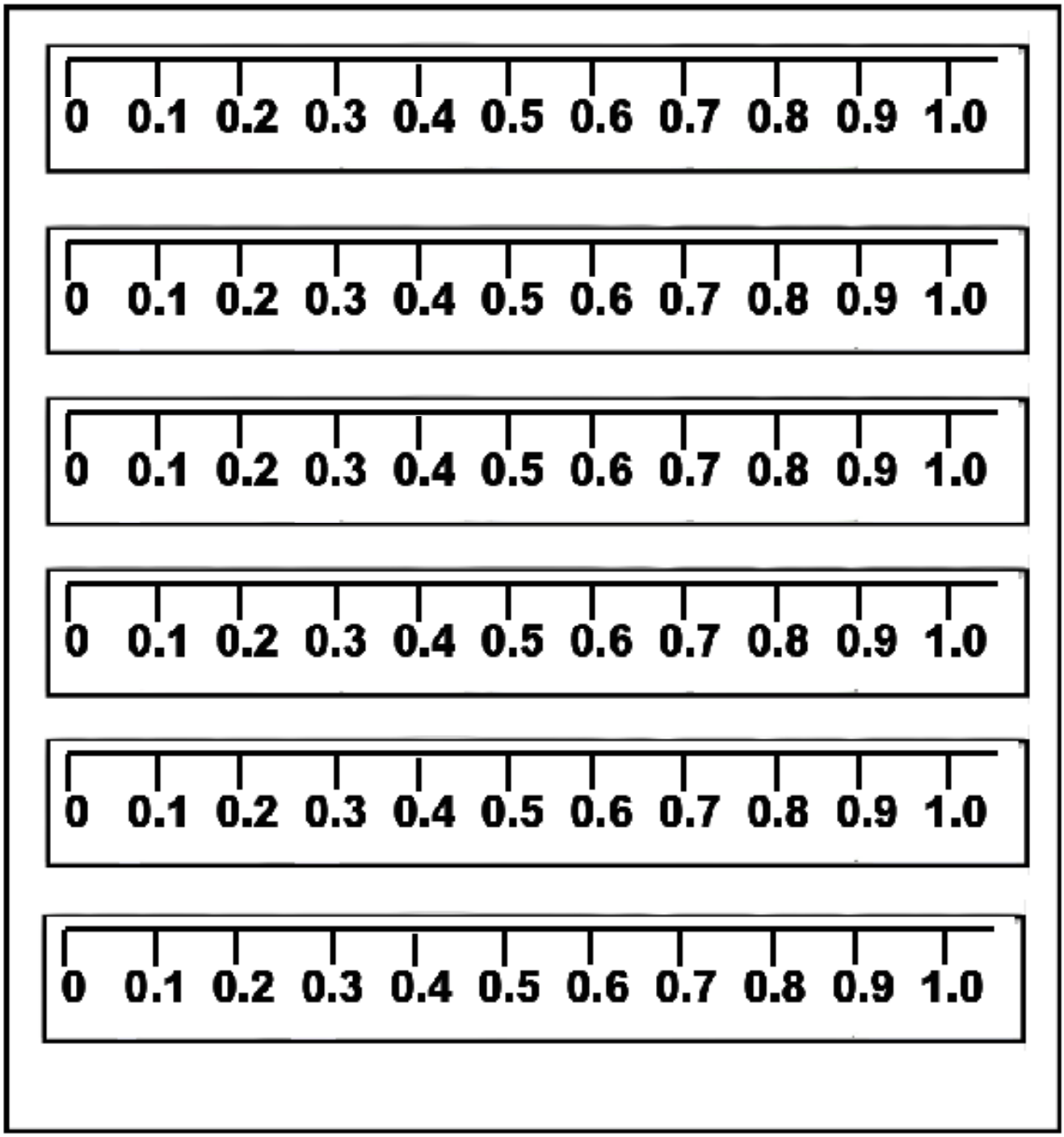
DECIMAL GRID



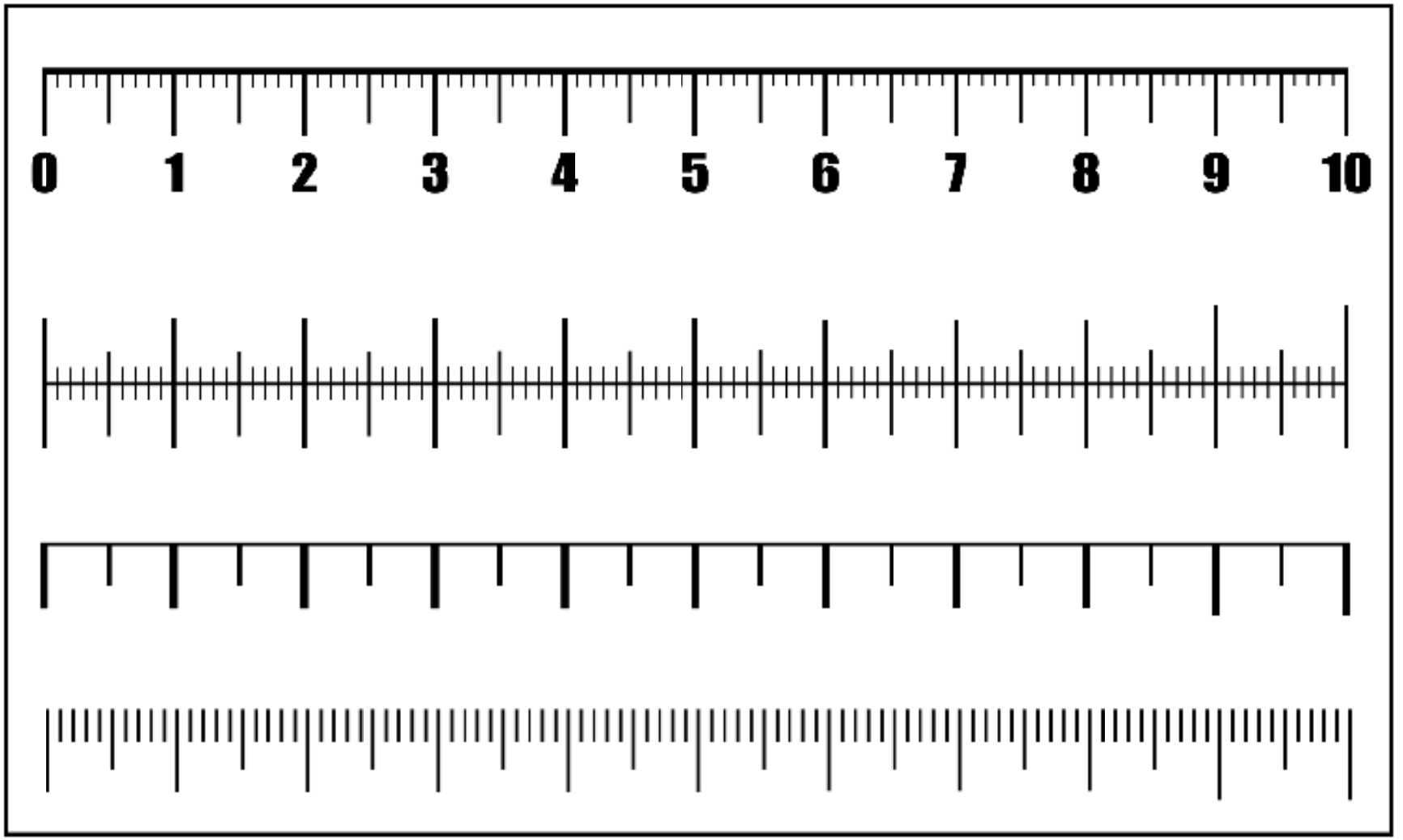
HUNDREDTHS CHART

0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10
0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.20
0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30
0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40
0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50
0.51	0.52	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.60
0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.69	0.70
0.71	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.80
0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.89	0.90
0.91	0.92	0.93	0.94	0.95	0.96	0.97	0.98	0.99	1.00

