Summer Math Requirement:

Attached are the pages for Lessons 1-13 of "Getting Ready for Fourth Grade".

Please either print these out and have your student complete the activities, or have them write the answers out on lined paper.

The pages should be hole-punched and put into either a small binder or folder. When applicable, please have your student show their work.

IMPORTANT:

Although I would like to see what your student can do **independently**, I do not want to have any students frustrated over the summer. If you feel that it would help them for you to re-explain a concept, I have no problem with that. Additionally, if there is a section that is **truly** above your child's independent level, you may choose to leave a few problems blank with a parent note. That will help me as I am planning in the fall to see which concepts need more attention than others.

Math strategies for your student:

- Use flashcards or technology to practice addition, subtraction, and multiplication facts. This greatly assists your child in learning more difficult processes.
- Show practical reasons for math. Engage your student in measuring during cooking and crafting, counting money during shopping, estimating sharing snacks equally with friends, keeping score at a game, etc.
- Teach and reinforce analog time concepts with your student. Count by fives on the clock and talk about the hour and minute hands. Let your child know when he has "10 minutes" before a transition so he knows what that feels like. Actively ask him to tell you the time during the day using an analog clock (start with on the hour/ half hour first). Our children use technology so much, that they forget how to tell time on the "older" ☺ clocks!

Name _____

Numbers to Ten Thousand

Essential Question How can you represent numbers to ten thousand in different ways?

Unlock the Problem

Real World

The Thousand Bolts factory uses boxes of 1,000 bolts to fill crates of 10,000 bolts. How many boxes of 1,000 bolts are in each crate of 10,000?

- Circle the number you will need to count to find the answer.

Count by thousands to find the total number of boxes of 1,000 bolts that will go into each crate. Then count the boxes.

1,000	2,000					
1	2					

So, there are _____ boxes of 1,000 bolts in each crate of 10,000.

Example

Suppose the factory has no crates and must use case of 100 to fill an order for 3,200 bolts. How many cases will it pack?

There are _____ cases of 100 in 1,000.

So, there are _____ cases of 100 in 3,000.

There are _____ cases of 100 in 200.

Add the cases. 30 + 2 = _____.

So, the factory will pack 32 cases of 100.

Math Talk Mathematical Practices

What if the factory had boxes of 1,000 and bags of 10 but no cases of 100? **Explain** how it could pack the order for 3,200 bolts.

Share and Show

MATH BOARD

1. The Thousand Bolts factory has an order for 3,140 bolts. How can it pack the order using the fewest packages?

_____

2. Suppose the bolt factory has only cases and bags. How can it pack the order for 3,140 bolts?

_____

3. Suppose the bolt factory has only boxes and bags. How can it pack the order for 3,140 bolts?

Remember

1 box = 1,000 bolts
1 case = 100 bolts
1 bag = 10 bolts

On Your Own

Complete the packing chart. Use the fewest packages possible. When there is a zero, use the next smaller size package.

	Number of Bolts Ordered	Crates (Ten Thousands)	Boxes (Thousands)	Cases (Hundreds)	Bags (Tens)	Single Bolts (Ones)
4.	5,267		5			
5.	2,709			7	0	
6.	5,619					
7.	8,416		0		1	6
8.	3,967		0		0	

Problem Solving

Real World

9. The Thousand Bolts factory used 9 boxes, 9 cases, and 10 bags to fill an order. How many bolts did they pack?

_____

Name _____

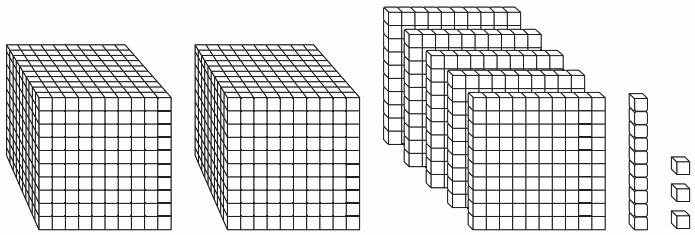
Read and Write Numbers to Ten Thousands

Essential Question What are some ways you can read and write numbers?

Unlock the Problem

Real World

The ABC Block Factory receives an order for blocks. The base-ten blocks show the number of blocks ordered.



