



Math Summer Learning Packet

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The Math Summer Prep is for incoming HC identified students who want to bridge their math skills. Students are working two levels above grade level. For example, a student who has completed first grade and starts as second-grade student will study fourth grade math. It provides a variety of printable materials, web based materials, and math skill building games

How to use this Grade 2 Summer Math Learning Packet

This optional packet provides practice with key math concepts for next year. Please support your child as they use these math resources. Your child does not need to complete every page or every question. The packet is organized by topic and includes Parent Letters with QR codes linking to matching math activities on the SPS HC website. Choose the activities that are most helpful for your child.

What Incoming 2nd grade math students should know:

- Addition and subtraction facts up to 20
- Understanding of the concept of Multiplication/ Division
- Adding/subtracting multi-digit numbers (up to 2 digits)
- Strong understand place value up to 1,000
- Fraction basics (name, represent, compare different fractions both greater than and less than 1)
- Estimating and rounding whole numbers

Suggested Schedule:

Do what works best for your family. While the printable packet and interactive websites do provide some feedback, having an adult there to further explain will help a lot!

Sample 15 min. Schedule:

5 min – warm up with a game* or watch a video about a math concept or math skill

10 min – interactive website or packet work **OR** Play a game for 15 minutes*

**Third grade is the year that students traditionally study multiplication tables and fluency is essential to study of 5th grade math. If your student does not yet recall multiplication and division facts with fluency (10 – 15 second recall), please have them review their facts daily. The online resource Multiplication by Heart has an excellent approach. See link under Interactive Websites for details.*

Resources:

Videos: These short videos (~ 5min.) to help students “warm up” to math work.

Games: These are game pages in the print packet, or interactive games accessible online.

Interactive Websites: Khan Academy, Multiplication by Heart, and Polypad related to each topic.

enVision website: enVision math website provides home activities for families.

Grade 2 https://media.pk12ls.com/curriculum/math/family_engage_cc/q02_welcome_en.html

Grade 3 https://media.pk12ls.com/curriculum/math/family_engage_cc/q03_welcome_en.html

Math Tool Kit: Quick reference sheets students could use in the summer and during the school year.

By the end of 2nd grade your HC identified math students should know:

- *Multiplication & Division Facts*
- *Place value up to 1,000,000*
- *Adding and Subtracting multi-digit numbers with regrouping (up to 4 digits)*
- *Multiplying multi-digit numbers (up to 2 digits by 3 digits)*
- *Dividing multi-digit numbers (up to 2 digits by 4 digits)*
- *Fraction equivalence*
- *Adding and subtracting Fractions with same denominators*
- *Multiplying a whole number by a unit fractions (such as $2 \times \frac{1}{3}$)*

OPERATION KEYWORDS

<p>ADDITION</p> <ul style="list-style-type: none"> • SUM • ADD • PLUS • INCREASE • GREATER THAN • MORE THAN • COMBINED • ALL TOGETHER 	<p>SUBTRACTION</p> <ul style="list-style-type: none"> • DIFFERENCE • MINUS • LESS THAN • DECREASE • SUBTRACT • TAKE AWAY • DEDUCT • LESS
<p>MULTIPLICATION</p> <ul style="list-style-type: none"> • PRODUCT • MULTIPLY • TIMES • DOUBLE • TRIPLE • EQUAL GROUPS OF • TIMES GREATER THAN 	<p>DIVISION</p> <ul style="list-style-type: none"> • QUOTIENT • DIVIDE • HALF • SHARE EQUALLY • EQUAL GROUPS • RATIO • SEPARATE • PER

OPERATION VOCABULARY

<p>ADDITION PROBLEM</p> <p>addends</p> <p>$5 + 4 = 9$</p> <p>sum</p>	<p>SUBTRACTION PROBLEM</p> <p>subtrahend</p> <p>$8 - 2 = 6$</p> <p>minuend difference</p>
<p>MULTIPLICATION PROBLEM</p> <p>factors</p> <p>$5 \times 3 = 15$</p> <p>product</p>	<p>DIVISION PROBLEM</p> <p>divisor</p> <p>$18 \div 3 = 6$</p> <p>dividend quotient</p>

Multiplication 2, 3, 4, 5, & 10 facts

Scan this QR Code to access additional online resources





MULTIPLICATION CHART



X	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Name _____

Multiplication Facts: Use Patterns

Dear Family,

Your child is learning to multiply using 0, 1, 2, 5, 9, and 10 as factors. Help him or her learn these multiplication facts by using patterns.

Skip counting patterns can help your child with multiplication facts using 2, 5, or 10 as factors. For example, to find 2×7 or 7×2 , skip count by 2s seven times.

2, 4, 6, 8, 10, 12, 14 $7 \times 2 = 14$

Make or buy a set of multiplication flash cards, and play this game with your child.

Penny Patterns

Materials cards with multiplication problems where 0, 1, 2, 5, 9, and 10 are factors, 100 pennies

Step 1 Mix the multiplication cards and place them facedown.

Step 2 Player 1 turns over a card without Player 2 seeing it. Player 1 then uses pennies to show the multiplication problem. For example, if the problem is 4×5 , Player 1 could place the pennies in 4 rows of 5 pennies each.

Step 3 Player 2 looks at the penny pattern and says what multiplication problem is on the card and gives the answer.

Observe Your Child

After your child has created an array, have him or her skip count the pennies using one of the factors. Make clear that a pattern can also be observed by counting by the other factor.

Name _____



Blockout

Rules

Play **Blockout** by yourself or as a team.

1. Roll two dice.
2. Shade in that array on the board.
3. Then write the equation for that array inside it.

Keep going until you can't fit in the array you roll.

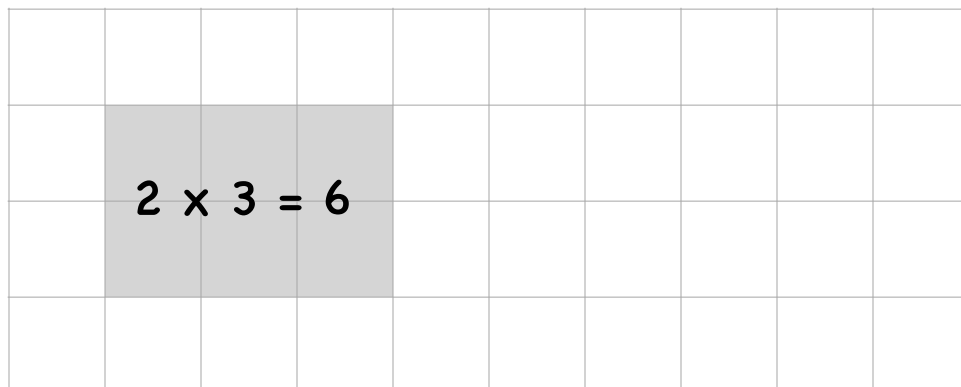
The total number of shaded squares is your score.

The higher the score, the better.

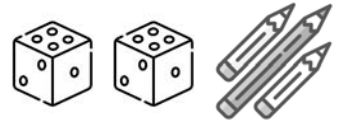
Example

I rolled a 2 and a 3.

I shaded in a 2×3 array and wrote $2 \times 3 = 6$.



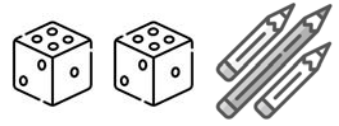
Name _____



Blockout Board

Total Score _____

Name _____



Challenge

Play a game of blockout with an extra rule.

You get to decide what numbers you use on every turn.

BUT you can **never** use a one. Use only 2, 3, 4, 5, or 6.

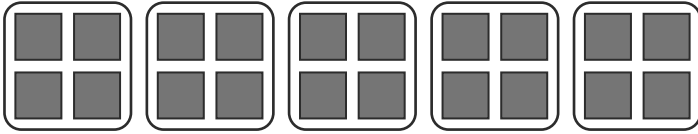
Can you fill the entire board, with no squares leftover?

Additional Practice 1-1

Relate Multiplication and Addition

Another Look!

Each group below has the same number of squares. There are 5 groups of 4 squares.



20 squares



An addition equation or a multiplication equation can represent the total number of squares.

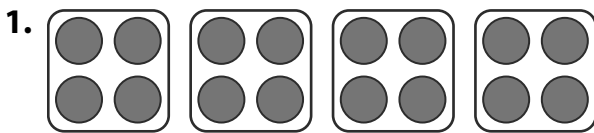
$$4 + 4 + 4 + 4 + 4 = 20$$

$$5 \times 4 = 20$$

There are 20 squares in all.



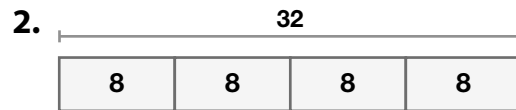
Complete 1 and 2. Use the pictures to help.



4 groups of ____

$$4 + 4 + 4 + 4 = \underline{\quad}$$

$$4 \times \underline{\quad} = \underline{\quad}$$



____ groups of 8

$$\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = 32$$

$$\underline{\quad} \times 8 = \underline{\quad}$$

In 3 and 4, write the addition equation as a multiplication equation.

3. $3 + 3 + 3 + 3 + 3 = 15$

4. $7 + 7 + 7 = 21$

In 5–8, write the multiplication equation as an addition equation.

5. $5 \times 5 = 25$

6. $6 \times 2 = 12$

7. $3 \times 4 = 12$

8. $5 \times 6 = 30$





Practice



Video



Tools



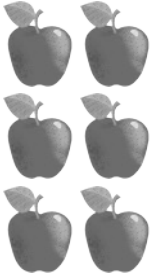
Games

Additional Practice 1-3

Arrays and Properties

Another Look!