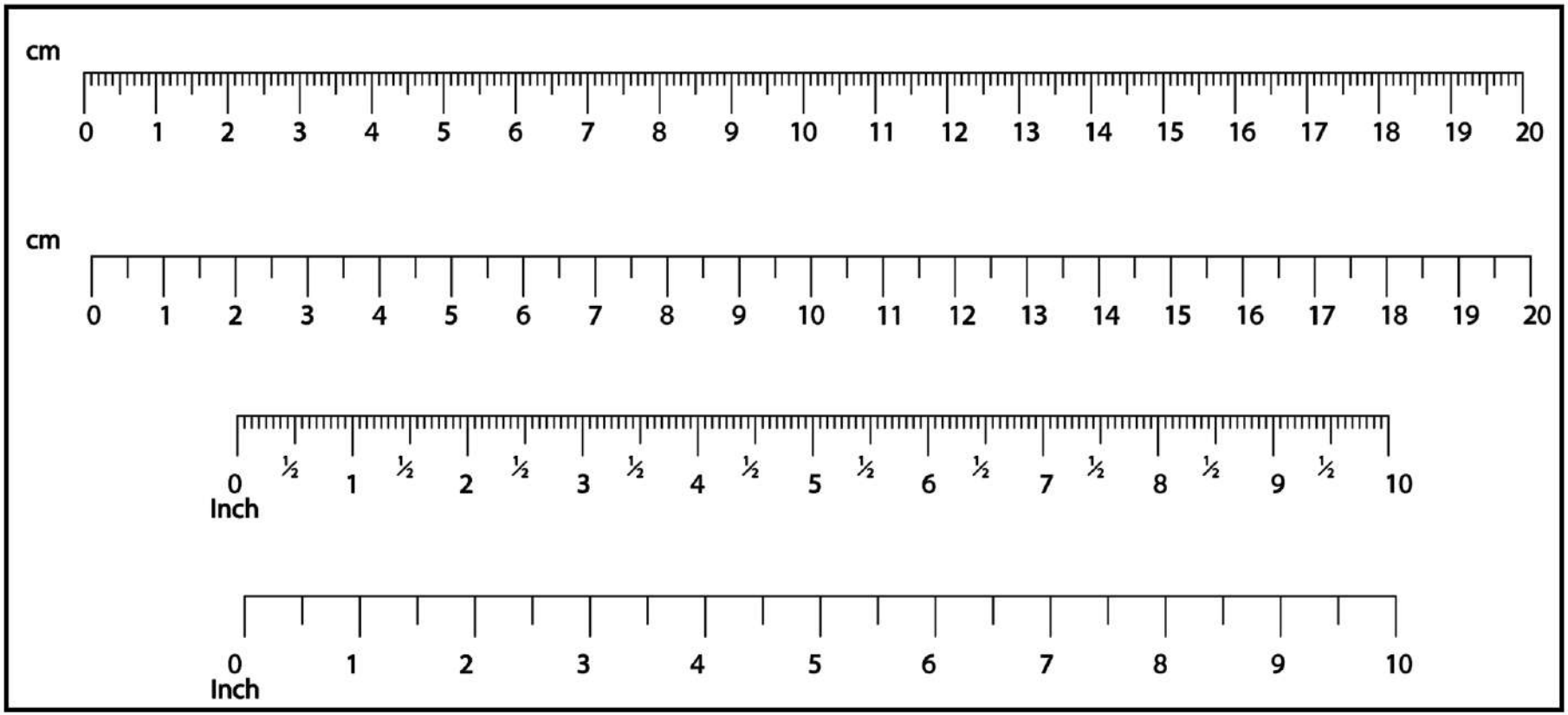
DECIMAL NUMBER LINE



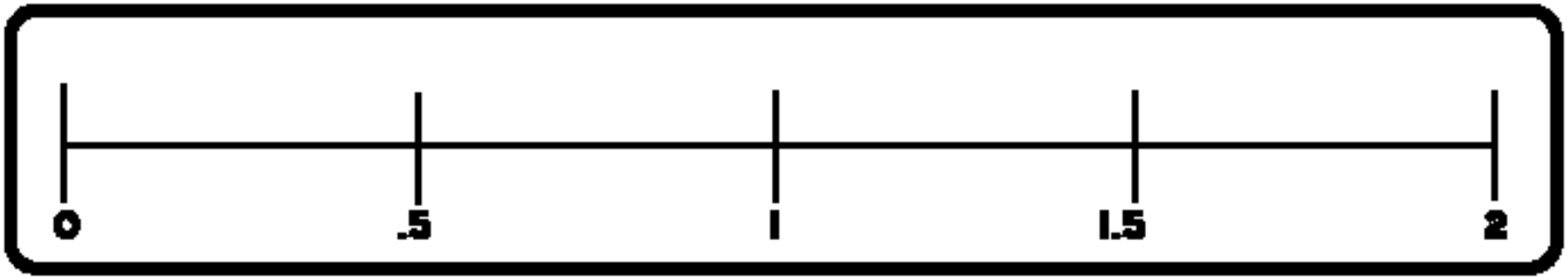
NUMBER LINES DECIMALS

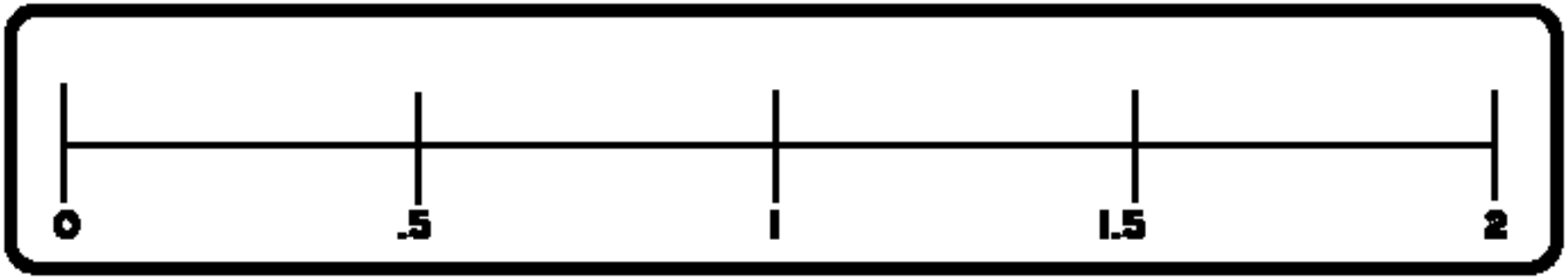


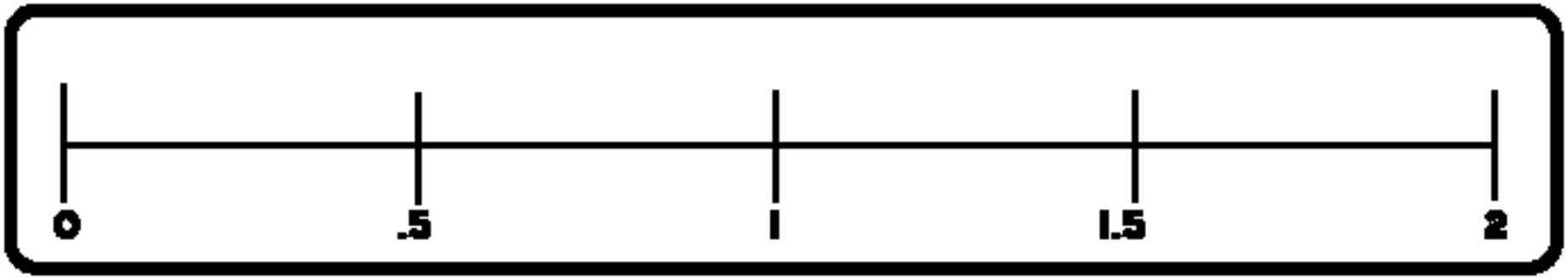
DECIMAL NUMBER LINE



DECIMAL NUMBER LINE

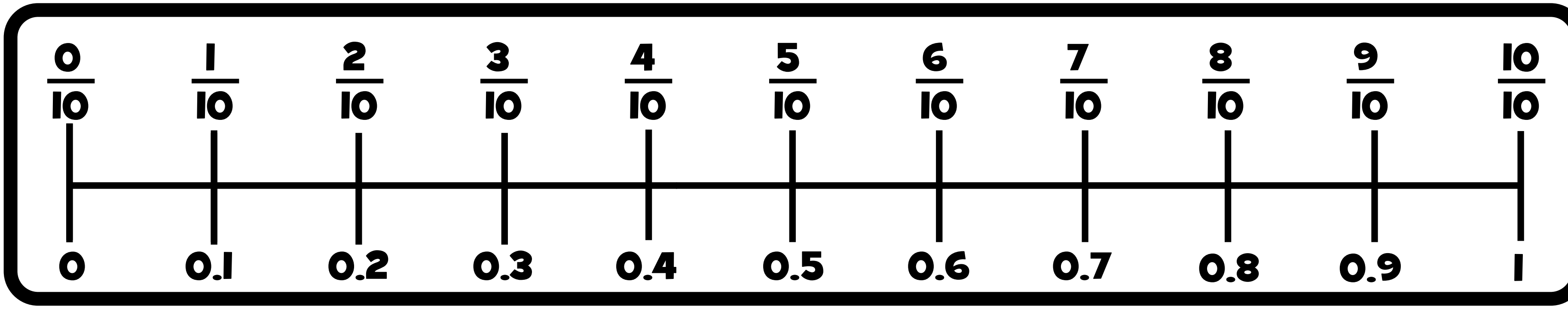