- How many blocks were ordered?

_____

Math Idea

The location of a digit in a number tells its value.

Each worker on the team checks the order by expressing the number in a different way. What way does each worker use?

Read and write numbers.

Word form is a way to write a number using words.

Sam gets the order and reads the number to Mary: two thousand, five hundred thirteen

Expanded form is a way to write a number by showing the value of each digit.

Mary uses the value of each digit to record the number of blocks that will be in each type of package:
2,000 + 500 + 10 + 3

Standard form is a way to write a number using the digits 0 to 9, with each digit having a place value.

When the order is complete, Kyle writes the total number of blocks on the packing slip: 2,513

So, Sam says the number using _____

form, Mary uses _____ form,

and Kyle uses _____ form.

Math Talk Mathematical Practices

Explain how to find the value of the underlined digit in 7,521.

Share and Show

1. Write the number shown in expanded form.

TEN THOUSANDS	THOUSANDS	HUNDREDS	TENS	ONES
	7,	5	9	8

_____ + 500 + 90 + _____

Write the number in standard form.

2. 4,000 + 600 + 70 + 4 _____

3. eight thousand, two hundred sixty-one _____

Write the value of the underlined digit two ways.

4. 6,920

_____

5. 8,063

_____

On Your Own

Write the number in standard form.

6. 5,000 + 600 + 90 + 7 _____

7. two thousand, three hundred fifty-nine _____

8. one thousand, three hundred two _____

Write the value of the underlined digit two ways.

9. 6,818

_____

10. 9,342

_____

11. Rename 3,290 as hundreds and tens.

_____ hundreds _____ tens

12. Rename 2,934 as tens and ones.

_____ tens _____ ones

Problem Solving

13. The number of children who attended the fair on opening day is 351 more than the value of 4 thousands. How many children attended the fair on opening day?

_____

Name _____

Relative Size on a Number Line

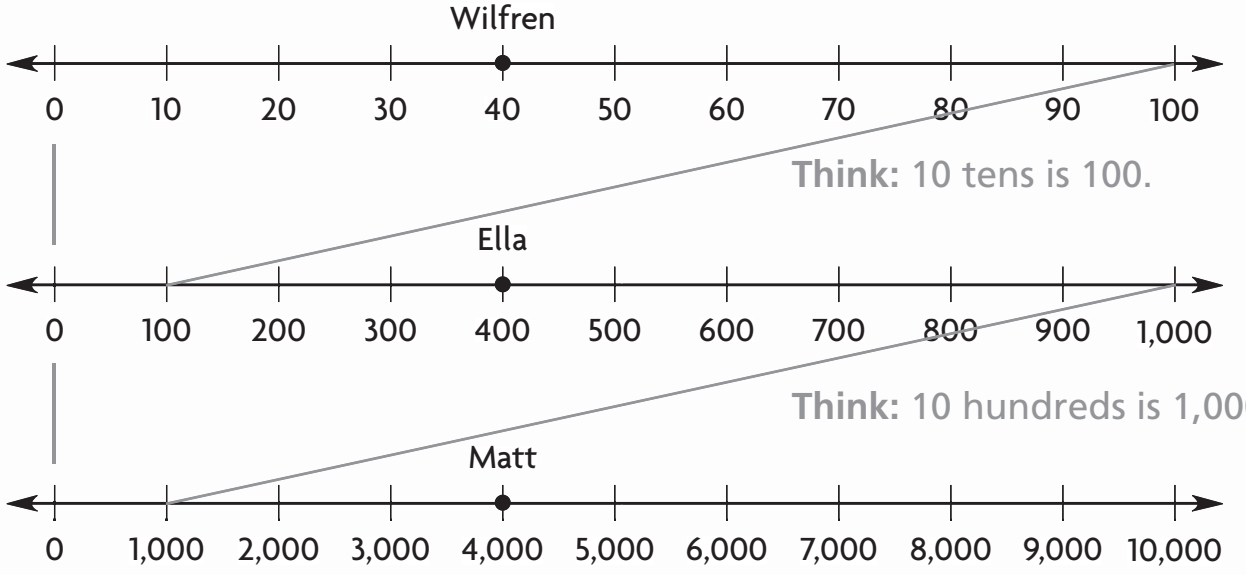
Essential Question How can you locate and name a point on a number line?

