Dear Families,

We miss you! Everytime our grade level meets we talk about how much we miss seeing our students and their families! We hope that you are well! We know that the COVID 19 life-changes have been stressful. Honestly, we **don't** want to add to your stress! You have plenty on your plates already! To help alleviate a portion of your stress, we want to remind you that....

- Every child works at a different pace! We understand and respect this undeniable fact! Please give yourself and your child some wiggle room in this area. We created this work with the idea that your child will have no more than one hour of work each day for ten days. However, we also know that the amount of time your child has to work on this packet will vary each day. The timing and pacing is for you to determine with your child.

- Students will approach the work differently as well, and that is OK! Some will want to do all the math first. Others will want to do all of the reading first. Some will want to do a little bit of each curricular area every day. **There is no right or wrong way to approach the packet...as long as they get 'er done! :)**

- For those who have "hard copies" to work from, please remember that we have posted links on the Fremont Public Schools website. If you have internet access, there are video lessons that will support your child's learning. For example, Mrs. Hanna has some videos to teach your child how to complete the reading portion of the packet. Our goal is that these videos will clarify and explain the packet lessons.

- If your child has questions, we will be available to answer them during our Zoom meetings or our office hours by phone. We also plan on checking in on your child's progress with their work during Zoom meetings as well. **We are here to support you!**

- **Due Date: This first packet is due on or before May 4. Your new Session #2 packets will be available on May 4 as well.**

- This is our first time providing instruction in this manner. It is just as challenging for us as it is for you! PLEASE, extend grace to yourself, your child, and to us. We are learning just as much as you are! Going forward, when the going gets tough, take a break! **We are here to support you!**

Thank you for all that you are doing to support your child at home.

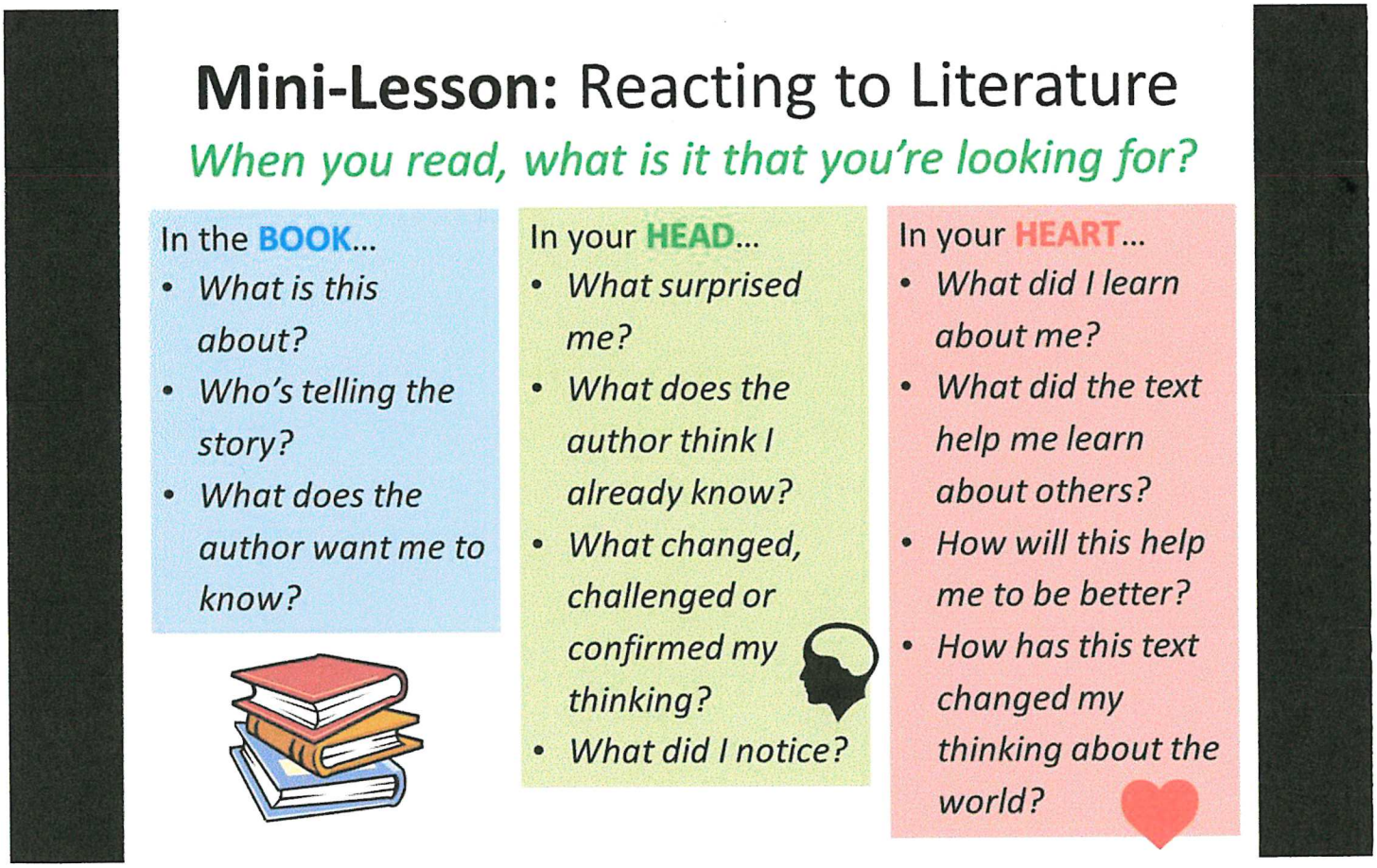
~The Daisy Brook 5th Grade Team

Session 1 Reading
Love That Dog by Sharon Creech

If you look at the cover of the book and at the first pages, you'll notice it's a little different from most novels. It's written like journal entries and poetry. It's free verse, so it won't rhyme.

1. **Read the Poems at the back of the book**. Before you start the story, read the poems in the back of the book starting on page 87. Read them out loud and try to Visualize (make pictures in your head) while you read. If you can, read them with a family member and talk about what you see in your mind and how they make you feel. They will be important when we start reading the story!
   If you can get online to the Fremont Public Schools website, find the Grade Level Work Packets and open this document. You may click the link to read the poems if you don't have a copy of the book. Love That Dog Poems from the back of the book (Google Doc)
   Extra: Click here for a Youtube Video. "Love That Dog Poems from the back of the book". You don't need to do the assignments she talks about in this video - at least not yet -just enjoy the poems and discussion.

2. **Read the story, and record these 3 things on the worksheets provided.**



- Read pages 1-4 and look at my example in the packet. If you need to read an online copy of the book, click here for Love That Dog.
  If you are online, you can watch the youtube video titled "BHH LTD pages 1-4" by clicking here to get some more explanation. The Book Head Heart example and worksheets are available online by clicking here.

- Read pages 5-21 and record your thoughts on the Book-Head-Heart organizer.

- Write a 'So Much Depends Upon' poem - see worksheet included in this packet for instructions. *If you are online, you can watch the video titled, "So Much Depends Upon Poem".* You might have time during your class Zoom meetings to share these poems, so have them ready!

- Read pages 22-37 and record your thoughts on the Book-Head-Heart organizer.

- Write a concrete poem - see worksheet for instructions. *If you are online, you can watch a video explaining Concrete Poems.* Share it with a family member or your Zoom meeting! Hang it on your bedroom wall!

- Read pages 38-67 and record your thoughts on the Book-Head-Heart organizer.

- Read pages 68-86 and record your thoughts on the Book-Head-Heart organizer.

- Write a 'Love That Dog' poem - see worksheet for instructions. Share it with a family member or your Zoom meeting!

3. **Reflect upon the story.** Read back through your Book-Head-Heart organizers. Answer the following questions.
   a. How did Jack change from the beginning of the story to the end of the story?
      In the beginning of the story, Jack . . .

      For example, in the text it says, "

      This shows that . . .

      By the end of the story, Jack . . . .