Scott arranges some apples into arrays.
How many apples are in each array?



$$3 \times 2 = 6$$

There are 6 apples in each array.



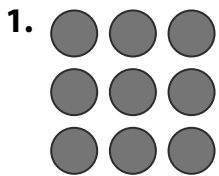
$$2 \times 3 = 6$$

You can use the
Commutative Property of
Multiplication to multiply
numbers in any order.

$$3 \times 2 = 2 \times 3$$

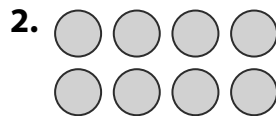


In **1–3**, fill in the blanks to show skip counting and multiplication for each array.



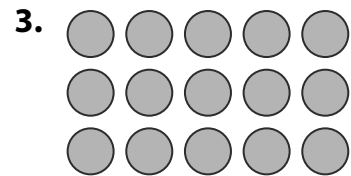
3, __, __

$$3 \times \underline{\quad} = 9$$



__, __

$$2 \times \underline{\quad} = \underline{\quad}$$



__, __, 15

$$\underline{\quad} \times \underline{\quad} = 15$$

In **4** and **5**, draw arrays. Write and solve a multiplication equation for each array.

4. 3×4

4×3

5. 2×5

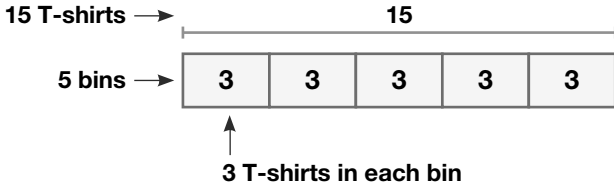
5×2



Additional Practice 1-4
Division: How Many in Each Group?

Another Look!

A.J. has 15 T-shirts. He sorted them equally into 5 laundry bins. How many T-shirts did A.J. put in each bin? You can use a bar diagram to solve.



There are 15 T-shirts. There are 5 equal groups.
 There are 3 T-shirts in each group.
 So, $15 \div 5 = 3$.

A.J. put 3 T-shirts in each laundry bin.

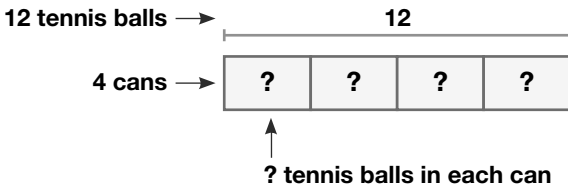
Division can show how many items are in each equal group.



In 1, use the bar diagram to help divide.

- There are 12 tennis balls that need to be packaged equally into 4 cans.

How many tennis balls will be in each can?



There are ___ tennis balls.

There are ___ groups.

There are ___ tennis balls in each group.

$12 \div \underline{\quad} = \underline{\quad}$

In 2-7, put an equal number of objects in each group. Use counters or draw a picture to solve. Write the unit for each answer.

- Sort 16 apples equally into 2 baskets. How many apples are in each basket?
- Arrange 20 chairs equally at 4 tables. How many chairs are at each table?
- Seven rabbits share 21 carrots equally. How many carrots does each rabbit get?
- Five children share 25 dimes equally. How many dimes does each child get?
- Divide 14 books equally on 2 shelves. How many books are on each shelf?
- Twenty-four people divide among 3 elevators equally. How many people are in each elevator?





Practice



Video



Tools



Games

**Additional
Practice 1-5****Division: How Many
Equal Groups?****Another Look!**

Layla has 20 raffle tickets.


There are 5 tickets in each book.

How many books of raffle tickets
does Layla have? Find $20 \div 5 = \square$.

$$\left. \begin{array}{l} 20 - 5 = 15 \\ 15 - 5 = 10 \\ 10 - 5 = 5 \\ 5 - 5 = 0 \end{array} \right\} \text{There are four groups of 5 in 20.}$$

You subtracted 5 four times. So, $20 \div 5 = 4$.

Layla has 4 books of raffle tickets.


 Subtract 5 tickets
each time.
In **1**, use repeated subtraction to help solve.

- 1.** Ryan has 10 markers.
There are 5 markers in each box.
How many boxes of markers are there?
Find $10 \div 5 = \square$.

$10 - 5 = \underline{\quad}$

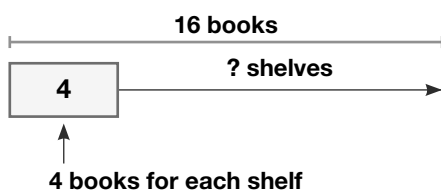
$5 - \underline{\quad} = \underline{\quad}$

I subtracted 5 two times.

So, $\underline{\quad} \div \underline{\quad} = \underline{\quad}$.

Ryan has $\underline{\quad}$ boxes of markers.In **2** and **3**, use bar diagrams or counters or draw a picture to solve.

- 2.** There are 16 books. The librarian arranged
4 books on each shelf. How many shelves
are there?



- 3.** Joseph had 28 paintbrushes to give to
4 members of the Art Club. He wanted to
give an equal number of brushes to each
member. How many brushes did each
member get?