Unlock the Problem

Wilfren has 40 pennies, Ella has 400 pennies, and Matt has 4,000 pennies. How do their amounts of pennies compare?

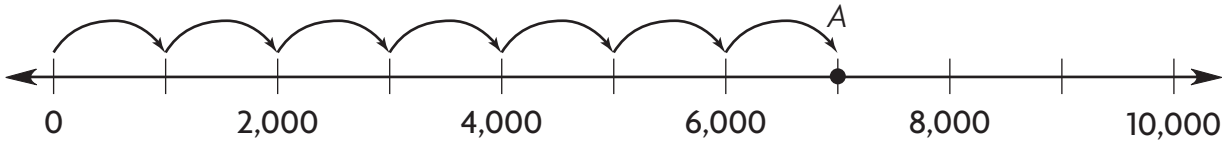
- Circle the amounts you need to compare.

Compare the relative sizes of the amounts of pennies.



So, Ella has _____ times as many pennies as Wilfren, and Matt has _____ times as many pennies as Ella.

Try This! **Find the number represented by the point.**



Start at 0. Skip count by 1,000s until you reach point A.

There are _____ jumps of 1,000. So, point A represents _____.

Math Talk **Mathematical Practices**

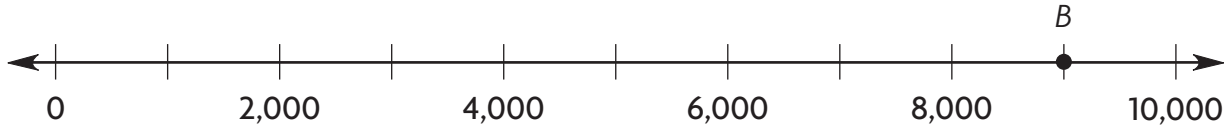
Explain how to locate and draw the point 3,000 on a number line.

Share and Show

MATH BOARD

Find the number that point *B* represents on the number line.

1.



_____

On Your Own

Find the number represented by the point.

2.

_____

3.

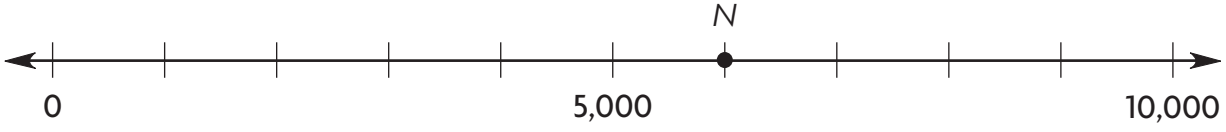
_____

Problem Solving

Real World

Use the number line for 4–5.

Nestor and Elliot are playing a number line game.



4. Nestor's score is shown by point *N* on the number line. What is his score?

_____

5. Elliot's score is 8,000. Is Elliot's score located to the right or to the left of Nestor's score? **Explain**.

_____

Name _____

Compare 3- and 4-Digit Numbers

Essential Question What are some ways you can compare numbers?

Unlock the Problem

Real World

Cody collected 2,365 pennies. Jasmine collected 1,876 pennies. Who collected more pennies?

- What do you need to find?

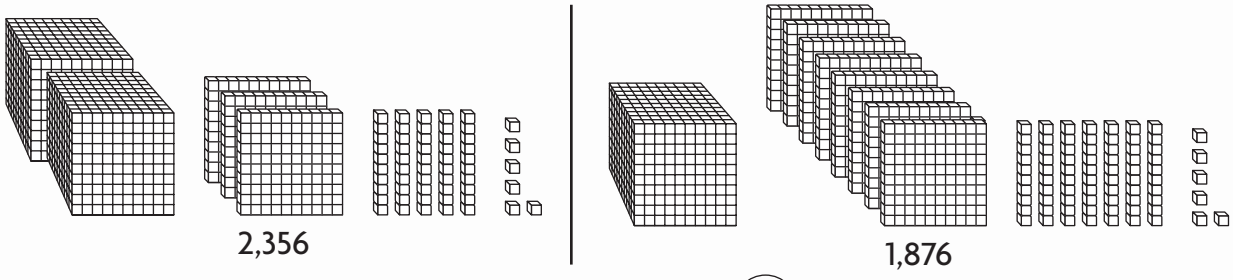
_____

_____

You can compare numbers in different ways to find which number is greater.