      For example, in the text it says, "

      This shows that . . .

b. Write what you think the theme of Love That Dog is. Use the following prompt to help you:

Some people think Love That Dog By Sharon Creech is about a boy who doesn't like poetry, but I think it's really about:

Name: Mrs. Hanna's Example

Text Title: Love That Dog, pages 1-4

BOOK – HEAD – HEART

What's in the BOOK

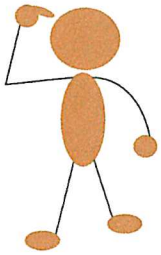
- What's this book about?
- Who's telling the story?
- What does the author want me to know?
- Quotes that make me curious, wonder, or think.

This looks like a student's journal. Jack is telling the story.

Quote: "You've just got to make short lines."

What's in your HEAD

- What surprised me?
- What does the author think I already knew?
- What challenged, changed, or confirmed my thinking?
- What I noticed
- Questions I asked myself



I noticed that he doesn't like poetry and doesn't want to write any. He thinks only girls write poetry I wonder why he thinks boys can't. I wonder why the blue car matters so much.

What's in your HEART

- What did I learn about me?
- How did this make me feel?
- How does this change my feelings?
- What connections can I make?
- How will this help me to be better?

I have been nervous before, like Jack, to let others see my writing. He did it, though. I can share my writing, too.

Name:

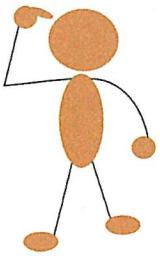
Text Title: Love That Dog, pages 5-21

BOOK – HEAD – HEART

What's in the BOOK

- What's this book about?
- Who's telling the story?
- What does the author want me to know?
- Quotes that make me curious, wonder, or think.

What's in your HEAD



- What surprised me?
- What does the author think I already knew?
- What challenged, changed, or confirmed my thinking?
- What I noticed
- Questions I asked myself

What's in your HEART

- What did I learn about me?
- How did this make me feel?
- How does this change my feelings?
- What connections can I make?
- How will this help me to be better?

Name:

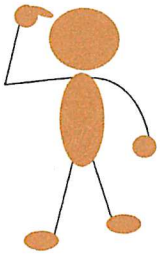
Text Title: Love That Dog, pages 22-37

BOOK – HEAD – HEART

What's in the BOOK

- What's this book about?
- Who's telling the story?
- What does the author want me to know?
- Quotes that make me curious, wonder, or think.

What's in your HEAD



- What surprised me?
- What does the author think I already knew?
- What challenged, changed, or confirmed my thinking?
- What I noticed
- Questions I asked myself

What's in your HEART

- What did I learn about me?
- How did this make me feel?
- How does this change my feelings?
- What connections can I make?
- How will this help me to be better?

Name:

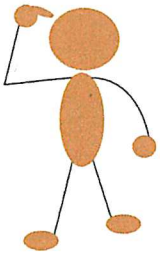
Text Title: Love That Dog, pages 38-67

BOOK – HEAD – HEART

What's in the BOOK

- What's this book about?
- Who's telling the story?
- What does the author want me to know?
- Quotes that make me curious, wonder, or think.

What's in your HEAD



- What surprised me?
- What does the author think I already knew?
- What challenged, changed, or confirmed my thinking?
- What I noticed
- Questions I asked myself

What's in your HEART

- What did I learn about me?
- How did this make me feel?
- How does this change my feelings?
- What connections can I make?
- How will this help me to be better?

Name:

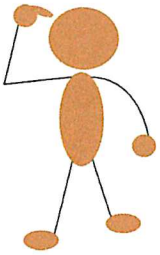
Text Title: Love That Dog, pages 68-86

BOOK – HEAD – HEART

What's in the BOOK

- What's this book about?
- Who's telling the story?
- What does the author want me to know?
- Quotes that make me curious, wonder, or think.

What's in your HEAD



- What surprised me?
- What does the author think I already knew?
- What challenged, changed, or confirmed my thinking?
- What I noticed
- Questions I asked myself

What's in your HEART

- What did I learn about me?
- How did this make me feel?
- How does this change my feelings?
- What connections can I make?
- How will this help me to be better?

So Much Depends Upon Poems

I'll show you how to do it with a poem of my own. Your first two lines will be:

so much depends
upon

Now I'm thinking of something important to me and 3 words that I can use to describe it:

a brown leather
saddle

Now I'm thinking of a phrase to describe my important thing that uses an "-ed" word to start with. Again, using 2 lines - 3 words on the top and one word on the bottom.

covered in light
dust

The last two lines are about WHERE the important object is. Again, 3 words on one line and 1 word on the next line.

on my red
horse

The Red Wheelbarrow **By William Carlos Williams** **so much depends** **upon** **a red wheel** **barrow** **glazed with rain** **water** **beside the white** **chickens**	**The Brown Leather Saddle** **By Mrs. Hanna** **so much depends** **upon** **the brown leather** **saddle** **covered in light** **dust** **on my red** **horse**	Title: _____ By: _____ so much depends upon _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____

You can try writing more of these, too, on your own!

Concrete Poems

Pick an object that is important to you - your favorite soccer ball, a lucky hat, your pillow. Draw an outline of your object on paper. Fill in the shape by telling a story about your object, or describe what makes this item important to you.
Here is another example of a concrete poem.

Lucky Hat, from The Last Fifth Grade of Emerson Elementary by Laura Shovan

Blue,
My favorite color,
pin-striped like the Yankees,
my favorite baseball team. The bill
is perfectly broken in, just the right
amount of curve to it. My mom promised
not to wash it, ever. Dust and sweat from
my winning games. I didn't know hats are
not allowed during spelling tests. I swear I
wasn't cheating. Ms. Hill, please give me back my lucky hat.

Try one or two of your own:

Love That Boy, Love That Dog Poem

Love That Dog
By Jack

Love that dog,
like a bird loves to fly
I said love that dog
like a bird loves to fly
Love to call him in the morning
love to call him
"Hey there, Sky!"

_____ (Your Title)

Love that _____,	name something you really love
Like a _____ loves to _____	come up with your own simile here
I said I love that _____	repeat
Like a _____ loves to _____	Repeat the simile
Love to call him _____	When or where would you call the thing you love? After school? At bedtime? At the bus stop?
Love to call him, "_____!"	What do you call to the thing you love?

Create your own Quarantine Journal

The missions are yours: play, explore and create. There is no obligation to finish all of the prompts. Do Mission #1, which has you create a journal. Then try to choose at least 4 of your favorite prompts (you can do more if you want!) in the next 2 weeks to write about in your Quarantine Journal. Do them in any order you want. No pressure. No stress! Just be creative.
This journal is not a product, it is a process.

How you respond to the mission is completely up to you. Draw a picture, write a story, write a poem, draw a poem(?)...take photographs, write music, find artifacts around your house that can be cut out and pasted into your journal. If you don't like what you have, paste a new piece of paper over the top of it and start again. The best way to do this journal is to just do it. Don't be afraid to make mistakes. This journal is not a product, it is a process. As long as you are having fun, you are doing it right!

Below is a link where you can take a Sneak Peek at how some other people have responded to the missions. If you want, you can look at them to help you get ideas and get started. We would love to see what you come up with at our Zoom meetings, or you can keep them totally private and just for you.

Sneak Peak: https://www.writeonjournaling.com/home/want-a-sneak-peek

JOURNAL MISSION #1

Set Up Your Journal!

1. Go on a hunt for materials - a  +  + 
2. Find a  spot to journal. Set up your materials!
3. Use magazines, family photos, the internet, or your drawings to add pictures with glue/tape to the cover of your journal. Each picture or quote should tell something about YOU & what you  most.

Now you have a personalized journal all set to begin writing tomorrow! Mission accomplished! 