x3

NAME: _____

COLOR BY PRODUCT



6



9



12



15



18



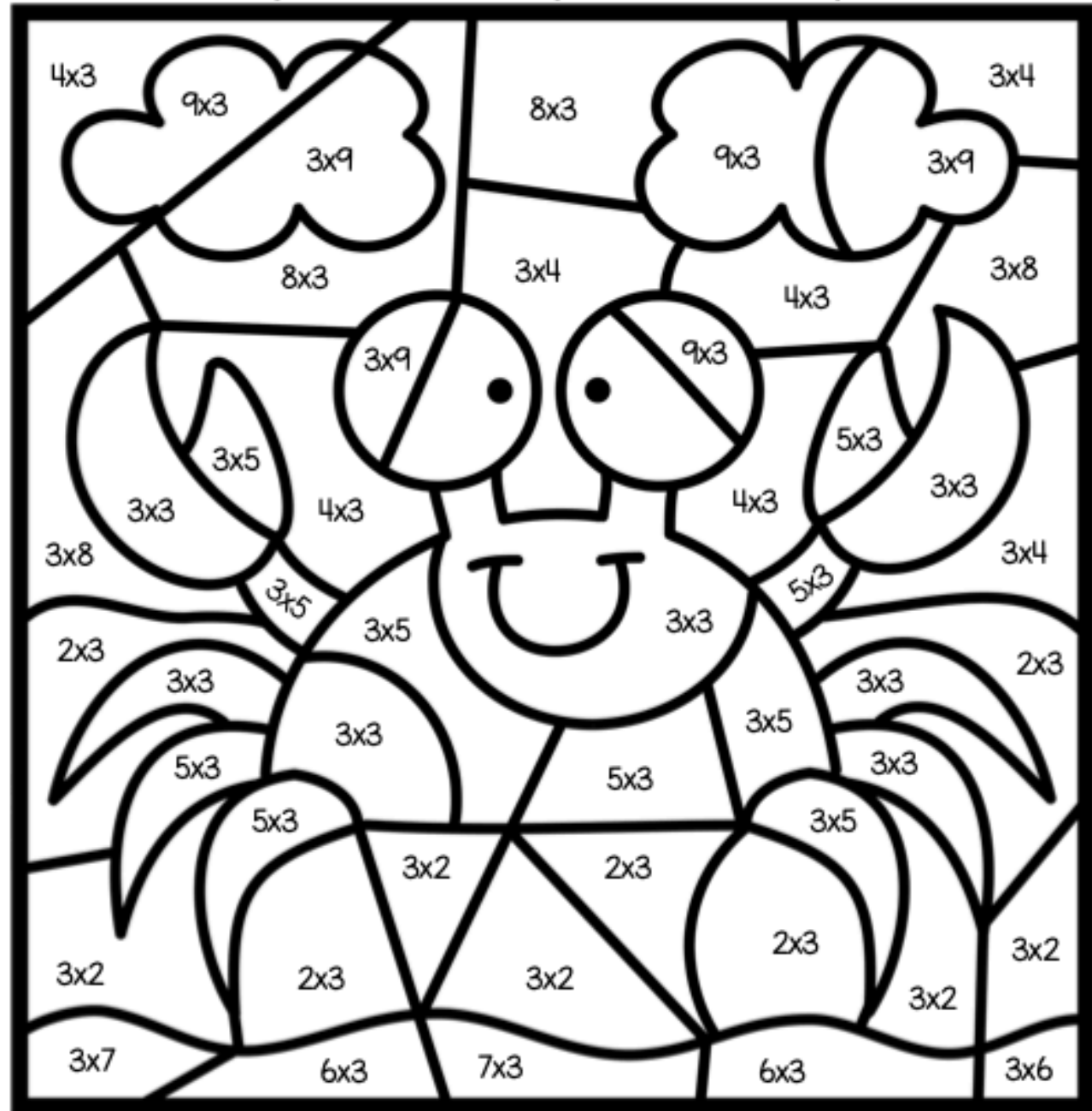
21



24



27



Name : _____

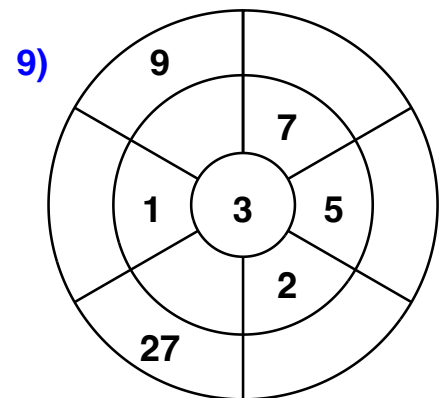
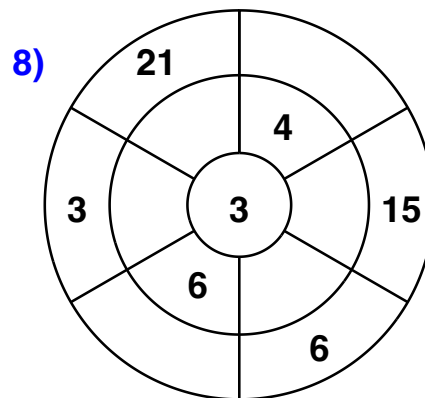
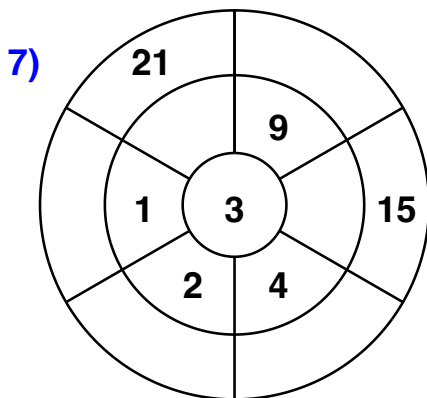
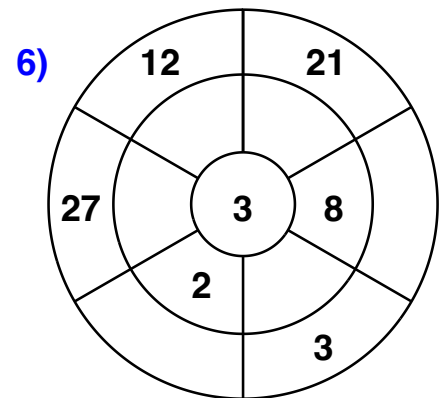
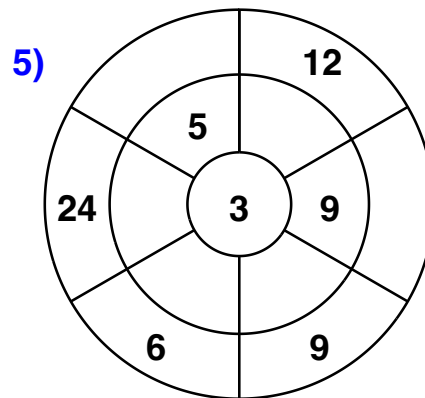
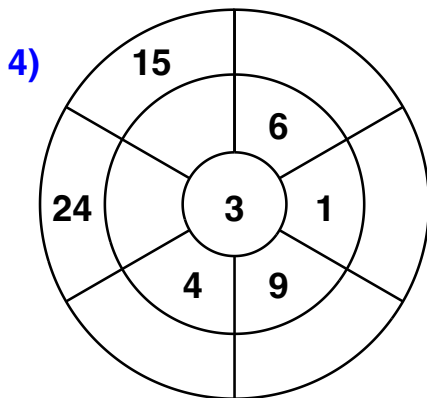
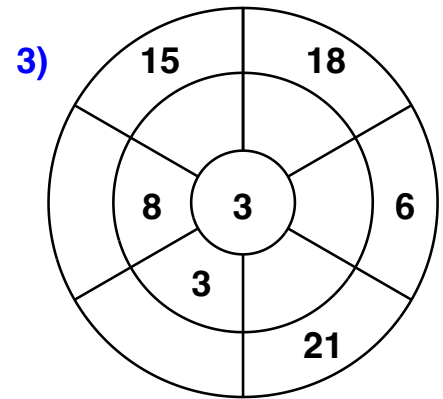
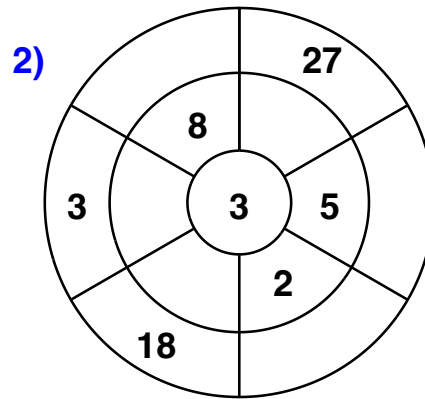
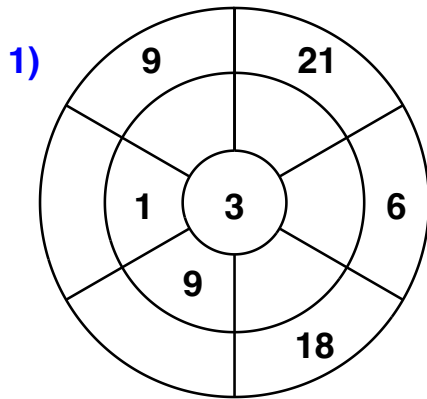
Score : _____

Teacher : _____

Date : _____

3 Times Table - Target Circles

Complete the circle by multiplying the number in the center by the middle ring to get the outer numbers.



Name : _____

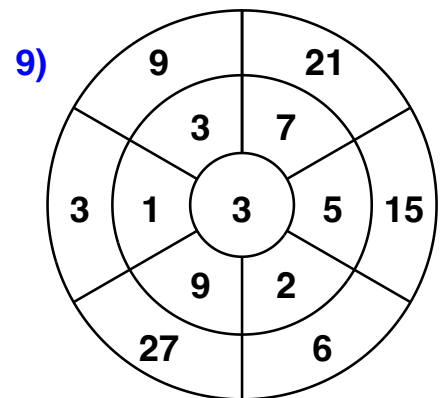
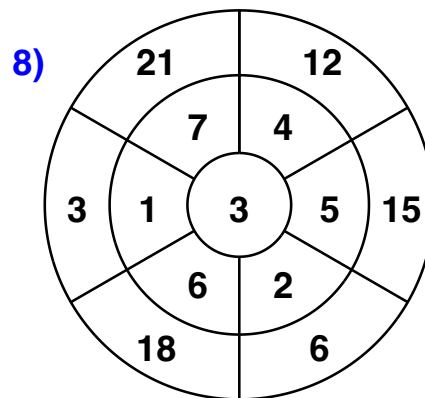
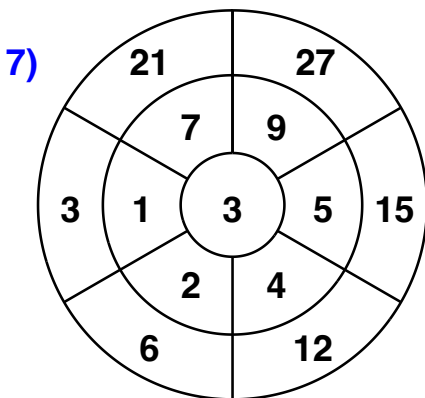
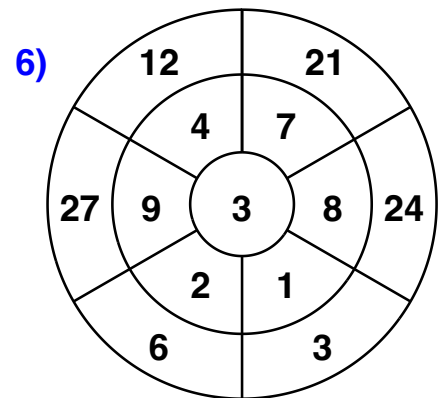
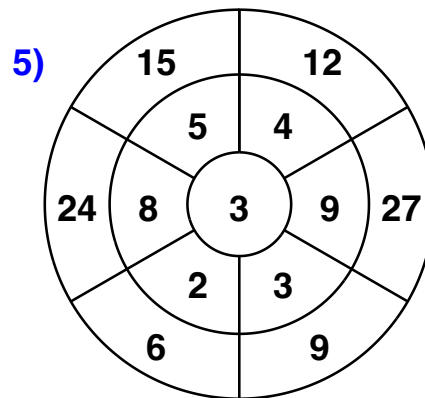
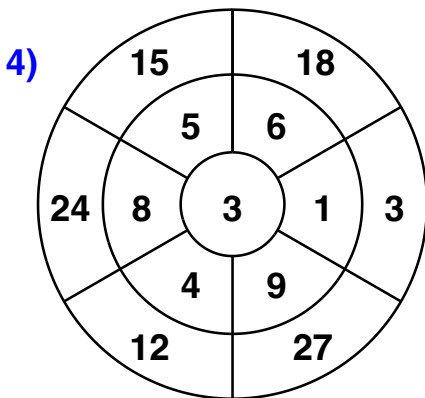
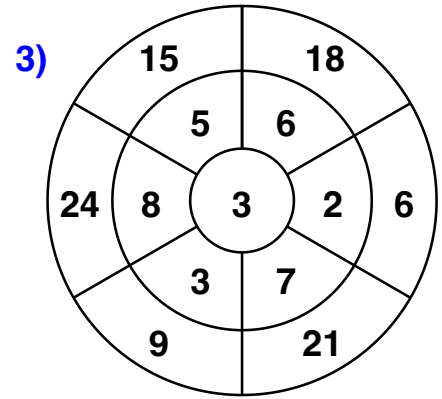
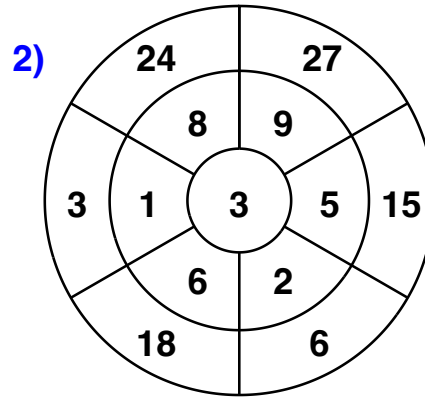
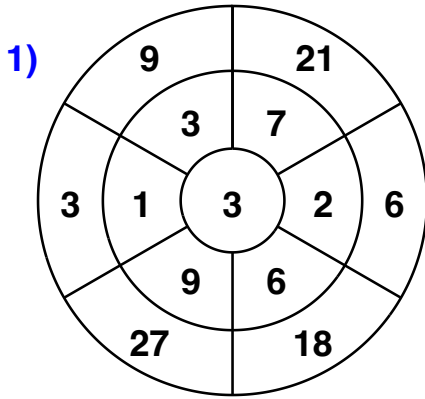
Score : _____

Teacher : _____

Date : _____

3 Times Table - Target Circles

Complete the circle by multiplying the number in the center by the middle ring to get the outer numbers.