One Way Use base-ten blocks.

Compare the values of the blocks in each place-value position from left to right. Keep comparing the blocks until the values are different.



2 thousands is greater than 1 thousand. So, 2,365 ◯ 1,876.

So, Cody collected more pennies.

Read Math

Read < as *is less than*.
Read > as *is greater than*.
Read = as *is equal to*.

Another Way Use place value.

Compare 7,376 and 7,513.

Compare digits in the same place-value position from left to right.

THOUSANDS	HUNDREDS	TENS	ONES
7,	3	7	6
7,	5	1	3

STEP 1: Compare the thousands. The digits are the same.

STEP 2: Compare the hundreds. 3 ◯ 5

So, 7,376 ◯ 7,513.

Math Talk Mathematical Practices

Explain how you know that 568 is less than 4,786.

Share and Show

MATH BOARD

1. Compare 2,351 and 3,018. Which number has more thousands? Which number is greater?

_____

_____

Compare the numbers. Write <, >, or = in the ◯.

2. 835 ◯ 853

3. 7,891 ◯ 7,891

4. 809 ◯ 890

5. 3,834 ◯ 3,483

On Your Own

Compare the numbers. Write <, >, or = in the ◯.

6. 219 ◯ 2,119

7. 2,517 ◯ 2,715

8. 5,154 ◯ 5,154

9. 5,107 ◯ 5,105

10. 1,837 ◯ 837

11. 9,832 ◯ 9,328

Problem Solving

Real World

12. Nina has a dictionary with 1,680 pages. Trey has a dictionary with 1,490 pages. Use <, >, or = to compare the number of pages in the dictionaries.

_____

13. The odometer in Ed's car shows it has been driven 8,946 miles. The odometer in Beth's car shows it has been driven 5,042 miles. Which car has been driven more miles?

_____

14. Avery said that she is 3,652 days old. Tamika said that she is 3,377 days old. Who is younger?

_____

Name _____

Multiply with 11 and 12

Essential Question What strategies can you use to multiply with 11 and 12?

Unlock the Problem

Real World

It takes Bobby 11 minutes to walk to school each morning. How many minutes will Bobby spend walking to school in 5 days?

- What are the groups in this problem?

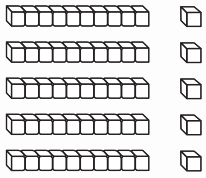
_____

_____

Multiply. $5 \times 11 =$ ▢

One Way Break apart an array.

Make 5 rows of 11. Use the 10s facts and the 1s facts to multiply with 11.



$5 \times (10 + 1)$

$5 \times 10 =$ _____ $5 \times 1 =$ _____

$5 \times 11 =$ _____ $+$ _____

$5 \times 11 =$ _____

So, Bobby will spend _____ minutes walking to school.

Another Way Find a pattern.

Look at the list.

Notice the product has the same factor in the tens and ones places.

To find 5×11, write the first factor in the tens and ones places.

$5 \times 11 = 55$

$1 \times 11 = 11$
$2 \times 11 = 22$
$3 \times 11 = 33$
$4 \times 11 = 44$
$5 \times 11 =$ _____
$6 \times 11 = 66$
$7 \times 11 = 77$
$8 \times 11 = 88$
$9 \times 11 = 99$

Try This! **What if** it took Bobby 12 minutes to walk to school? How many minutes will he spend walking to school in 5 days?

Break apart the factor 12.

$5 \times (10 + 2)$

$5 \times 10 = 50$ $5 \times 2 = 10$

$5 \times 12 =$ _____ $+$ _____ $=$ _____

Double a 6s fact.

Find the 6s product. $5 \times 6 = 30$

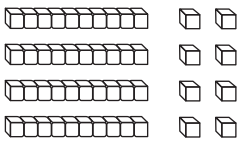
Double that product. _____ $+$ _____ $=$ _____

So, $5 \times 12 =$ _____. Bobby will spend _____ minutes walking to school.