JOURNAL MISSION #2

Written  of YOU in This Unique Time Period

Describe yourself at this point in your life. *(I am...I come from...I live...I love...My best friends are...I'm currently into... You can usually find me...You would NEVER catch me...)*

Could be a word web with your name in the center circle and details about YOU all around...or a narrative piece...or a poem describing you line by line.

Remember: NO RULES! JUST YOU!

Now you have a  of WHO YOU ARE in this unprecedented time! Mission accomplished! 

JOURNAL MISSION #3

A Different Kind of Bucket List

In times like this our idea of a bucket list shifts from big hopes and dreams to getting back to **simple pleasures**.

What do you miss doing the most?
What's the FIRST thing you're going to do when life goes back to normal?

Make a **list**...or **sketch**...
Use color or pencil

OR

Describe a day filled with all the things you wish you could do now.
Where would you go? **Who** would you be with?

When this is behind us, **THIS will be your bucket list!**

JOURNAL MISSION #4

A Day in the Life of YOU!

Life has changed for everyone. What is life like for you now? What do you do now with your time that you **like**? What **don't** you like?

Make a and a **list**

or

Describe a typical "day in the life of YOU"
during this time.

We will get past this ...life won't always be this way.
Now YOU will always have this **record of your life during this time**.

to that!

JOURNAL MISSION #5

Letter to Someone You

We are all affected by this pandemic,
no matter what race, ethnicity, age, size, or socioeconomic status...
and some of us are certainly affected more than others
(or in very unique ways).

Think of someone you and write that person a **letter** in your .
If you feel like it, snap a of it and send it via text or email.

Let them know...
I SEE YOU and I get how this pandemic is affecting you.
I am here. It will get better.

JOURNAL MISSION #6

HOW ARE YOU?

This time isn't easy.
Take some time in your today to answer this:

HOW ARE YOU?

Created by March 2020

JOURNAL MISSION #7

I Am Grateful

It's easy to feel at this time.

Take some time today to
write all of the things
for which you are **grateful.**

Make a OR write a thank you note!

"Someday we'll look back on this moment and it will remind us to never take the little things for granted, hug with all our s, pause to appreciate holding someone's hand and live in the moments that we are surrounded by others."

Created by March 2020

JOURNAL MISSION #8

The BEST Feelings!

Spending so much time at home in social isolation
brings up lots of feelings
and not all are THE BEST.

Write **a bulleted list** of what brings up **THE BEST FEELINGS for YOU**
(**not** just feelings you are having now...
think about life before and after social isolation)!

A compliment you didn't see coming? A warm hug from a parent or friend?
Extra on your birthday? Warm right out of the oven?
The warmth of the on the first day of summer vacation?

What brings up ALL THE FEELS for you?

Created by March 2020

JOURNAL MISSION # 9

Quotes For Overcoming Tough Times

Tough times come and go.
Quotes (inspirational, funny, hopeful) can help get us through.

What quotes have you read, shared or given a or a or a ?
What quote has made you laugh or cry during this unprecedented time?

Take a and write them down in your .

Snap a on your and print them out.

Feeling *extra inspired* by a quote? Add **what it means** to you.

From now on...your journal is the perfect place to
save the quotes that mean something to you!

Created by March 2020

JOURNAL MISSION # 10

Slice of Life Story

Write a **SLICE OF LIFE** story.

Think: a short narrative piece...something that happened

Take JUST ONE SEGMENT of your day...**zoom in** on that small moment,
stretch it out, tell it bit by bit...one at a time.

Your writing BEGINS IN THE MOMENT (capture the scene!)

Include people, action, dialogue....use your senses (eyes, ears, nose)

The = your thoughts & feelings

Created by March 2020

5th Grade Math Session #1: Multiplying Decimals

(I have included solutions in the back of the packet. Students still need to show their work)

You can access video links at www.fremont.net. Click on Extended School Closure →Remote Learning→ Daisy Brook→ General Education Materials→ 5th Grade

Day 1: Review Student Reference Book (SRB) Pages 100-104 for multiplying whole numbers. Using your preferred strategy, solve problems 1-4 on the 6th Grade Quick Check-Form A. I have also included videos that walk you through the partial products method and the lattice method.
http://everydaymath.uchicago.edu/teaching-topics/computation/mult-part-prod.html
http://everydaymath.uchicago.edu/teaching-topics/computation/mult-lattice.html

Day 2: Complete Math Journal Page 217 Problems 1-10. The following video walks you through estimating decimals. https://www.youtube.com/watch?v=S-z0OMrXWeM

Day 3: Review SRB Pages 134-135 for Multiplying Decimals.

Work on Math Journal Page 219. The following video also walks you through using the estimation strategy when multiplying decimals.
https://www.youtube.com/watch?v=VQN6MvdJRx4

Day 4: Pull out the worksheet titled "Multiplying Decimals." This worksheet has a mouse on it. Review the steps for multiplying decimals using decimal places. Work on problems 1-9 on this worksheet. The following video also walks you through using the decimal places strategy.
https://mathantics.com/lesson/decimal-arithmetic

Day 5: Continue working on the "Multiplying Decimals" worksheet with the mouse.

Day 6: Play the Comparing Decimal Products Game. Follow steps 1-5. Save the papers with your work attached.
*If you do not have a partner you can check your work with a calculator. If you are correct you get 5 points. Continue playing until you reach 25 points.

Day 7: Play the Comparing Decimal Products Game from yesterday again. Today if your answer is smaller you win the round.

Day 8: Have students work on solving and coloring the stain-glass window. If you do not have every color feel free to substitute with what you have at home.

Day 9: Continue solving and coloring the stain class window.

Day 10: Catch up on everything that is not completed. I have also attached a link to more practice problems.
https://www.iknowit.com/lessons/e-multiplying-decimals.html

TURN IN: 6th Grade Quick Link, Math Journal Page 217, Math Journal Page 219, Mouse Sheet, Game Scoresheets, Stain-Glass Window Sheet and Coloring Page

Multiplication Methods

Partial-Products Multiplication

When you multiply using **partial-products multiplication,** the value of each digit in one factor is multiplied by the value of each digit in the other factor. The final product is the sum of these **partial products.**

When you use partial-products multiplication, factors are broken up by place value. This results in partial products that are either basic multiplication facts or extended multiplication facts that can be calculated mentally. You must keep track of the place value of each digit in the partial products.

Note The symbols × and * are both used to indicate multiplication.

Example

4 * 236 = **?**

Estimate: You can round 236 to 200.

Since 236 was rounded down, the product will be greater than 4 * 200 = 800.

Think of 236 as 200 + 30 + 6.

Multiply each part of 236 by 4.

		2	3	6
	*			4
4 * 200 →		8	0	0
4 * 30 →		1	2	0
4 * 6 →			2	4
Add the partial products.		9	4	4

4 * 236 = **944**

The answer is reasonable because it is "in the hundreds" like the estimate of 800 and it is more than 800.

Compare the area model for multiplication on page 99 to using partial products. How are they alike? How are they different?

Note If you can estimate and multiply to find the partial products using mental math, then you do not need to write the steps shown in green.

You can draw an area model to help identify partial products.

Example

43 * 26 = **?**

Estimate: 43 rounds to 40, and 26 is close to 25. An estimate is 40 * 25 = 1,000.

Draw an area model. Draw a rectangle that is 43 by 26 and divide it into four smaller rectangles by breaking up the factors using place value.
The whole rectangle is 26 units wide and 43 units long.
Think about the width of 26 as 20 + 6.
Think about the length of 43 as 40 + 3.
Find the area of each of the smaller rectangles and you have found the partial products. Add the partial products together to find the answer.

	40	3
20	800	60
6	240	18

43 (40 + 3); 26 (20 + 6)

Think about the 40-by-20 rectangle.

	40	3
20	800	60
6	240	18

40 * 20 →

Think about the 40-by-6 rectangle.

	40	3
20	800	60
6	240	18

40 * 6 →

Think about the 3-by-20 rectangle.

	40	3
20	800	60
6	240	18

3 * 20 →

Think about the 3-by-6 rectangle.