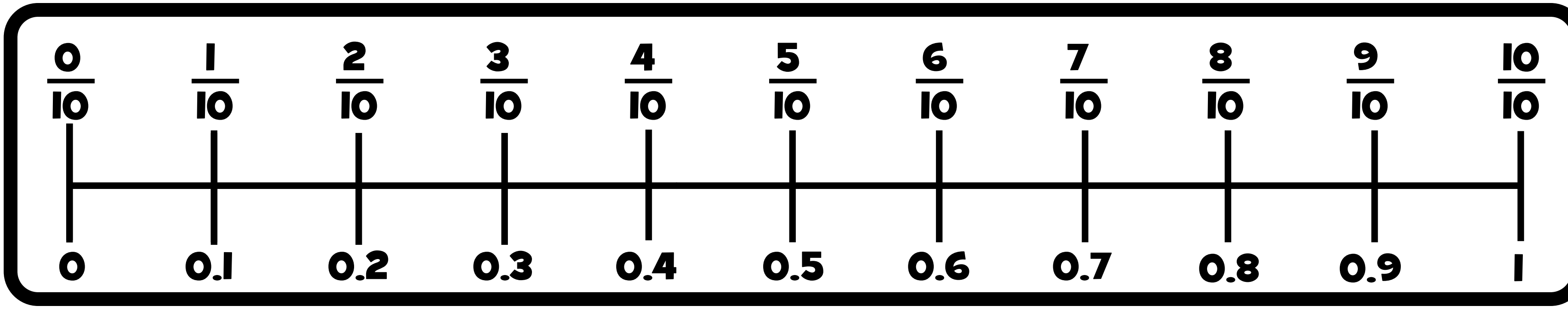


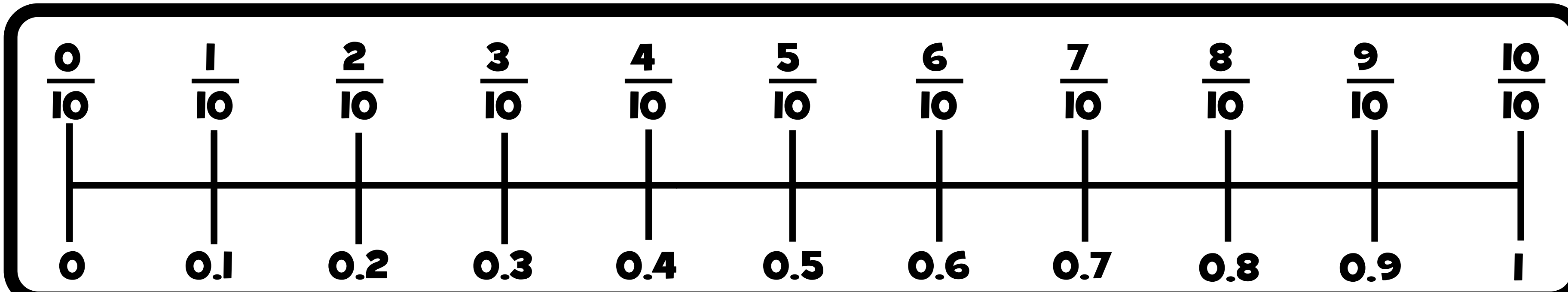


DECIMAL NUMBER LINE

TENTHS







DECIMAL WALL

1.0

0.5	0.5

0.333	0.333	0.333

0.25	0.25	0.25	0.25

0.2	0.2	0.2	0.2	0.2

0.167	0.167	0.167	0.167	0.167	0.167