Share and Show

MATH BOARD

1. How can you use the 10s facts and the 2s facts to find 4×12?



_____

_____

Find the product.

2. $9 \times 11 =$ _____

3. $7 \times 12 =$ _____

4. _____ $= 4 \times 11$

On Your Own

Find the product.

5. _____ $= 11 \times 6$

6. _____ $= 12 \times 2$

7. $0 \times 11 =$ _____

8. _____ $= 6 \times 12$

9. $8 \times 12 =$ _____

10. $7 \times 11 =$ _____

11. $12 \times 9 =$ _____

12. $3 \times 12 =$ _____

13. $1 \times 12 =$ _____

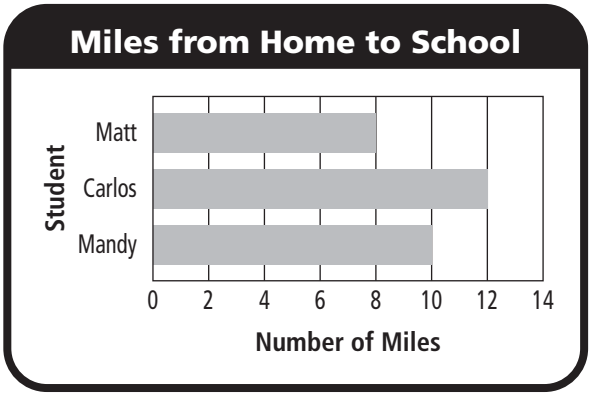
Problem Solving

Real World

Use the graph for 14–15.

14. The graph shows the number of miles some students travel to school each day. How many miles will Carlos travel to school in 5 days?

_____



15. Suppose that Mandy takes 9 trips to school, and Matt takes 11 trips to school. Who travels more miles? **Explain**.

_____

_____

Name _____

Divide with 11 and 12

Essential Question What strategies can you use to divide with 11 and 12?

Unlock the Problem

Tara collects 60 postcards. She arranges them in 12 equal stacks. How many postcards are in each stack?

Divide. $60 \div 12 = \blacksquare$

- Do you need to find the number of groups or the number in each group?

_____

_____

One Way Use a multiplication table.

Since division is the inverse of multiplication, you can use a multiplication table to find a quotient.

Think of a related multiplication fact.

$$12 \times \blacksquare = 60$$

- Find the row for the factor 12.
- Look across to find the product, 60.
- Look up to find the unknown factor.
- The unknown factor is 5.

Since $12 \times 5 = 60$, then

$60 \div 12 =$ ____.

×	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10	11	12
2	0	2	4	6	8	10	12	14	16	18	20	22	24
3	0	3	6	9	12	15	18	21	24	27	30	33	36
4	0	4	8	12	16	20	24	28	32	36	40	44	48
5	0	5	10	15	20	25	30	35	40	45	50	55	60
6	0	6	12	18	24	30	36	42	48	54	60	66	72
7	0	7	14	21	28	35	42	49	56	63	70	77	84
8	0	8	16	24	32	40	48	56	64	72	80	88	96
9	0	9	18	27	36	45	54	63	72	81	90	99	108
10	0	10	20	30	40	50	60	70	80	90	100	110	120
11	0	11	22	33	44	55	66	77	88	99	110	121	132
12	0	12	24	36	48	60	72	84	96	108	120	132	144

Another Way Use repeated subtraction.

- Start with 60.
- Subtract 12 until you reach 0.
- Count the number of times you subtract 12.

$$\begin{array}{r} 60 \\ -\ 12 \\ \hline 48 \end{array} \quad \begin{array}{r} 48 \\ -\ 12 \\ \hline 36 \end{array} \quad \begin{array}{r} 36 \\ -\ 12 \\ \hline 24 \end{array} \quad \begin{array}{r} 24 \\ -\ 12 \\ \hline 12 \end{array} \quad \begin{array}{r} 12 \\ -\ 12 \\ \hline 0 \end{array}$$

You subtracted 12 five times.

$60 \div 12 =$ _____

So, there are 5 postcards in each stack.

Math Talk Mathematical Practices

What other strategies can you use to divide?