	40	3
20	800	60
6	240	18

3 * 6 →

		2	6
*		4	3
	8	0	0
		4	0
		6	0
		1	8
1,	1	1	8

43 * 26 = **1,118**

The answer is reasonable because it is close to the estimate of 1,000.

U.S. Traditional Multiplication

When you use **U.S. traditional multiplication,** you add products as you go, rather than recording each partial product separately. Use an estimate to check whether the answer is reasonable.

Example

$5 * 629 = ?$

Estimate: You can round 629 to 600.

Since 629 was rounded down, the product will be greater than $5 * 600 = 3{,}000$.

Step 1 Multiply the ones.

$5 * 9$ ones $= 45$ ones $= 4$ tens $+ 5$ ones

Write 5 in the 1s place below the line.

Write 4 above the 2 in the 10s place.

Step 2 Multiply the tens.

$5 * 2$ tens $= 10$ tens

Remember the 4 tens from Step 1.

10 tens + 4 tens = 14 tens in all.

14 tens = 1 hundred + 4 tens

Write 4 in the 10s place below the line.

Write 1 above the 6 in the 100s place.

Step 3 Multiply the hundreds.

$5 * 6$ hundreds $= 30$ hundreds

Remember the 1 hundred from Step 2.

30 hundreds + 1 hundred = 31 hundreds in all

31 hundreds = 3 thousands + 1 hundred

Write 1 in the 100s place below the line.

Write 3 in the 1,000s place below the line.

$$\begin{array}{r} {\scriptstyle 4} \\ 629 \\ * \quad 5 \\ \hline 5 \end{array} \qquad \begin{array}{r} {\scriptstyle 1\ 4} \\ 629 \\ * \quad 5 \\ \hline 45 \end{array} \qquad \begin{array}{r} {\scriptstyle 1} \\ 629 \\ * \quad 5 \\ \hline 3145 \end{array}$$

$5 * 629 =$ **3,145**

The answer is reasonable because it is close to and greater than the estimate of 3,000.

Did You Know?

Writing the numbers above the factors in U.S. traditional multiplication is sometimes called "carrying." The numbers are called "carry marks" or "carries."

When using U.S. traditional multiplication to multiply multidigit numbers by multidigit numbers, break up one of the numbers and record partial products on separate lines.

Example

$73 * 26 = ?$

Estimate: Round 73 to 70. Round 26 to 30. An estimated product is $70 * 30 = 2{,}100$.

The steps:

Step 1 Multiply 73 by the 6 in 26 as if the problem were $6 * 73$.

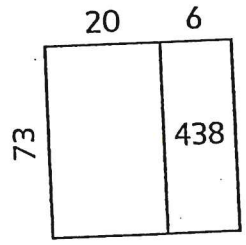
Check: The product of 438 for Step 1 should be equal to the sum of the partial products involving 6: $6 * 70 = 420$ and $6 * 3 = 18$. $420 + 18 = 438$

Record the steps:

$$\begin{array}{r} {\scriptstyle 1\ \ \ } \\ 73 \\ * \quad 26 \\ \hline 438 \end{array}$$

Think about the area model:

$6 * 73$ corresponds to the rectangle that is 73 by 6.

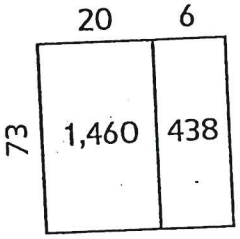


Step 2 *Think:* What is the value of the 2 in 26? It's 20, so multiply 73 by the 2 tens in 26 as if the problem were $20 * 73$.

Check: The product of 1,460 for Step 2 should be equal to the sum of the partial products involving 20: $20 * 3 = 60$ and $20 * 70 = 1{,}400$. $60 + 1{,}400 = 1{,}460$

$$\begin{array}{r} {\scriptstyle 1\ \ \ } \\ 73 \\ * \quad 26 \\ \hline 438 \\ 1460 \end{array}$$

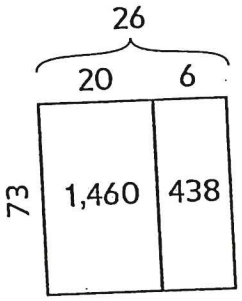
$20 * 73$ corresponds to the rectangle that is 73 by 20.



Step 3 Add the two partial products to get the final answer.

$$\begin{array}{r} {\scriptstyle 1\ \ \ } \\ 73 \\ * \quad 26 \\ \hline 438 \\ +\ 1460 \\ \hline 1898 \end{array}$$

Add the partial products to find the total area of the large rectangle.



$73 * 26 = \mathbf{1{,}898}$

The answer is reasonable because it is close to the estimate of 2,100.

Lattice Multiplication

Lattice multiplication has been used for hundreds of years. It is based on placing answers to basic multiplication facts in each box and then adding along the diagonals. The box with cells and diagonals is called a **lattice.**

Lattice multiplication works because each diagonal is the same as a place-value column.

Example

6 * 815 = **?**

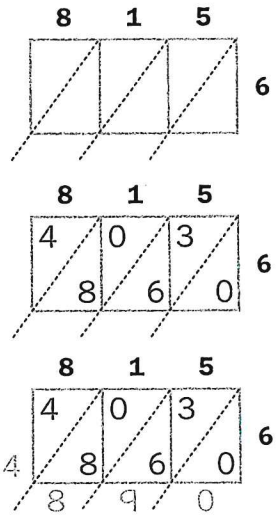
Estimate: 815 is close to 800. An estimated product is 6 * 800 = 4,800.

Write 815 above the lattice.
Write 6 on the right side of the lattice.

Multiply 6 * 5. Then multiply 6 * 1. Then multiply 6 * 8.
Write the answers as shown.

Add the numbers along each diagonal, starting at the right.
Read the answer. 6 * 815 = **4,890**

The answer is reasonable. It is close to the estimate of 4,800.

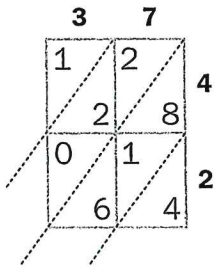


Example

42 * 37 = **?**

Estimate: 42 rounds to 40, and 37 rounds to 40. An estimate is 40 * 40 = 1,600.

Write 37 above the lattice. Write 42 on the right side of the lattice.
Multiply 4 * 7. Then multiply 4 * 3.
Multiply 2 * 7. Then multiply 2 * 3.
Write the answers as shown.

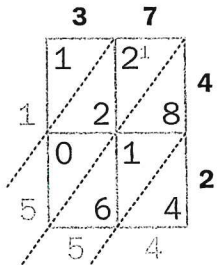


Add the numbers along each diagonal, starting at the right.
When the numbers along a diagonal add up to 10 or more:

- record the ones digit in the sum.
- add the tens digit to the sum along the next diagonal above.

Read the answer. 42 * 37 = **1,554**

The answer is reasonable because it is close to the estimate of 1,600.



6th Grade Quick Check – Form A

Readiness Standard 2 - 5.NBT.5

Name_____ Date_____

Learning Target: I will multiply multi-digit numbers.

Directions: Write the answer to each problem. (Work time: 4 minutes)

1. 3122 x 3	**2.** 45 x 13
3. 867 x 15	**4.** 297 x 48

Estimating Decimal Products and Quotients

Lesson 6-8

DATE TIME

The digits provided in the Answer column are correct, but they are missing a decimal point. For each problem, write a number sentence to estimate the product or quotient. Use your estimate to place a decimal point in the digits provided. An example is done for you.