Multiplication 6, 7, 8, & 9 facts

Scan this QR Code to access additional online resources



Name _____

Apply Properties: Multiplication Facts for 3, 4, 6, 7, 8

Dear Family,

Your child continues to study multiplication using 3, 4, 6, 7, and 8 as factors. Your child uses multiplication facts he or she already knows to find multiplication facts he or she does not know. For example:

$$\begin{array}{l}
 \left. \begin{array}{l} \square\square\square\square\square\square\square\square \\ \square\square\square\square\square\square\square\square \end{array} \right\} 2 \times 8 = 16 \\
 \left. \begin{array}{l} \square\square\square\square\square\square\square\square \\ \square\square\square\square\square\square\square\square \end{array} \right\} 1 \times 8 = 8 \\
 3 \times 8 = 24
 \end{array}
 \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} 16 + 8 = 24$$

Here is an activity you can try together.

Matching Multiplication

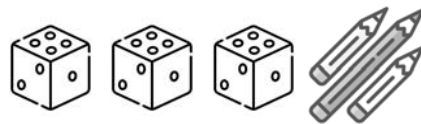
Materials Cards with multiplication facts that have 3, 4, 6, 7, or 8 as a factor and separate cards with the products for each fact

- Each player turns over one factor card and one product card in order to find a multiplication equation match.
- If the cards match, the player keeps the cards and takes another turn. If not, the two cards are returned to the bottom of each set and the next person tries to find a match.
- Continue until all cards have been correctly matched.

Observe Your Child

When two cards match, ask your child to show a way to break the product into the sum of two other multiplication facts (as shown above).

Name _____



Big Blockout

RULES

Play **Big Blockout** by yourself or as a team.

1. Roll three dice.
2. Add 2 dice for the length (or height).
The 3rd die is for height (or length)
3. Color in that array on the board.
Write the equation for that array inside it.

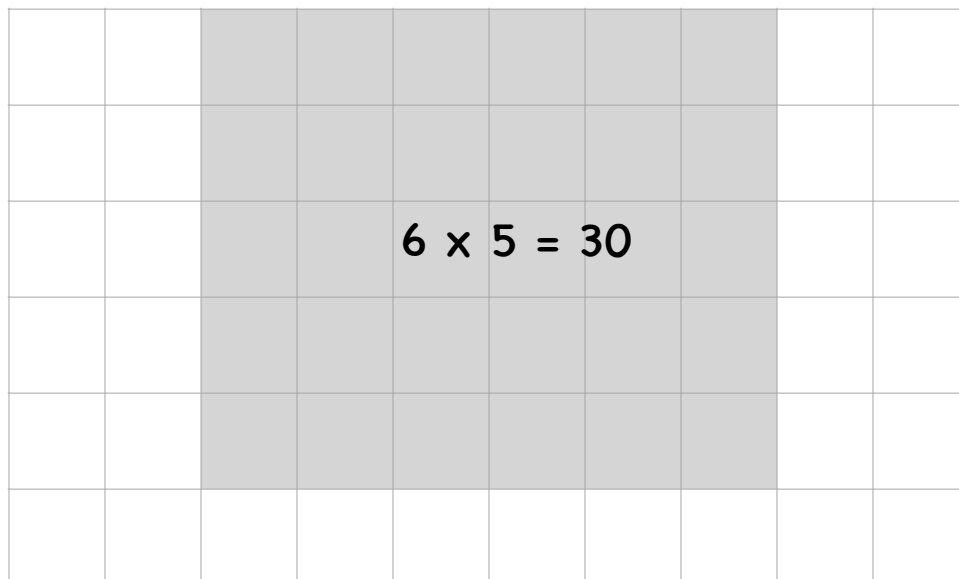
The game ends when you can't fit in an array you rolled.
Your score is the total number of colored squares.

EXAMPLE

I rolled 2, 4, 5.

I made one side of my array $2 + 4 = 6$ long.

I made the other side 5 long





Practice



Video



Tools



Games

Additional Practice 2-4

Multiply by 10

Another Look!

The table shows multiplication facts for 10.

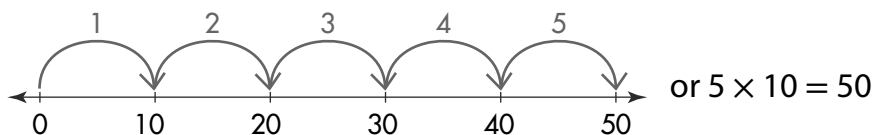
10s Facts	
$10 \times 0 = 0$	$10 \times 5 = 50$
$10 \times 1 = 10$	$10 \times 6 = 60$
$10 \times 2 = 20$	$10 \times 7 = 70$
$10 \times 3 = 30$	$10 \times 8 = 80$
$10 \times 4 = 40$	$10 \times 9 = 90$
	$10 \times 10 = 100$

All multiples of 10 in the table end with zero.



Find 5×10 .

To find the answer, you can use a number line, place value, or you can use patterns.



In **1** and **2**, use the number lines to help find the product.

1. $2 \times 10 = \underline{\quad}$

2. $4 \times 10 = \underline{\quad}$



In **3-12**, find the product.

3. $10 \times 6 = \underline{\quad}$

4. $10 \times 10 = \underline{\quad}$

5. $0 \times 10 = \underline{\quad}$

6. $1 \times 10 = \underline{\quad}$

7. $10 \times 3 = \underline{\quad}$

8. $9 \times 10 = \underline{\quad}$

9.
$$\begin{array}{r} 10 \\ \times 1 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 10 \\ \times 3 \\ \hline \end{array}$$

11.
$$\begin{array}{r} 10 \\ \times 8 \\ \hline \end{array}$$

12.
$$\begin{array}{r} 10 \\ \times 7 \\ \hline \end{array}$$

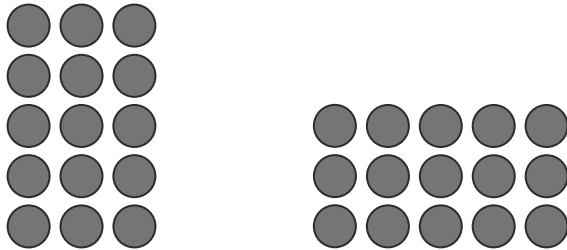


Additional Practice 2-5
Multiplication Facts:
0, 1, 2, 5, 9, and 10

Another Look!

How many apples are in 5 baskets with 3 apples each?

5 groups of 3 and 3 groups of 5 both have the same number of items: $5 \times 3 = 3 \times 5$.



Use a pattern to multiply by 5.

5, 10, 15

$3 \times 5 = 15$

Also, $5 \times 3 = 15$.

You can multiply numbers in any order and the product is the same.



In 1-3, use a pattern to find each product.

1. 7×2 2, 4, _____, _____, _____
 $7 \times 2 =$ _____

2. 10×5 _____, _____, _____, _____, _____
 $10 \times 5 =$ _____

3. 5×10 _____, _____, _____, _____, _____
 $5 \times 10 =$ _____

You can use a pattern to multiply.



In 4-9, find each product.

4. $2 \times 9 =$ _____

5. $5 \times 8 =$ _____

6. _____ $= 3 \times 2$

7. $9 \times 1 =$ _____

8. _____ $= 10 \times 10$

9. $0 \times 0 =$ _____



Additional Practice 3-5

Practice Multiplication Facts

Another Look!

Find 8×4 .

You can use a picture or known facts to find 8×4 .



Picture

8×4 means 8 groups of 4.

?

4	4	4	4	4	4	4	4
---	---	---	---	---	---	---	---

Combine equal groups to find the product.

So, $8 \times 4 = 32$.

Known Facts

Use 4s facts to help.

○ ○ ○ ○	}	$4 \times 4 = 16$
○ ○ ○ ○		
○ ○ ○ ○		
○ ○ ○ ○		
○ ○ ○ ○	}	$4 \times 4 = 16$
○ ○ ○ ○		
○ ○ ○ ○		
○ ○ ○ ○		

$16 + 16 = 32$

So, $8 \times 4 = 32$.

In 1 and 2, use a picture and known facts to find the product.