Share and Show

MATH BOARD

1. Use the multiplication table on page P271 to find 99 ÷ 11.

_____ **Think:** What is a related multiplication fact?

Find the unknown factor and quotient.

2. 11 × ■ = 66 66 ÷ 11 = ■

■ = _____ ■ = _____

3. 2 × ■ = 24 24 ÷ 2 = ■

■ = _____ ■ = _____

4. 3 × ■ = 33 33 ÷ 3 = ■

■ = _____ ■ = _____

5. 12 × ■ = 72 72 ÷ 12 = ■

■ = _____ ■ = _____

On Your Own

Find the unknown factor and quotient.

6. 11 × ■ = 55 55 ÷ 11 = ■

■ = _____ ■ = _____

7. 12 × ■ = 48 48 ÷ 12 = ■

■ = _____ ■ = _____

8. 8 × ■ = 96 96 ÷ 8 = ■

■ = _____ ■ = _____

9. 8 × ■ = 88 88 ÷ 8 = ■

■ = _____ ■ = _____

Find the quotient.

10. 11 ÷ 11 = _____

11. 77 ÷ 7 = _____

12. _____ = 60 ÷ 12

13. _____ = 22 ÷ 11

14. 108 ÷ 9 = _____

15. 84 ÷ 12 = _____

16. 36 ÷ 3 = _____

17. _____ = 96 ÷ 12

18. 12 ÷ 12 = _____

Compare. Write <, >, or = for each ◯.

19. 96 ÷ 8 ◯ 96 ÷ 12

20. 77 ÷ 11 ◯ 84 ÷ 12

21. 99 ÷ 11 ◯ 84 ÷ 7

Problem Solving

Real World

22. Justin printed 44 posters to advertise the garage sale. He gave 11 friends the same number of posters to display around the neighborhood. How many posters did Justin give each friend?

_____

Name _____

Multiplication and Division Relationships

Essential Question How can you write related multiplication and division equations for 2-digit factors?

Multiplication and division are inverse operations.

Unlock the Problem

Real World

Megan has a rose garden with the same number of bushes planted in each of 4 rows. There are 48 bushes in the garden. How many bushes are in each row of Megan's garden?

- What do you need to find?

_____

_____

One Way

Make an array.

$48 \div 4 = \square$

Count 48 tiles. Make 4 rows by placing 1 tile in each row.

Continue placing 1 tile in each of the 4 rows until all the tiles are used.

Draw the array you made.

There are _____ tiles in each row.

_____ ÷ _____ = _____

So, there are _____ bushes in each row of Megan's garden.

Another Way

Write related equations.

$48 \div 4 = \square$

Think: 4 times what number equals 48?

$4 \times$ _____ $= 48$

You can check your answer using repeated addition.

_____ + _____ + _____ + _____ = _____

Write related equations.

_____ × _____ = 48

48 ÷ _____ = _____

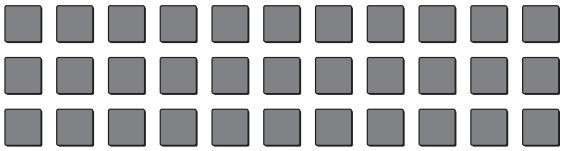
Math Talk Mathematical Practices

How can you tell if two equations are related?

Share and Show

MATH BOARD

1. Complete the related equations for this array.



$3 \times 11 = 33$ $33 \div 3 = 11$

_____ _____

Complete the related multiplication and division equations.

2. $1 \times 11 =$ _____

_____ $\times 1 = 11$

$11 \div 1 =$ _____

_____ $\div 11 = 1$

3. $5 \times$ _____ $= 60$

$12 \times 5 =$ _____

_____ $\div 5 = 12$

$60 \div$ _____ $= 5$

4. _____ $\times 11 = 77$

_____ $\times 7 = 77$

$77 \div$ _____ $= 11$

_____ $\div 11 = 7$

On Your Own

Complete the related multiplication and division equations.