0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125

0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08

DECIMAL CIRCLES

1 = 10/1

0.9 = 9/10

0.8 = 8/10

0.7 = 7/10

0.6 =

0.5 = 5/10 = 1/2

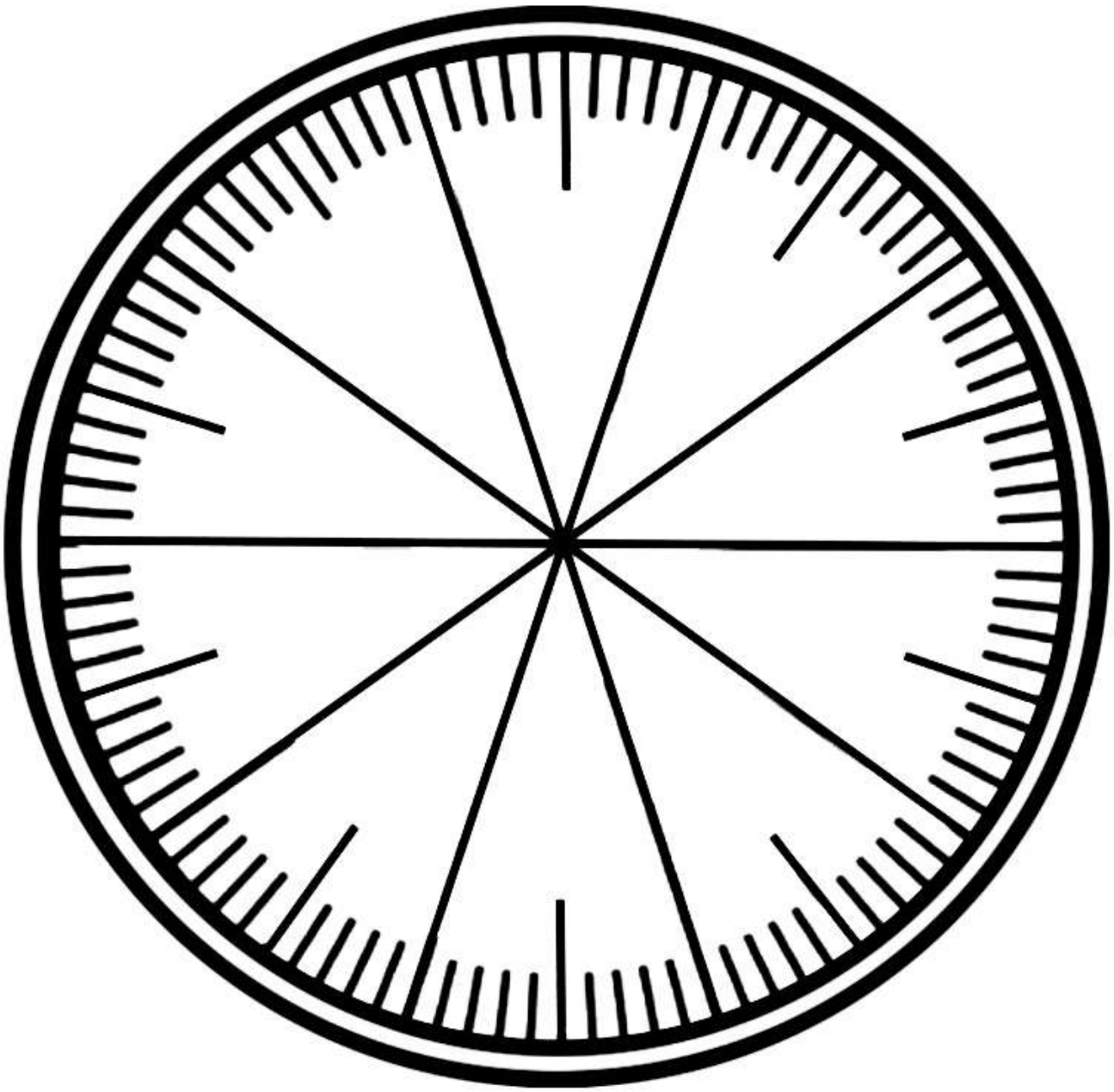
0.4 = 4/10

0.3 = 3/10

0.2 = 2/10

0.1 = 1

DECIMAL WHEEL