1. $3 \times 6 = ?$

?	}	$2 \times 6 = \underline{\quad}$
○ ○ ○ ○ ○ ○		
○ ○ ○ ○ ○ ○	}	$1 \times 6 = \underline{\quad}$
○ ○ ○ ○ ○ ○		

6	6	_____
---	---	-------

6 12 _____

$3 \times 6 = \underline{\quad}$

12 + _____ = _____

2. $3 \times 3 = ?$

?	}	$2 \times 3 = \underline{\quad}$
○ ○ ○		
○ ○ ○	}	$1 \times 3 = \underline{\quad}$
○ ○ ○		

3	3	_____
---	---	-------

3 6 _____

$3 \times 3 = \underline{\quad}$

6 + _____ = _____

In 3-8, multiply.

3. $3 \times 2 = \underline{\quad}$

4. $8 \times 3 = \underline{\quad}$

5. $6 \times 7 = \underline{\quad}$

6. $10 \times 7 = \underline{\quad}$

7. $4 \times 0 = \underline{\quad}$

8. $7 \times 2 = \underline{\quad}$

Name _____



Square Coloring

Color in the squares in the rectangles below so that:

- Every square is a different color
- No neighboring square are the same color
- Each color gets the same number of squares

Square tiles are nice for these, if you have them!
For this one, I used blue (B), yellow (Y), and white (W).

Example:

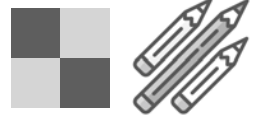
- 3 colors
- No same-color neighbors
- Same number of squares of each color

B	W	Y	B
W	B	W	Y
Y	W	Y	B

Number of squares of each color = 4

Total squares = 12

Name _____



Square Coloring

Use 3 colors. No same-color neighbors.

Number of squares of each color = _____

Total squares = _____

Name _____

Square Coloring



Use 4 colors. No same-color neighbors.

_____ Squares of each color

_____ Total squares

Place value

Scan this QR Code to access additional online resources



Place Value Chart

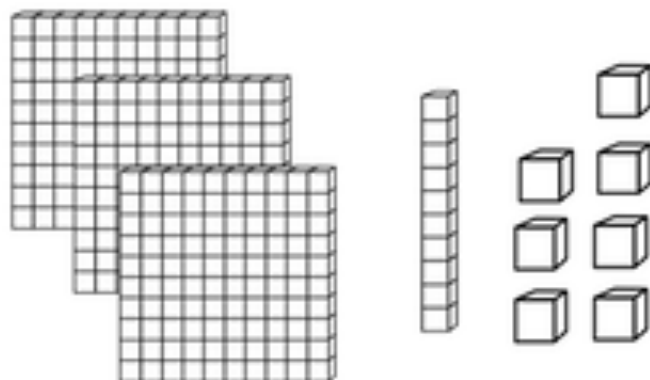
BILLIONS			MILLIONS			THOUSANDS			ONES			DECIMALS				
HUNDRED BILLIONS	TEN BILLIONS	BILLIONS	HUNDRED MILLIONS	TEN MILLIONS	MILLIONS	HUNDRED THOUSANDS	TEN THOUSANDS	THOUSANDS	HUNDREDS	TENS	ONES	TENTHS	HUNDREDTHS	THOUSANDTHS	TEN THOUSANDTHS	HUNDRED THOUSANDTHS
10^{11}	10^{10}	10^9	10^8	10^7	10^6	10^5	10^4	10^3	10^2	10^1	10^0	10^{-1}	10^{-2}	10^{-3}	10^{-4}	10^{-5}

NUMBER FORMS

STANDARD FORM

317

Base 10 FORM



EXPANDED FORM

$300 + 10 + 7$

WORD FORM

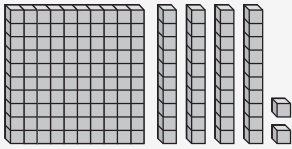
three
HUNDRED
SEVENTEEN

Numbers to 1,000

Dear Family,

In this topic, your child is learning to read and write numbers to 1,000. Your child will use place value, or the value of each digit in a number, to identify and record 3-digit numbers in expanded, standard, and word form. Your child will also learn how to skip count by 5s, 10s, and 100s on a number line, and compare numbers using place value and a number line. He or she will also be using mathematical reasoning involving place value to solve problems. Below is an example of writing a number in different ways:

Expanded, Standard, and Word Forms



Expanded form : $100 + 40 + 2$

Standard form : 142

Word form : One hundred forty-two

Expanded, Standard, and Word Forms of Numbers

Materials Newspapers or magazines, scissors, glue, paper, pencil

Have your child cut out 4 three-digit headline-sized numbers from magazines or newspapers. Have your child glue each number to the top of a half sheet of paper. Then ask him or her to write each number in expanded form and word form. Have your child read each number to you using the different forms.

Observe Your Child

On the left side of a piece of paper, write four numbers from 0 to 1,000 in word form. On the right side of the paper, write the same four numbers in standard form, but in a different order. Ask your child to match the forms of the numbers and explain why each answer makes sense. If your child is having difficulty, encourage him or her to persevere.

Name _____

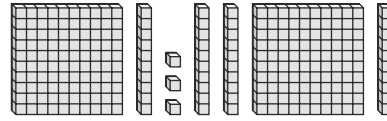


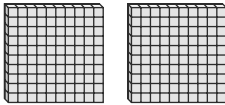
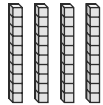

Additional Practice 9-2 Models and 3-Digit Numbers

Another Look! Use models and your workmat to sort and count.

First, put the hundreds flats on your mat. Next, put the tens rods on your mat. Last, put the ones cubes on your mat.

Write the number of hundreds, tens, and ones.

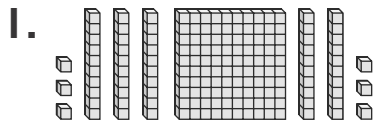


Hundreds	Tens	Ones
		
2	4	3

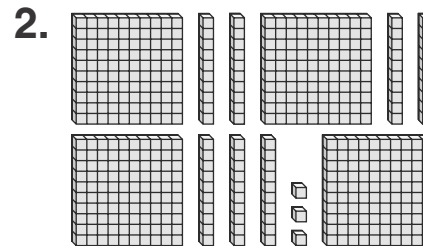
HOME ACTIVITY Give your child 50 paper clips or other small, countable objects. Ask your child to sort the clips into 10s and then write the number he or she counts.



Write the numbers shown. Use place-value blocks and your workmat if needed.



Hundreds	Tens	Ones



Hundreds	Tens	Ones



Name _____



Additional Practice 9-4

Read and Write 3-Digit Numbers

Another Look! You can write and show numbers in different ways.

Expanded form uses plus signs to show hundreds, tens, and ones.

$$200 + 60 + 4$$

You can draw models to show the expanded form.



The **word form** is two hundred sixty-four.

The **standard form** is 264.

HOME ACTIVITY Say a three-digit number, such as eight hundred fifty-one. Write it down in word form. Ask your child to write the number in both standard form and expanded form.



Solve each problem. Use place-value blocks to help.

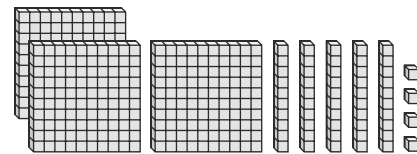
1. Draw models to show the expanded form.
Write the number in standard form.

$$400 + 30 + 8$$

four hundred thirty-eight

2. Write the number in expanded form and standard form.

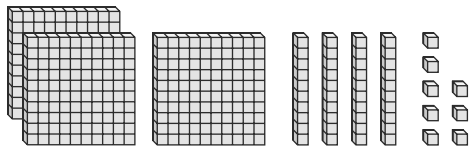
three hundred fifty-four



_____ + _____ + _____

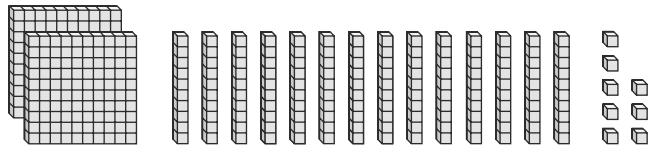


Another Look! You can show a number in different ways.



3 hundreds, 4 tens, and 8 ones

$348 = 300 + 40 + 8$ is the same as



2 hundreds, 14 tens, and 8 ones

$348 = 200 + 140 + 8$

Remember that 10 tens makes 1 hundred. So, 1 hundred and 4 tens is the same as 14 tens.



Additional Practice 9-5

Different Ways to Name the Same Number

HOME ACTIVITY Write the expanded form of a number and ask your child to tell you another way to show the number. For example, write $200 + 10 + 6$ or $900 + 40 + 3$.



Show two different ways to name the number. You can use place-value blocks to help.

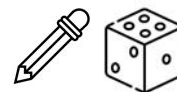
1. $734 =$ _____ hundreds, _____ tens, and _____ ones.

$734 =$ _____ hundreds, _____ tens, and _____ ones.

$734 =$ _____ + _____ + _____

$734 =$ _____ + _____ + _____

Name _____



Don't Break the Bank

Goal: get as close to 999 as possible without going over.

How to play:

- Roll 1 die. Put the number you rolled into one of the nine spaces of your gameboard.
- Repeat until you've rolled nine times and made 3 three-digit numbers. Then add them up.
- If the sum is less than 1000, you get that many points. If you get 1000 or more, you've Broken the Bank, and get no score for that round.