SRB 128

Problem	Estimation Number Sentence	Answer (place the decimal point)
Example: 12.2 * 1.9	10 * 2 = 20	23.18
1 17.4 * 97.5		16965
2 83.12 * 7.25		60262
3 0.36 * 325.5		11718
4 4.85 * 0.6		291
5 1.8 * 27.3		4914
6 95.76 ÷ 7.6		126
7 515.87 ÷ 65.3		79
8 2.76 ÷ 3.68		075
9 101.8 ÷ 0.8		12725
10 1,390.72 ÷ 21.73		6400

Math Journal

Multiplying Decimals

You can use the same procedures for multiplying decimals that you use for whole numbers. The main difference is that with decimals you have to decide where to place the decimal point in the product. To multiply decimals:

- Estimate the product.
- Multiply as if the factors were whole numbers.
- Use your estimate to place the decimal point in the answer.

Note You can find estimates by using close-but-easier numbers or by rounding.

Example

$15.2 * 3.6 =$ **?**

Step 1 Make an estimate.
Round 15.2 to 15 and 3.6 to 4.
An estimated product is $15 * 4 = 60$.

Step 2 Multiply as you would with whole numbers. One way to do this is to use partial-products multiplication. Ignore the decimal points.

		1	5	2
	*		3	6
30 * 100 →	3	0	0	0
30 * 50 →	1	5	0	0
30 * 2 →			6	0
6 * 100 →		6	0	0
6 * 50 →		3	0	0
6 * 2 →			1	2
	5	4	7	2

Note If you can find the partial products in your head, then you do not need to write the steps shown in green.

Step 3 Use your estimate to place the decimal point in the answer. Your estimate was 60. To have a product that is closest to 60, the decimal point should be placed between the 4 and 7 in 5472.

So, $15.2 * 3.6 =$ **54.72.**

Example

$3.27 * 0.8 =$ **?**

Step 1 Make an estimate.

The factor 0.8 is almost 1. An estimated product is $3.27 * 1 = 3.27$. The answer will be less than 3.27, since the factor 0.8 was rounded up.

Step 2 Multiply as you would with whole numbers. One way to do this is to use U.S. traditional multiplication. Ignore the decimal points.

$$\begin{array}{r} {\scriptstyle 2\ \ 5} \\ 3\ 2\ 7 \\ * \qquad 8 \\ \hline 2\ 6\ 1\ 6 \end{array} \qquad 327 * 8 = 2616$$

Step 3 Use your estimate to place the decimal point in the answer. The estimate was less than 3.27, so the decimal point should be placed between the 2 and 6 in 2616.

So, $3.27 * 0.8 =$ **2.616.**

Sometimes when you multiply a decimal less than 1 by another decimal less than 1, making an estimate to place the decimal point is difficult. Another way to multiply decimals is to use powers of 10 to place the decimal point.

Example

$0.2 * 0.041 =$ **?**

Multiply both factors by a power of 10 to make them whole numbers. Keep track of both powers of 10, or the total number of places the decimal point shifted in each factor.

$0.2 * 10^1 = 2$

$0.041 * 10^3 = 41$

Multiply the whole numbers.

$2 * 41 = 82$

Undo the multiplication by powers of 10 by dividing by powers of 10. Divide the product by the powers of 10 used to change the factors to whole numbers, or shift the decimal point to the left the total number of places it shifted when changing the factors to whole numbers.

$82 / (10^1 * 10^3) = 0.0082$

This is the same as $(10) * (10 * 10 * 10)$.

So, $0.2 * 0.041 =$ **0.0082.**

Multiplying Decimals: Estimation Strategy

Lesson 6-9

DATE TIME

Math Message

SRB 100, 102, 128, 134

Tori has 8 blocks. Each block is 1.2 centimeters high.
If Tori stacks the blocks, what will the height of the stack be? _____ cm

Solve Problems 1–3 using the following method:

Step 1: Make an estimate.
Step 2: Multiply as if the factors were whole numbers.
Step 3: Use your estimate to place the decimal point in the product.

1. 76.1 * 9.6 = ?

   Estimate: _____

   Answer: _____

2. 189.6 * 1.75 = ?

   Estimate: _____

   Answer: _____

3. 5.6 * 0.8 = ?

   Estimate: _____

   Answer: _____

Math Journal 1

Multiplying Decimals

Multiplying decimals may seem like a daunting task at first, but once you learn how, you'll find that it's just like multiplying regular numbers! To multiply decimals, follow the steps below.

1. Multiply normally, ignoring the decimal points.
2. Place the decimal point in the answer in the correct spot.
   -It will have as many decimal places as the 2 original numbers combined.

Example: Multiply 0.03 by 11

1. Start with: **0.03 × 11**
2. Multiply without decimal points: **3 × 11 = 33**
3. 0.03 has 2 decimal places and 11 has no decimal places.
4. The total number of decimal places is 2.
5. Therefore, our answer has 2 decimal places: **0.33**

Solve the following multiplication problems. Write out all of the steps in your answers. Do not forget to count the number of decimals places in the original numbers and place the decimal point in your answer.

1) $\begin{array}{r} 2.4 \\ \times \quad 9 \\ \hline \end{array}$

2) $\begin{array}{r} 5.9 \\ \times \quad 12 \\ \hline \end{array}$

3) $\begin{array}{r} 6.4 \\ \times \quad 29 \\ \hline \end{array}$

4) $\begin{array}{r} .12 \\ \times \quad .2 \\ \hline \end{array}$

5) $\begin{array}{r} .10 \\ \times \quad .03 \\ \hline \end{array}$

6) $\begin{array}{r} 1.3 \\ \times \quad 3.4 \\ \hline \end{array}$

7) $\begin{array}{r} 11.4 \\ \times \quad 2 \\ \hline \end{array}$

8) $\begin{array}{r} 15 \\ \times \quad .29 \\ \hline \end{array}$

9) $\begin{array}{r} 1.21 \\ \times .295 \\ \hline \end{array}$

Comparing Decimal Products Game

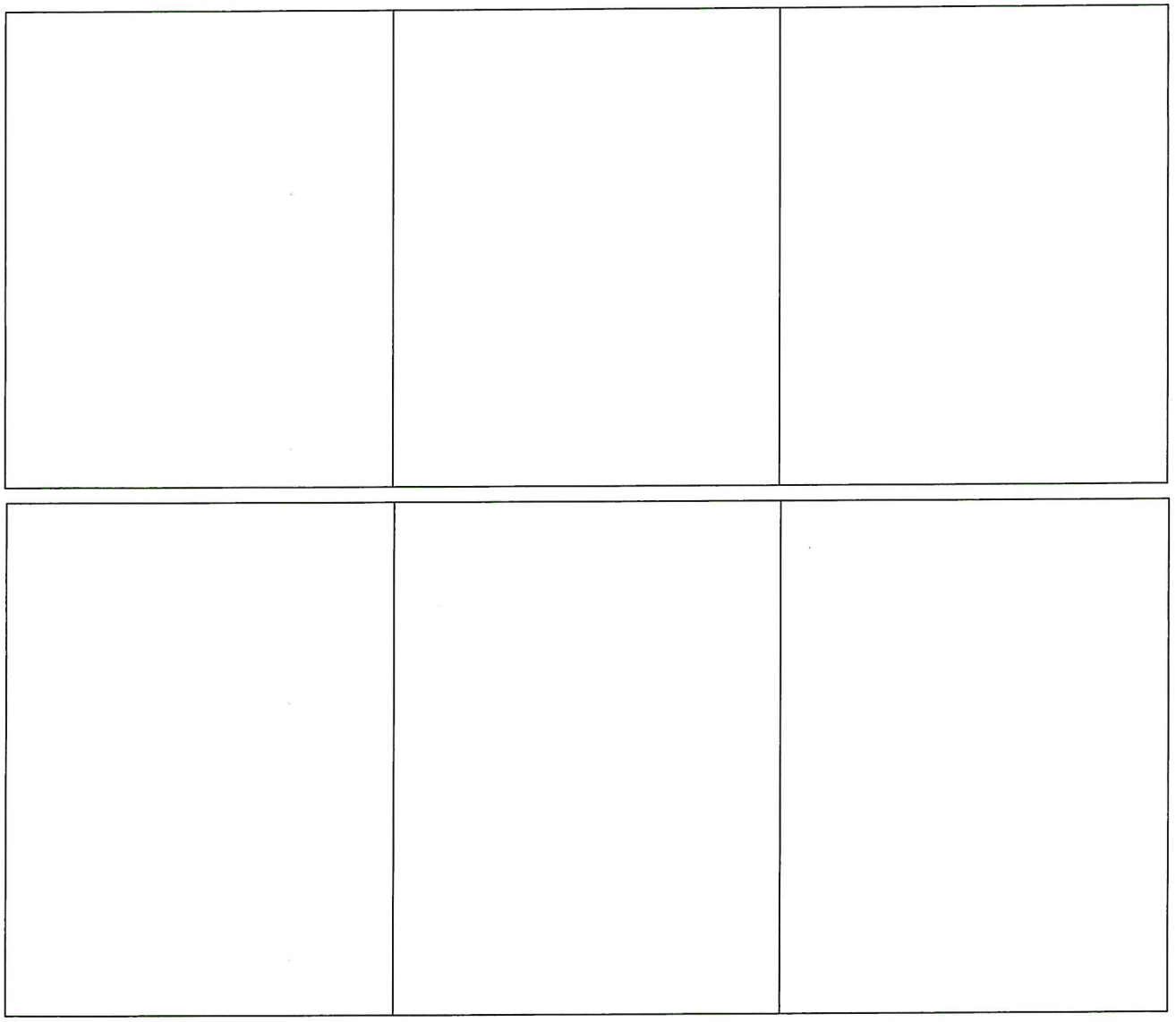
What you Need:

Number Cards 0-9 (4 of each) 2 Game Boards 2 Scoresheets
4 Counters Paper Pencil Calculator (optional)

What To Do:

1. Shuffle the cards and place them face down. Each player gets a game board, a scoresheet and 2 counters (you could use coins if you have them around the house.)
2. You and your partner draw a card and place it on your own game board. Continue going back and forth until you have filled up your game board. Use the counters to show where you want your decimals points to be. You may place them before, after, or between your cards but NOT at the end.
3. Each player solves their own multiplication problem using either the estimation strategy or the decimal places strategy.
4. Compare your product to your partners. Record your answers on your score sheet. The larger number wins and receives 5 points.
5. Repeats steps 1-4 until someone reaches 25 points.

Comparing Decimal Products Gameboard



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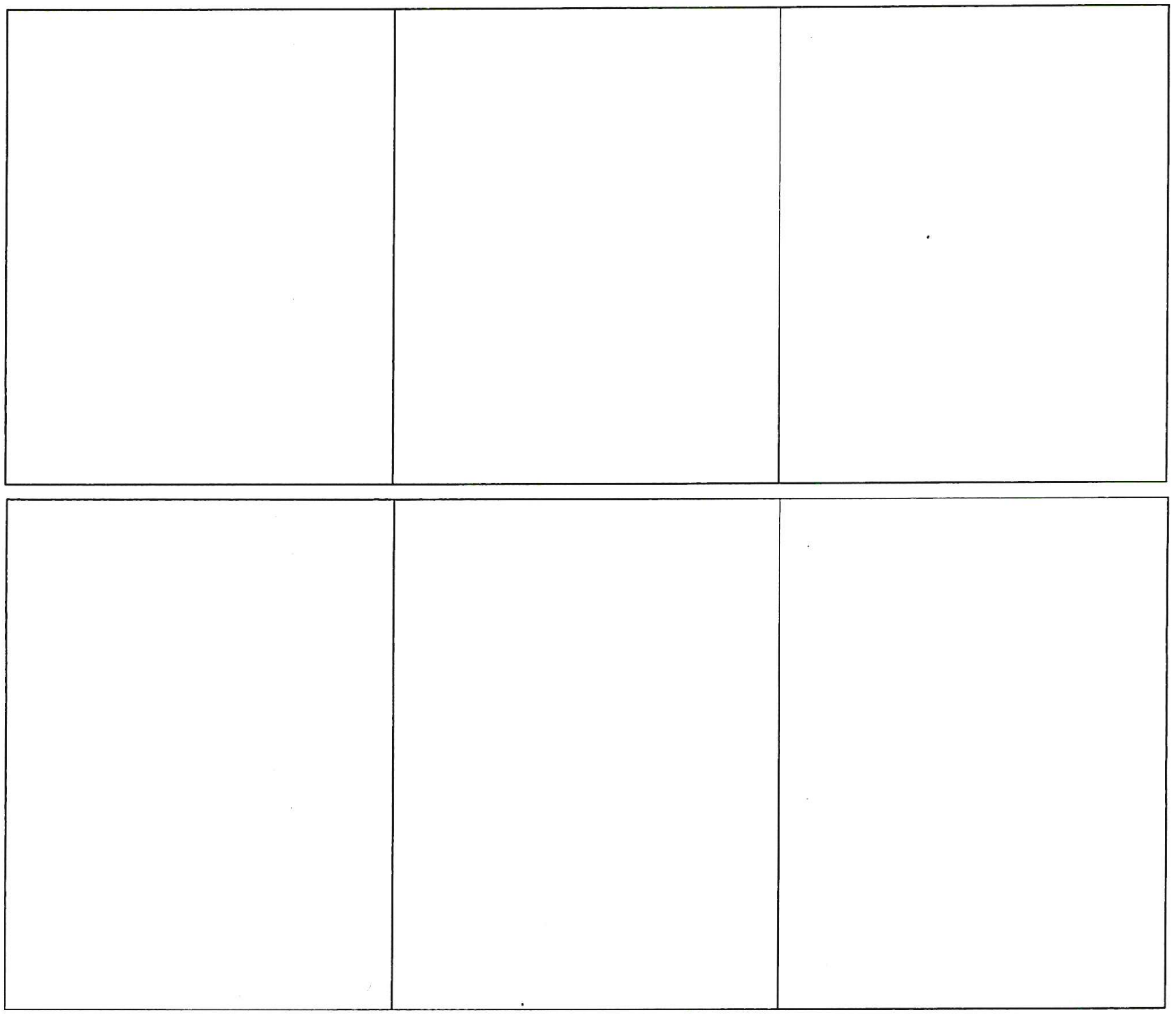
Comparing Decimal Products Gameboard