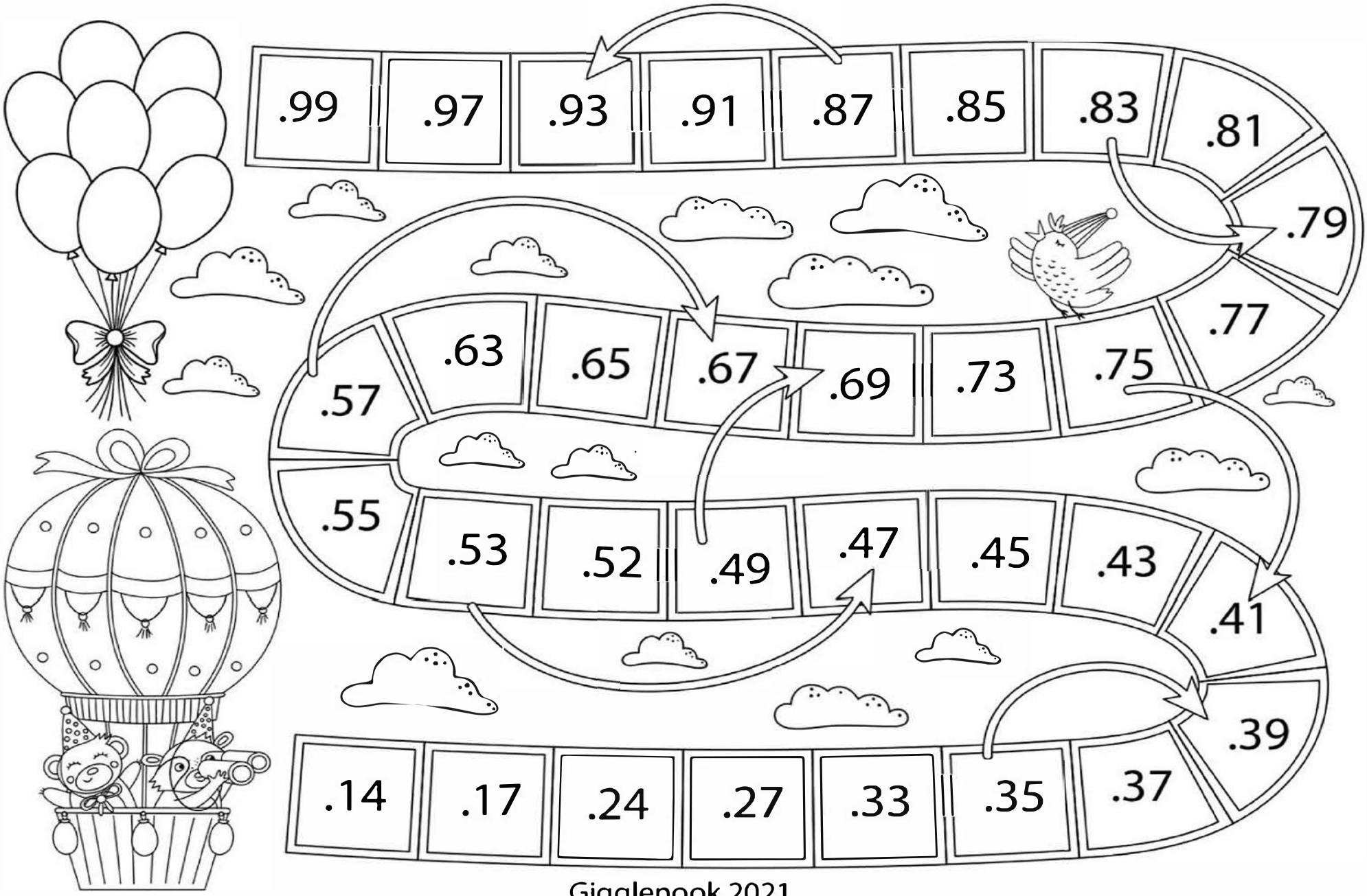


PUZZLE TIME

How many more to 1?

Instructions: Roll the dice and whoever has the largest number goes first. Roll and move. Wherever you land say how many more to 1 whole. Whoever reaches the end first wins.

Help the animals get to the bunch of balloons



Gigglenook 2021

Decimal Operation Flashcards

Decimal Battle (Addition)

Decimal Battle (Subtraction)

Decimal Battle (Multiplication)

Decimal Battle (Division)

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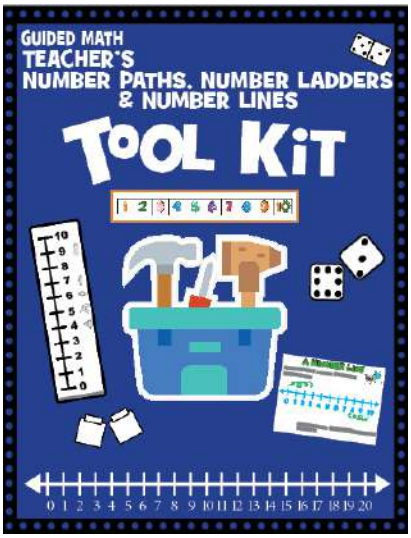