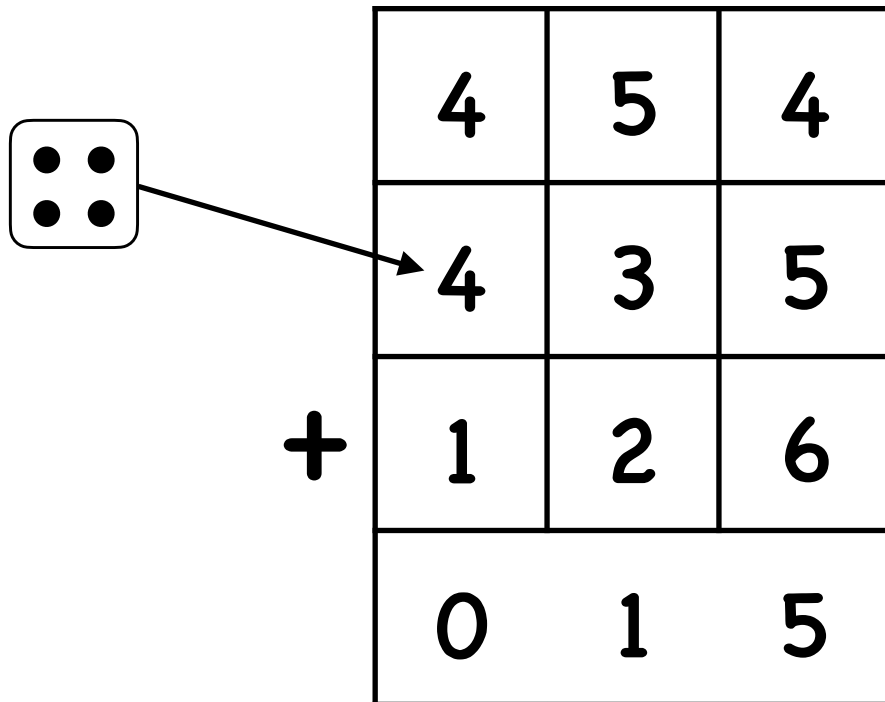
Example Game.

I rolled eight times, and had my board filled in as below.

	4	5	4
		3	5
+	1	2	6

Name _____

On my 9th roll, I rolled a 4. I had to put that into the hundreds place of the second number. Then I added up the numbers.



Since my final sum went past the hundreds place into the thousands place, I broke the bank! That means no score for me this round. But I can always play again :-)

Name _____

Don't Break the Bank

700 to 799 = okay

800 to 899 = good

900 to 949 = great!

950 to 989 = fantastic!!

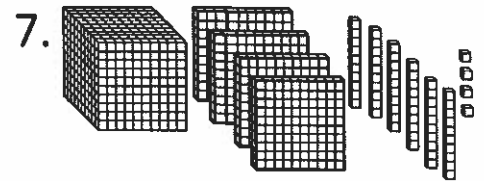
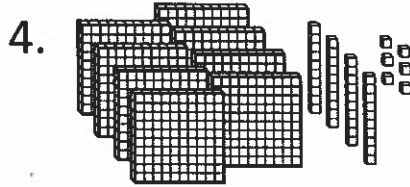
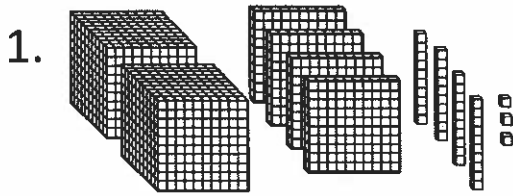
990 to 998 = amazing!!!

999 = perfect!!!!

Place Value

Use the place value blocks to determine the correct number. Match the letter next to each answer to the corresponding space below to answer the following riddle.

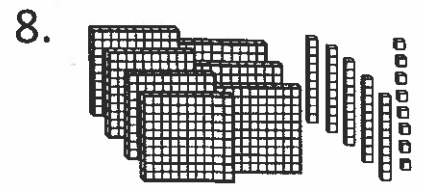
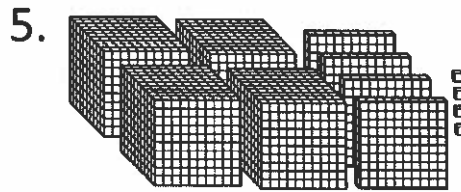
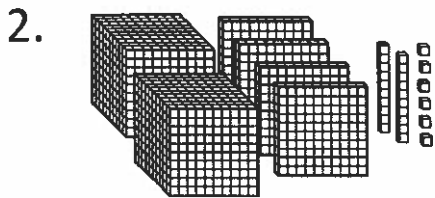
What is as big as an elephant but weighs nothing?



O _____

T _____

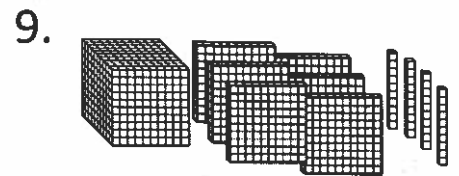
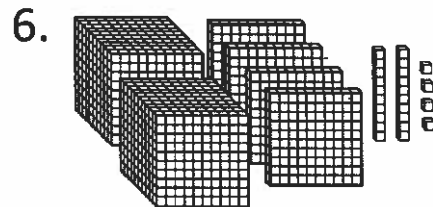
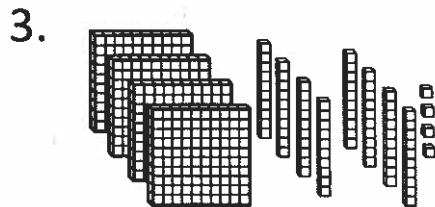
D _____



H _____

S _____

W _____



S _____

I _____

A _____

2,424
846
484

4,404
2,426
1,640
1,464

2,443
758

Place Value

Answer each of the following place value questions. Match the letter next to each answer to the corresponding space below to answer the following riddle.

What gets wetter the more it dries?

1. Which digit is in the thousands place of **347,908**? T _____
2. Which digit is in the hundreds place of **72,870**? B _____
3. Which digit is in the tens place of **351,821**? L _____
4. Which digit is in the millions place of **4,562,890**? O _____
5. Which digit is in the ten thousands place of **161,220**? T _____
6. Which digit is in the ones place of **56,715**? A _____
7. Which digit is in the hundreds place of **147, 908**? W _____
8. Which digit is in the tens place of **7,569,601**? E _____
9. Which digit is in the millions place of **3,077,623**? H _____
10. Which digit is in the hundred thousands place of **8,132,059**? A _____

5

8

1

6

3

7

4

9

0

2

Add, subtract multi-digit numbers with regrouping

Scan this QR Code to access additional online resources




Name _____

Fluently Add and Subtract within 1,000

Dear Family,

Your child is learning to add and subtract 3-digit numbers. It is sometimes necessary to regroup numbers, such as 10 ones as 1 ten, or regroup 10 tens as 1 hundred. For example, when adding $124 + 189$, you must regroup twice. Your child can also draw pictures of place-value blocks to show numbers.

$$\begin{array}{r} 124 \\ + 189 \\ \hline 313 \end{array}$$


313

Here is an activity you can do with your child.

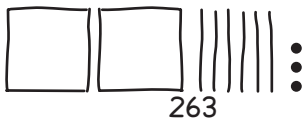
Regrouping

Materials paper and pencil

Step 1 Fill in the blanks in the following sentence with 2-digit numbers:
What number is the same as ___ tens ___ ones?

Step 2 Ask your child to draw place-value blocks or use paper and pencil to represent the number.

What number is the same as 25 tens and 13 ones?



Observe Your Child

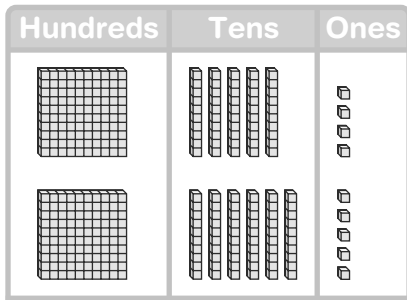
Have your child explain the relationship between the different place-value blocks.
Ask: "How many (ones) blocks make a (tens) block?"

Additional Practice 10-3

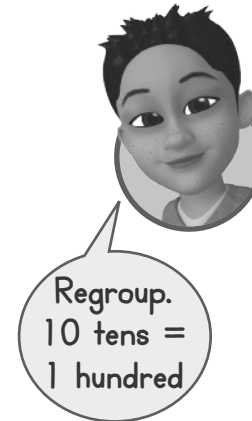
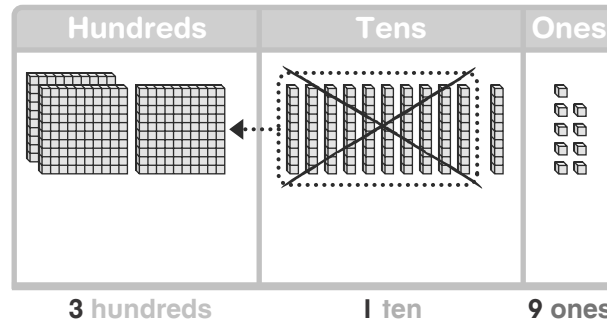
Add Using Models

Another Look! Find $154 + 165$.

Step 1: Show each number with place-value blocks.



Step 2: Join the hundreds, tens, and ones. Regroup if needed.



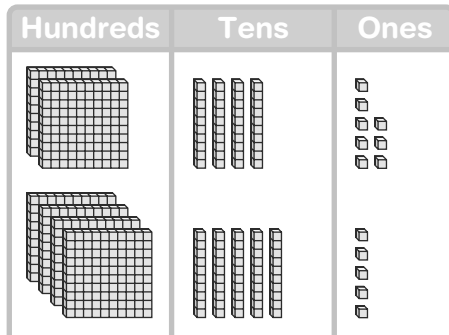
So, $154 + 165 = \underline{319}$.