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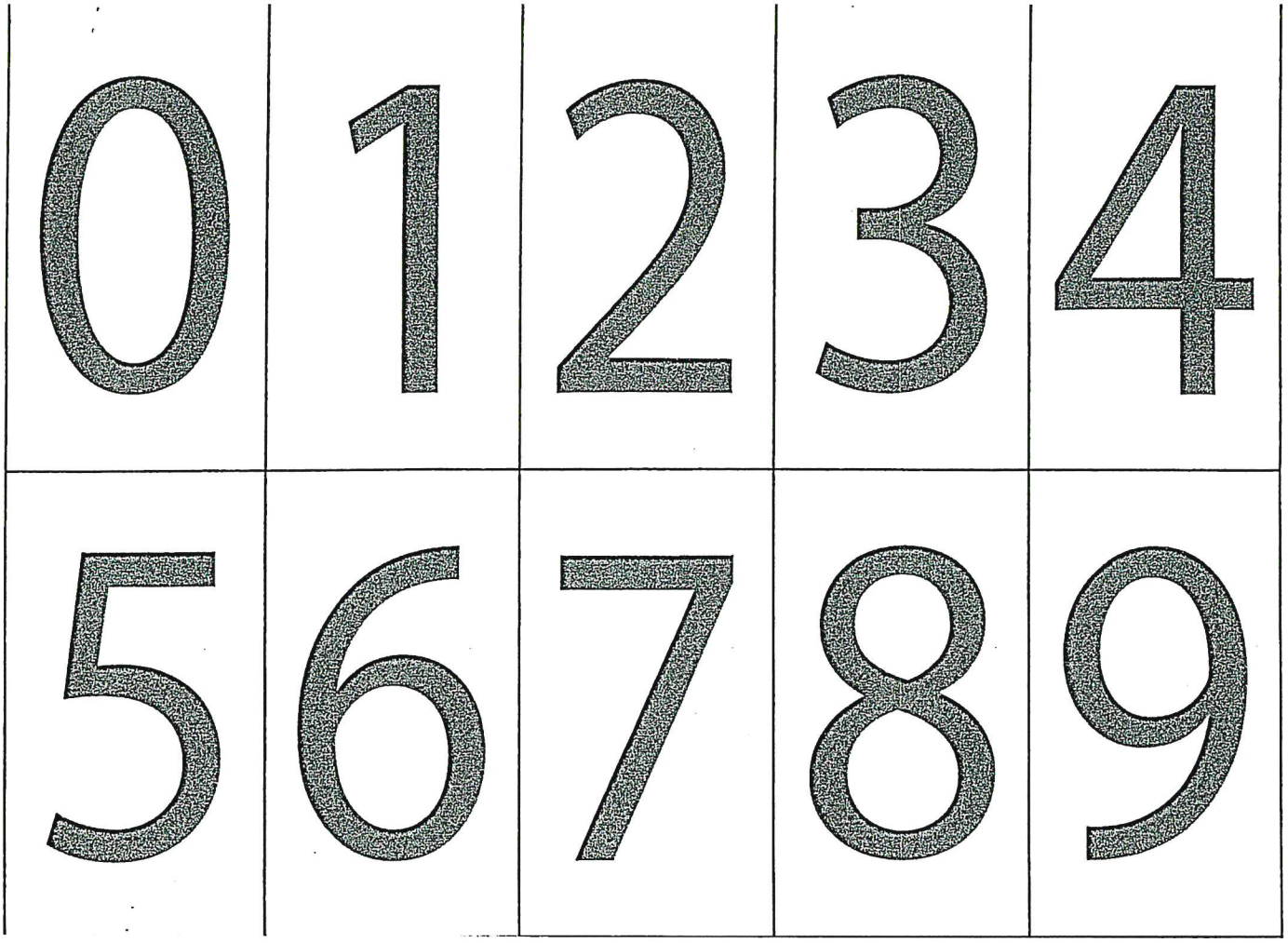
Comparing Decimal Products Score Sheet