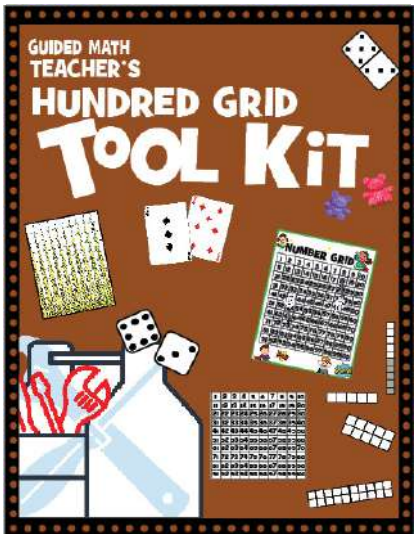

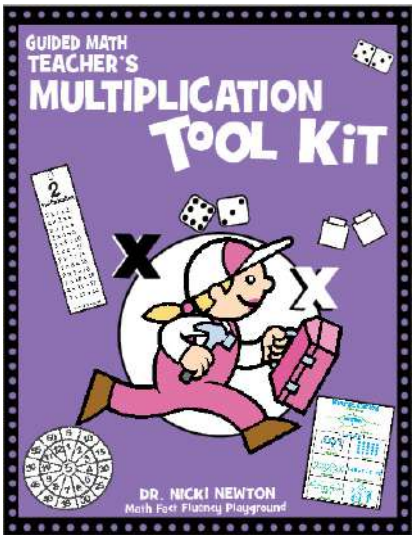

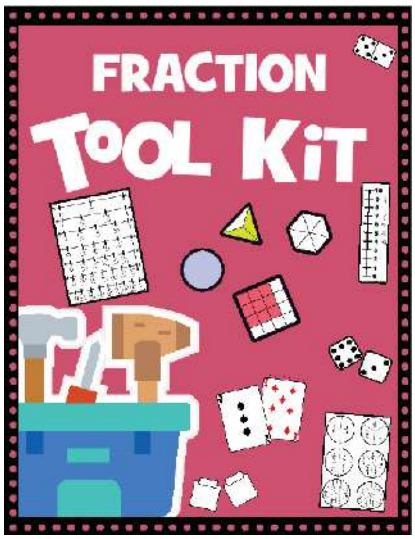

REFERENCES

Bruner, J. S. (1973). Beyond the Information Given: Studies in the Psychology of Knowing. New York: Norton.

Bruner, J. (1990). Acts of Meaning. Cambridge, MA: Harvard University Press.

Dewey, J. (1933). How We Think. A restatement of the relation of reflective thinking to the educative process (Revised ed.), Boston: M.A.

Dewey, J. (1998). Experience and Education: The 60th anniversary Edition. Kappa Delta Pi. Nov. 1st.

National Council of Teachers of Mathematics (1991). Professional standards for teaching mathematics. Reston, VA.

Piaget, J. (1972). To Understand Is To Invent. New York: The Viking Press, Inc.

Robb, L. (2008). Differentiating reading instruction: How to teach reading to meet the needs of each student. New York. New York: Scholastic.

Serravallo, J. (2010) Teaching Reading in Small Groups: Differentiated Instruction for Building Strategic, Independent Readers. Nh: Heinemann.

Tomlinson , C.A. (1999). How to differentiate instruction in mixed-ability classrooms. Alexandria , VA : ASCD.

Tomlinson, C. A. (2001). How to Differentiate Instruction in Mixed-Ability Classrooms. Upper Saddle River, NJ: Pearson Education.

Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. Massachusetts: Harvard University Press.

Tomlinson (2001), C.A. So Each May Soar: The Principles and Practices of Learner-Centered Classrooms ASCD. Alexandria, Virginia.

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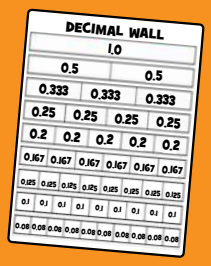
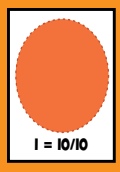
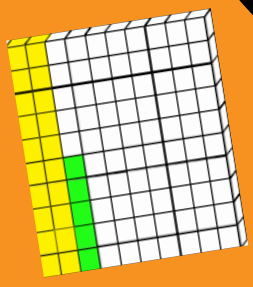
GUIDED MATH TEACHER'S DECIMAL TOOL KIT

0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10
0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.20
0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30
0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40
0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50
0.51	0.52	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.60
0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.69	0.70
0.71	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.80
0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.89	0.90
0.91	0.92	0.93	0.94	0.95	0.96	0.97	0.98	0.99	1.00



This Teacher's Decimal Resource Toolkit was created to help teach decimals. There are many different templates, activity sheets and blackline masters to differentiate instruction. Use these resources to scaffold access to grade level content for all your students!





The Guided Math Teacher's Decimal Toolkit is the essential resource for teachers to prepare and deliver hands-on, standards-based, visual lessons.