HOME ACTIVITY Ask your child to show you how to add $305 + 497$ using models. Have your child explain how he or she does the addition.

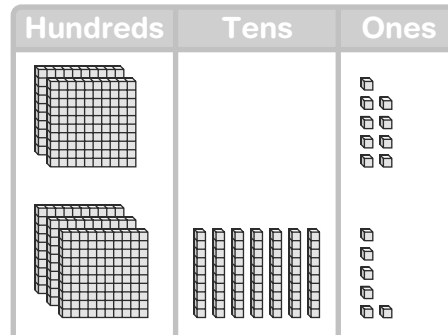


Use place-value blocks or drawings to find each sum. Regroup if needed.

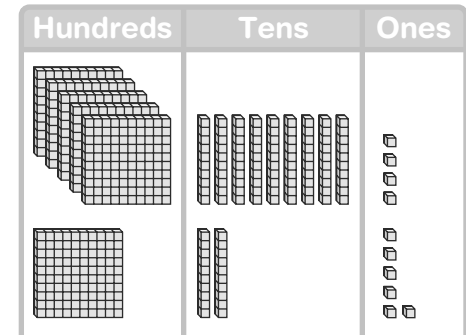
1. $248 + 455 = \underline{\quad}$



2. $209 + 376 = \underline{\quad}$



3. $594 + 126 = \underline{\quad}$



Name _____



Additional Practice 10-4

Continue to Add Using Models and Place Value

Another Look! Find $135 + 248$. Draw blocks for each addend.

Step 1: Join the hundreds. 3 hundreds = 300

Step 2: Join the tens. 7 tens = 70

Step 3: Join the ones. 13 ones = 13

Step 4: Add partial sums.

	Hundreds	Tens	Ones
135			
248			

Add partial sums:
 $300 + 70 + 13 = 383$.

$$135 + 248 = 383$$



HOME ACTIVITY Have your child draw place-value blocks and use partial sums to find $158 + 146$.



Draw blocks to find the partial sums. Add the partial sums to find the sum.

1. $341 + 127 = \underline{\quad}$

	Hundreds	Tens	Ones

2. $524 + 249 = \underline{\quad}$

	Hundreds	Tens	Ones



Draw blocks to find the partial sums. Add the partial sums to find the sum.

3. $209 + 123 =$ _____

Hundreds	Tens	Ones

4. $493 + 265 =$ _____

Hundreds	Tens	Ones

5. $582 + 356 =$ _____

Hundreds	Tens	Ones

6. $234 + 427 =$ _____

Hundreds	Tens	Ones

7. **Higher Order Thinking** Write and solve an addition story for $482 + 336$.


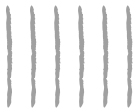

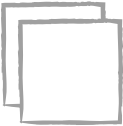


8. **Assessment Practice** Find $486 + 204$. Draw place-value blocks and show partial sums to solve.

$486 + 204 =$ _____

Hundreds	Tens	Ones

Another Look! You can use place value to add two 3-digit numbers.

$$164 + 258 = ?$$

Hundreds	Tens	Ones
		
		

Add the **hundreds**.
 Add the **tens**.
 Add the **ones**.
 Add the partial sums.

Find the partial sums.
 Then add the partial sums to find the sum.



Hundreds	Tens	Ones
1	6	4
2	5	8
3	0	0
1	1	0
	1	2
4	2	2

So, $164 + 258 = 422$.

Additional Practice 10-5

Add Using Place Value and Partial Sums

HOME ACTIVITY Write $581 + 294$ on a sheet of paper. Ask your child to use partial sums to find the sum.



Add. Use partial sums. Show your work.
 Use drawings of blocks if needed.

1. $218 + 136 = ?$

	Hundreds	Tens	Ones
	2	1	8
+	1	3	6
Hundreds:	3	0	0
Tens:		4	0
Ones:		1	4
Sum =			

2. $365 + 248 = ?$

	Hundreds	Tens	Ones
	3	6	5
+	2	4	8
Hundreds:			
Tens:			
Ones:			
Sum =			



Generalize Add. Use partial sums. Show your work.

$$\begin{array}{r} 3. \quad 714 \\ + 135 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 168 \\ + 423 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 266 \\ + 597 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 474 \\ + 238 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 567 \\ + 137 \\ \hline \end{array}$$

8. Higher Order Thinking Fill in the missing numbers to make the addition problem true.

	Hundreds	Tens	Ones
	2	<input type="text"/>	8
+	<input type="text"/>	7	<input type="text"/>
Hundreds:	<input type="text"/>	0	0
Tens:		<input type="text"/>	0
Ones:		<input type="text"/>	<input type="text"/>
Sum =	8	9	0

9. Assessment Practice Which is the same amount as $462 + 253$? Choose Yes or No.

$600 + 11 + 5$ Yes No

$600 + 110 + 5$ Yes No

$600 + 100 + 15$ Yes No

715 Yes No



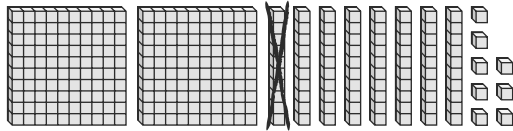
There is more than one way to write a sum.

Additional Practice 11-1

Subtract 10 and 100

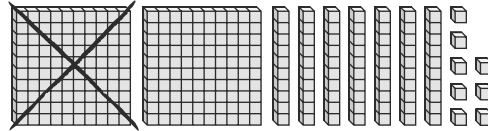
Another Look! Use mental math to subtract 10 or 100 from 3-digit numbers.
Find $278 - 10$ and $278 - 100$.

Place value can help you subtract 10 or 100 mentally.



7 tens minus 1 ten
is 6 tens.

$$278 - 10 = 2\boxed{6}8$$



2 hundreds minus 1 hundred
is 1 hundred.

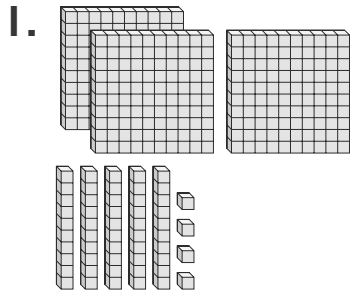
$$278 - 100 = \boxed{1}78$$



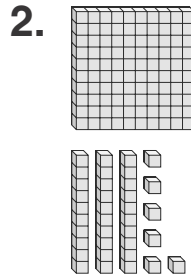
HOME ACTIVITY Choose a number between 300 and 400. Ask your child to subtract 10 from the number and tell you the difference. Repeat with subtracting 100 from the same number.



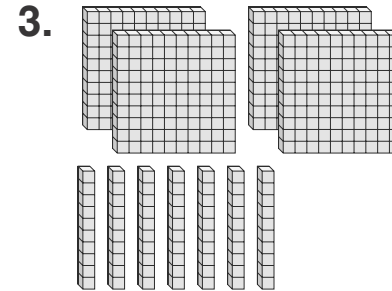
Subtract 10 and then subtract 100 from each number shown.
Use blocks if needed.



$$\begin{array}{r} \underline{\quad\quad\quad} - 10 = \underline{\quad\quad\quad} \\ \underline{\quad\quad\quad} - 100 = \underline{\quad\quad\quad} \end{array}$$



$$\begin{array}{r} \underline{\quad\quad\quad} - 10 = \underline{\quad\quad\quad} \\ \underline{\quad\quad\quad} - 100 = \underline{\quad\quad\quad} \end{array}$$



$$\begin{array}{r} \underline{\quad\quad\quad} - 10 = \underline{\quad\quad\quad} \\ \underline{\quad\quad\quad} - 100 = \underline{\quad\quad\quad} \end{array}$$

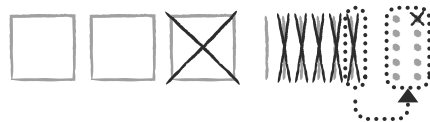
Additional Practice 11-4
Subtract Using Models and Place Value

Another Look! You can use drawings and partial differences to subtract.
 Find $361 - 142$.

Step 1: Draw 361.
 You can subtract the ones first. Subtract 1 of the ones to make a ten.



Step 2: Regroup 1 ten for 10 ones.
 Subtract the other 1.
 Then subtract the 4 tens and 1 hundred.



Step 3: Record the partial differences.

$$\begin{array}{r}
 361 \\
 - \quad 1 \\
 \hline
 360 \\
 - \quad 1 \\
 \hline
 359 \\
 - \quad 40 \\
 \hline
 319 \\
 - 100 \\
 \hline
 219
 \end{array}$$

So, $361 - 142 = 219$.

HOME ACTIVITY Ask your child to show you how to subtract $431 - 216$. Have your child explain every step of the subtraction.



Draw blocks to find the partial differences. Record the partial differences to find the difference.

1. $412 - 103 =$ _____

2. $398 - 235 =$ _____

3. $753 - 304 =$ _____



Fraction basics

Scan this QR Code to access additional online resources



Name _____

Understand Fractions as Numbers

Dear Family,

Your child is recognizing fractions found all around us and is learning that fractions are equal parts of a whole, of a set, or of a length. He or she is also learning to name fractions and to locate fractions on a number line. Seeing fractions on a number line will help your child enhance his or her number sense. Working with fractions on a number line also will serve as a basis for future work with fractions in measuring length.

Here is an activity that you and your child can do together.