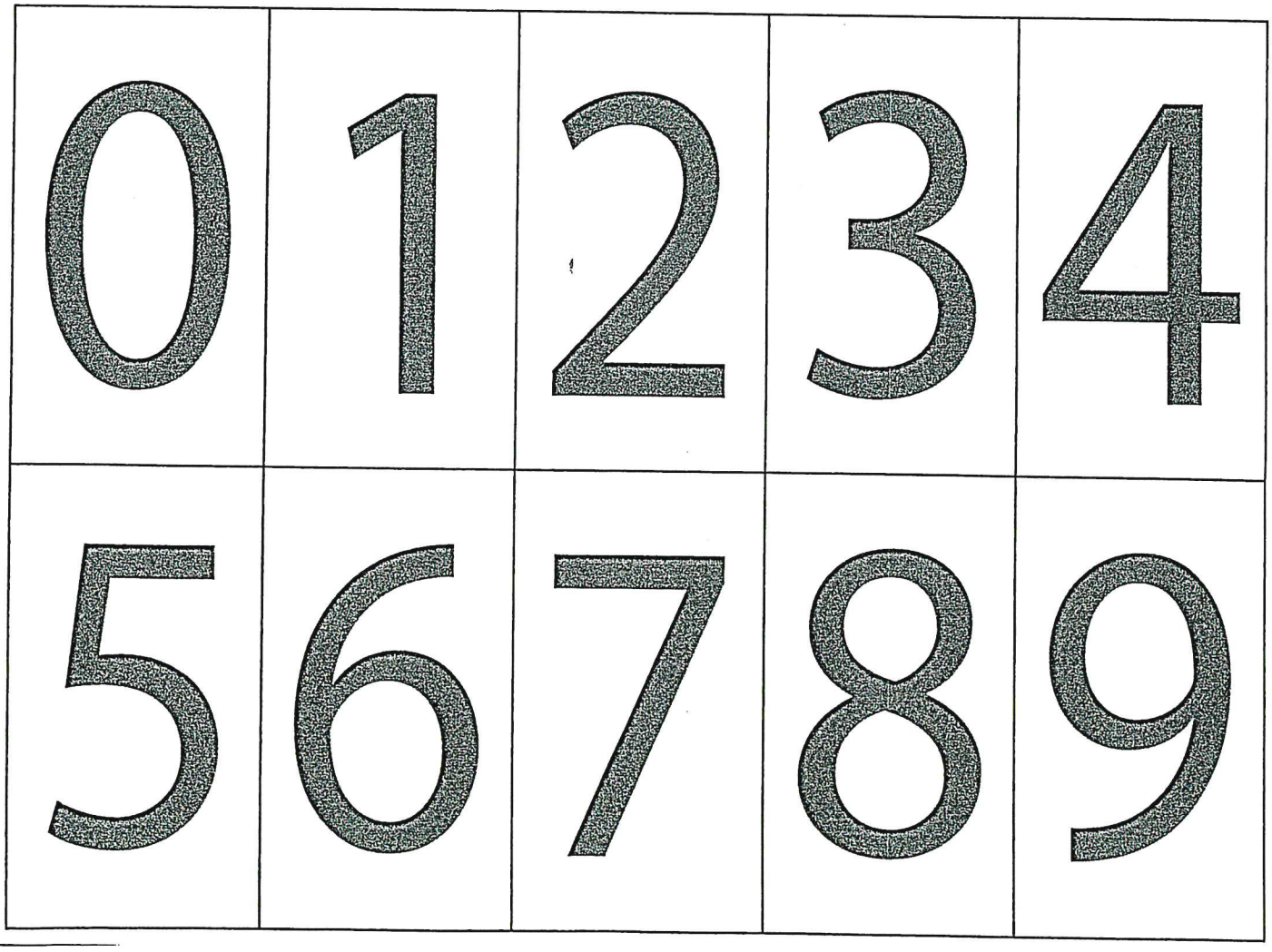
Player 1

Rounds	Problem	Answer	Score

Player 2

Rounds	Problem	Answer	Score


0 1 2 3 4
5 6 7 8 9

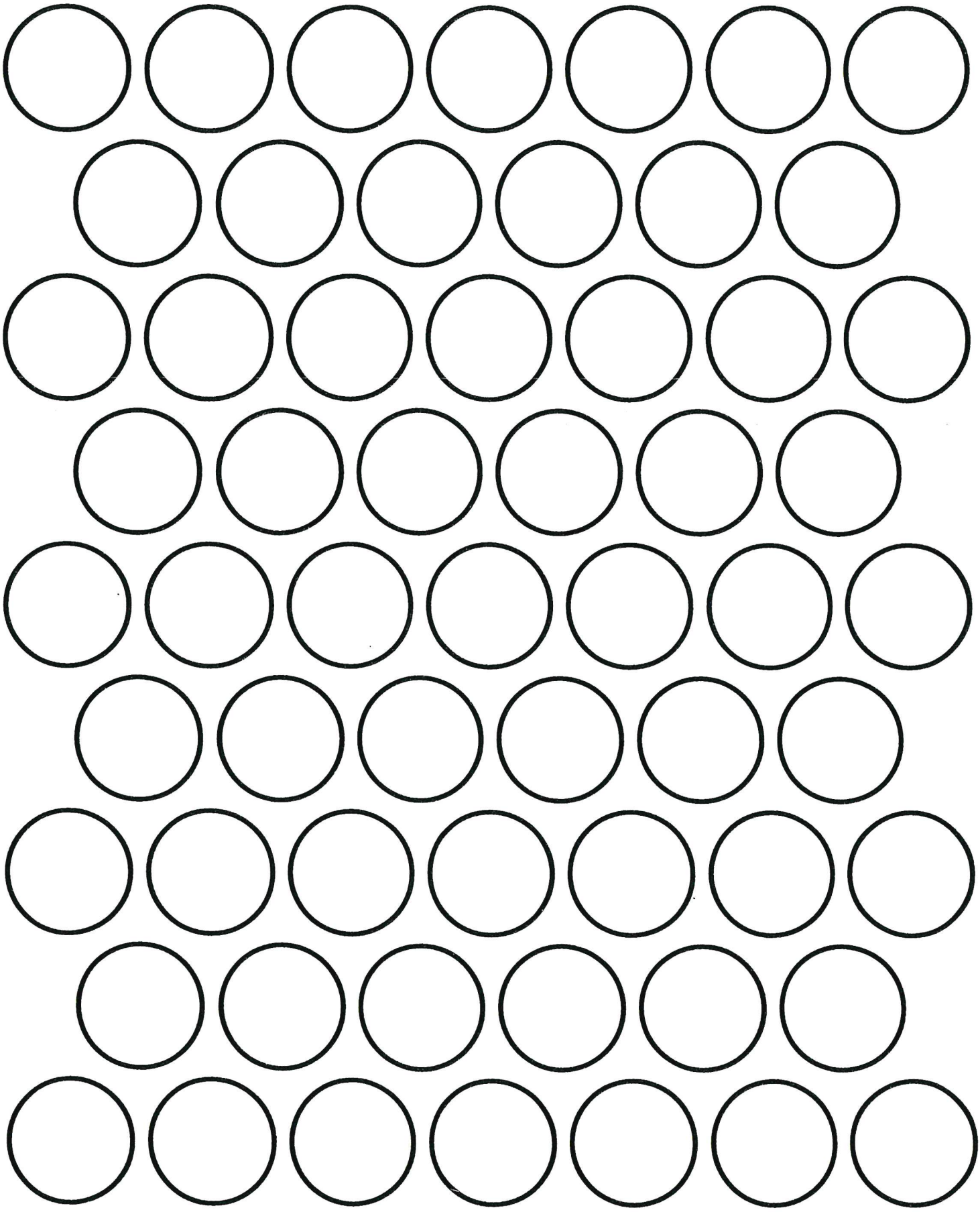

0 1 2 3 4
5 6 7 8 9

0	1	2	3	4
5	6	7	8	9

0	1	2	3	4
5	6	7	8	9

Counters

1" Circles



Name _____ Decimals: Multiplication

Stained-Glass Window

Solve the problems. Then, on page 39, find the shape(s) with each answer, and color them as directed below. (Hint: Look carefully—some of the answers are written in more than one shape!)

Color the shapes blue.

6.0 × 1.1	7.2 × 4.5	12 × 1.7	8.3 × 4.9	52 × 8.9

Color the shapes dark red.

402 × 0.3	7.8 × 12	332 × 1.7	14.2 × 8.9	9.7 × 2.3

Color the shapes red.

1.28 × 0.4	15.7 × 3.3	31.2 × 0.06	74.2 × 0.6	9.9 × 6.9

Color the shapes green.

4.7 × 6.9	11.7 × 0.9	0.4 × 2.8	1.8 × 4.3	13.7 × 2.9

Color the shapes yellow.

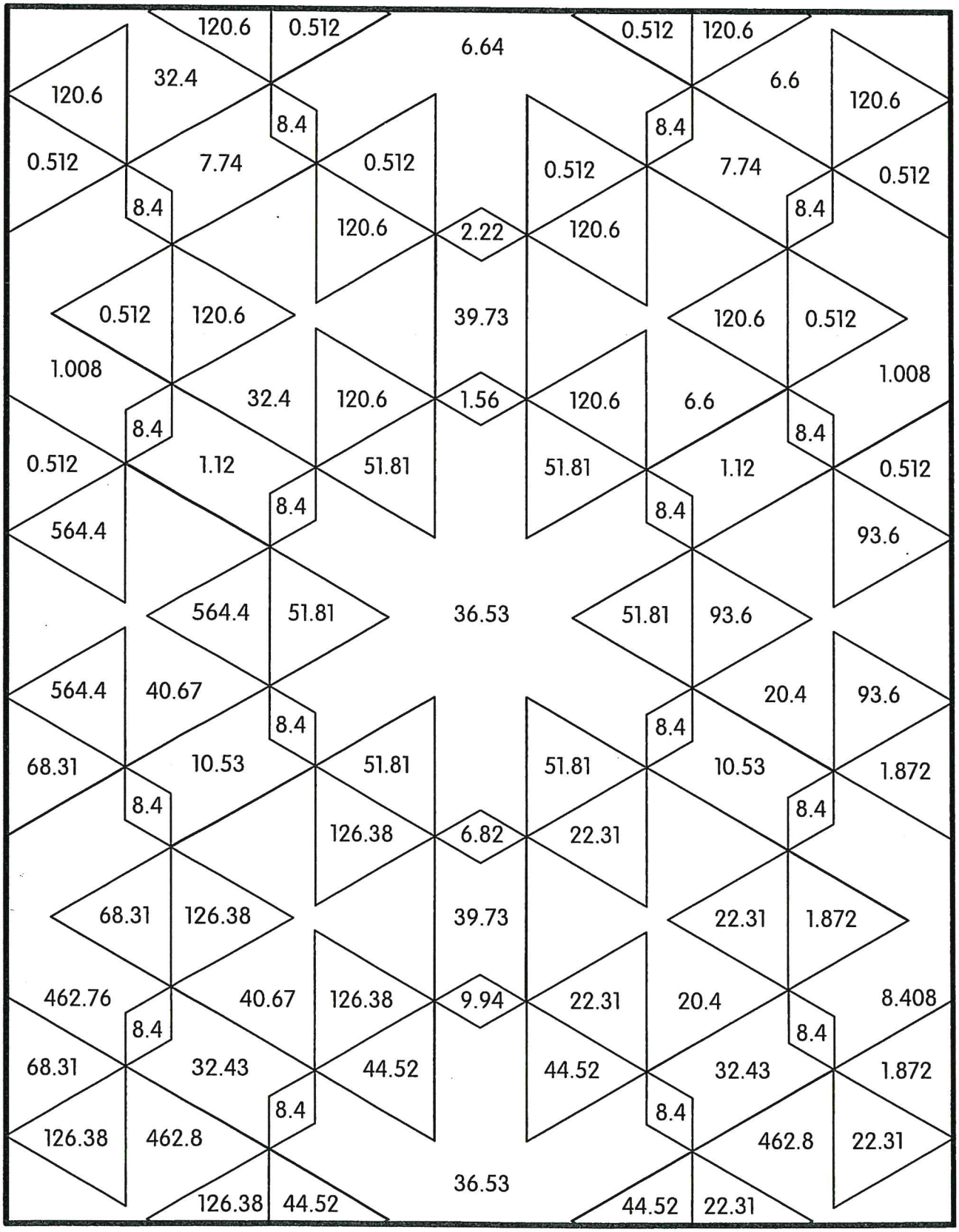
3.7 × 0.6	1.3 × 1.2	2.2 × 3.1	1.4 × 7.1	2.0 × 4.2

Color the shapes orange.

28.1 × 1.3	1.12 × 0.9	33.2 × 0.2	201.2 × 2.3	21.02 × 0.4

Name _____

Stained-Glass Window



Solutions

6th Grade Quick Link

1. 9366
2. 585
3. 13005
4. 14256

Math Journal 217

1. 1696.5
2. 602.62
3. 117.18
4. 2.91
5. 49.14
6. 12.6
7. 7.9
8. 0.75
9. 127.25
10. 64.00

Math Journal Page 219

1. 730.56
2. 331.8
3. 4.48

Multiplying Decimals (Mouse Sheet)

1. 21.6
2. 70.8
3. 185.6
4. 0.024
5. 0.003
6. 4.42
7. 22.8
8. 4.35
9. 0.35695