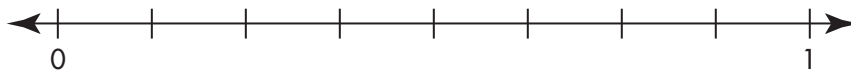
Fractions on a Number Line

Materials paper and pencil

Write the following fractions on eight slips of paper:

$\frac{1}{8}$ $\frac{2}{8}$ $\frac{3}{8}$ $\frac{4}{8}$ $\frac{5}{8}$ $\frac{6}{8}$ $\frac{7}{8}$ $\frac{8}{8}$

Put the slips of paper in a bag or box and mix them. Have your child draw two slips of paper and write each fraction in the correct position on the number line below.



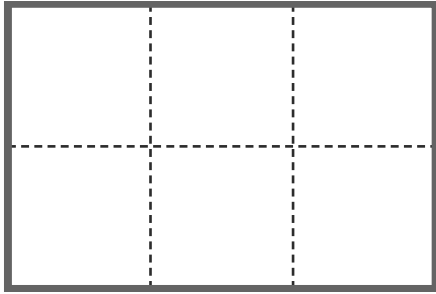
Continue with the remaining slips of paper.

Observe Your Child

Have your child explain the different components of a fraction (numerator, denominator) and what they represent.

Additional Practice 13-5 Equal Shares

Another Look! How many squares cover this rectangle?



Add the rows: $3 + 3 = 6$

Add the columns: $2 + 2 + 2 = 6$

You can use square tiles to cover rectangles. Count the squares in the rows. Then count the squares in the columns.



HOME ACTIVITY Ask your child to draw a rectangular section of a floor made of square tiles. Then ask your child to count how many squares make up that rectangle.



Use square tiles to cover the rectangle. Trace the tiles. Count the squares.



2. How many squares cover the rectangle?

Add by rows:

_____ + _____ + _____ = _____

Add by columns:

_____ + _____ + _____ + _____ + _____

= _____

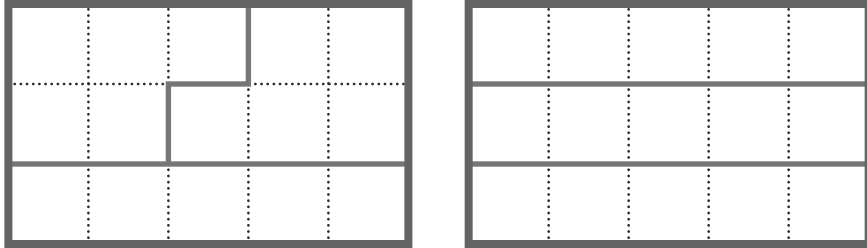


Additional Practice 13-7

Equal Shares, Different Shapes

Another Look!

You can show a rectangle with equal shares in different ways.



Each rectangle has 3 equal shares. Each equal share has 5 squares.

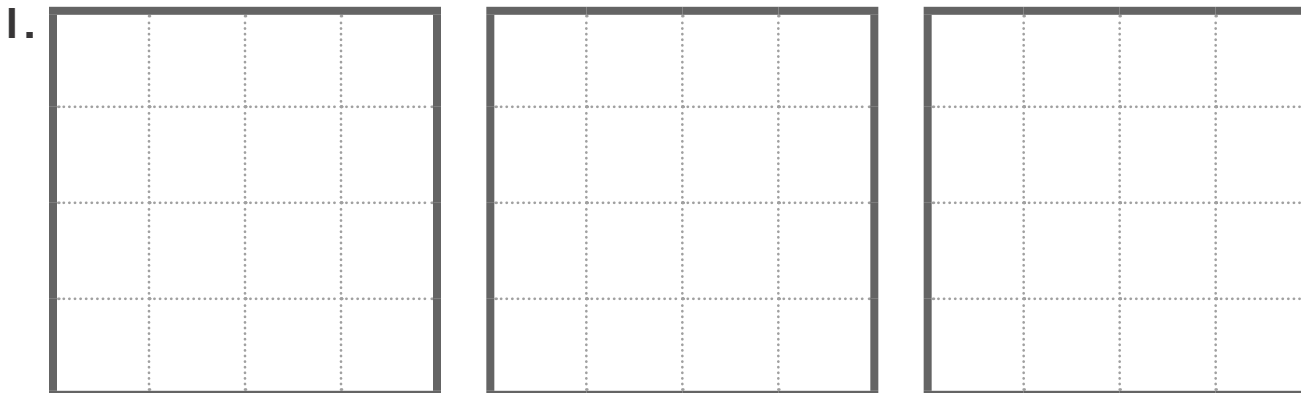
Each equal share has 5 squares.



HOME ACTIVITY Draw a rectangle. Ask your child to show it with two equal shares that have different shapes.



Draw lines to show three different ways to show 2 equal shares.



Can you show a rectangle with equal shares that have **DIFFERENT** shapes?

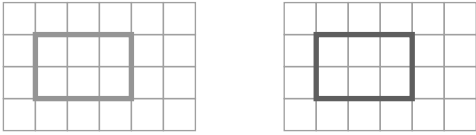


Additional Practice 12-1

Partition Regions into Equal Parts

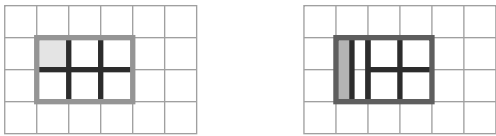
Another Look!

Divide these shapes into 6 equal parts in two different ways.



You can draw lines to divide the shapes into equal parts.

Equal parts do not need to be the same shape, but they must be equal in area.

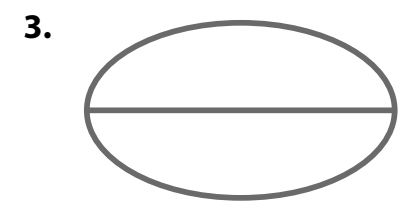
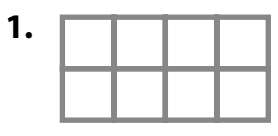


Both shapes are divided into six equal parts, or sixths.
 Each part is one sixth of the area of the shape.
 Each part can be written as $\frac{1}{6}$.

You can divide shapes into equal parts and name them using a fraction.

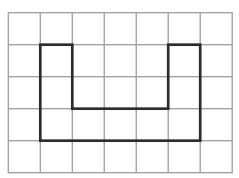


In 1–3, tell if each shows equal or unequal parts. If the parts are equal, label one of the parts using a unit fraction.

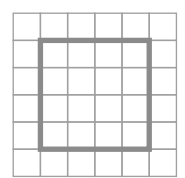


In 4–6, draw lines to divide the shape into the given number of equal parts. Then write the fraction that represents one part.

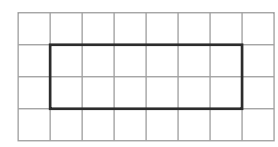
4. 3 equal parts



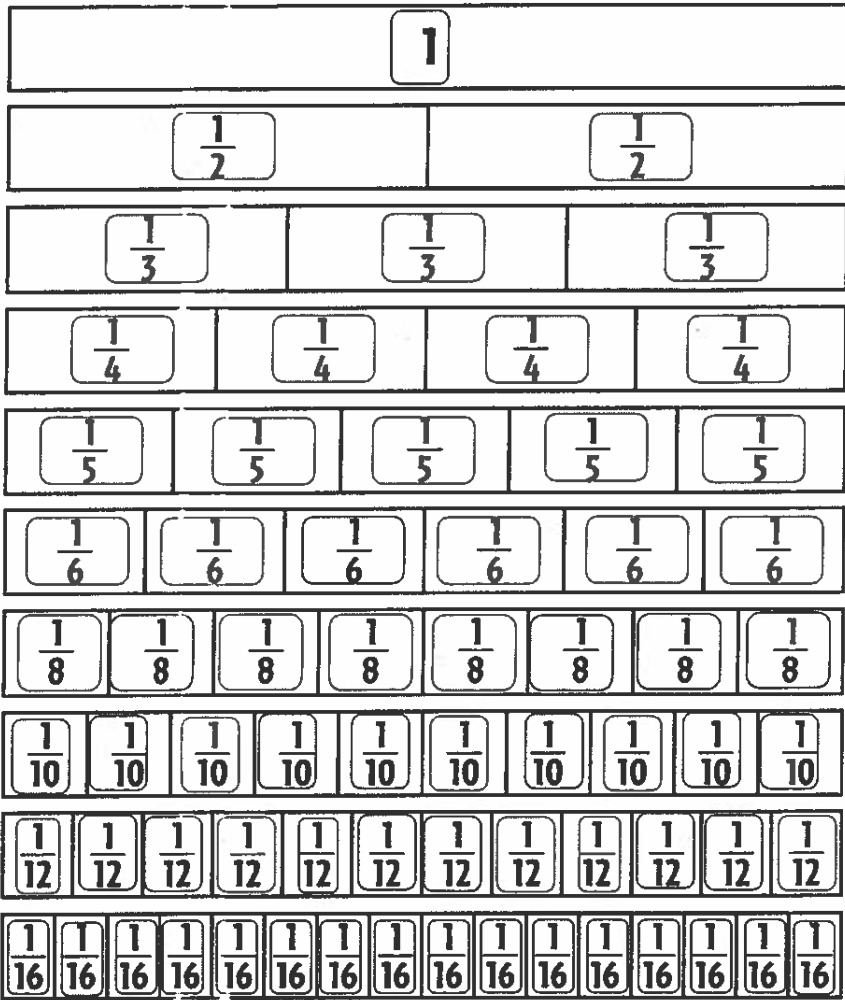
5. 4 equal parts



6. 6 equal parts



FRACTION MODELS



FRACTIONAL NUMBER LINES