5. _____ $\times 12 = 84$

_____ $\times 7 = 84$

_____ $\div 7 = 12$

$84 \div$ _____ $= 7$

6. $6 \times$ _____ $= 66$

$11 \times$ _____ $= 66$

$66 \div 6 =$ _____

$66 \div 11 =$ _____

7. $12 \times 8 =$ _____

$8 \times$ _____ $= 96$

$96 \div$ _____ $= 8$

$96 \div 8 =$ _____

Problem Solving

Real World

8. Megan cut 108 roses to make flower arrangements. She made 9 equal arrangements. How many roses were in each arrangement?

_____

9. Megan put 22 roses in a vase. She cut the same number of roses from each of 11 different bushes. How many roses did she cut from each bush?

_____

Name _____

Use Multiplication Patterns

Essential Question How can you multiply with 10, 100, and 1,000?

Unlock the Problem

Real World

Mrs. Goldman ordered 4 boxes of yo-yos for her toy store. Each box had 100 yo-yos. How many yo-yos did Mrs. Goldman order?

- Circle the numbers you need to use.
- What operation can you use to find the total when you have equal groups?

_____

Use a basic fact and a pattern to multiply.

Factors		Products
4×1	$=$	4
4×10	$=$	40
4×100	$=$	400

Think: Use the basic fact $4 \times 1 = 4$. Look for a pattern of zeros.

So, Mrs. Goldman ordered 400 yo-yos.

Math Idea

As the number of zeros in a factor increases, the number of zeros in the product increases.

Try This! **Use a basic fact and a pattern to find the products.**

A. $1 \times 3 = 3$

$10 \times 3 =$ _____

B. $5 \times 1 = 5$

$5 \times 10 = 50$

$5 \times 100 =$ _____

$5 \times 1{,}000 =$ _____

Math Talk **Mathematical Practices**

When multiplying $9 \times 1{,}000$, how many zeros will be in the product? **Explain**

Share and Show

MATH BOARD

1. **Explain** how to use a basic fact and a pattern to find 6×100.

_____

_____

Use a basic fact and a pattern to find the products.

2. $7 \times 10 =$ _____
   $7 \times 100 =$ _____
   $7 \times 1{,}000 =$ _____

3. $10 \times 5 =$ _____
   $100 \times 5 =$ _____
   $1{,}000 \times 5 =$ _____

4. $3 \times 10 =$ _____
   $3 \times 100 =$ _____
   $3 \times 1{,}000 =$ _____

On Your Own

Use a basic fact and a pattern to find the products.

5. $2 \times 10 =$ _____
   $2 \times 100 =$ _____
   $2 \times 1{,}000 =$ _____

6. $10 \times 8 =$ _____
   $100 \times 8 =$ _____
   $1{,}000 \times 8 =$ _____

7. $9 \times 10 =$ _____
   $9 \times 100 =$ _____
   $9 \times 1{,}000 =$ _____

Find the product.

8. $10 \times 8 =$ _____

9. $6 \times 100 =$ _____

10. _____ $= 4 \times 100$

11. $1{,}000 \times 4 =$ _____

12. _____ $= 1{,}000 \times 3$

13. $9 \times 100 =$ _____

Problem Solving

Real World

Use the picture graph.

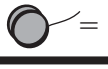
14. Patty has 20 fewer yo-yos in her collection than Chuck. Draw yo-yos in the picture graph. to show the number of yo-yos in Patty's collection. **Explain** your answer.

_____

_____

Yo-Yo Collections

Name	Number of Yo-Yos
Max	
Chuck	
Patty	

Key: Each  = 10 Yo-Yos.

Name _____

Use Models to Multiply Tens and Ones

Essential Question How can you use base-ten blocks and area models to model multiplication with a 2-digit factor?

Unlock the Problem Real World

Three groups of 14 students toured the state capitol in Columbus, Ohio. How many students toured the capitol in all?

Multiply. $3 \times 14 = \blacksquare$

- What do you need to find?

_____

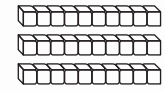
_____

- Circle the numbers you need to use.

One Way

STEP 1

Model 3×14 with base-ten blocks.

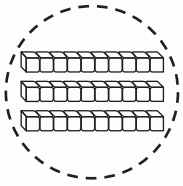


3 rows of 10

3 rows of 4

STEP 2

Multiply the tens and ones.
Record each product.



$3 \times 10 =$ _____ $3 \times 4 =$ _____

STEP 3

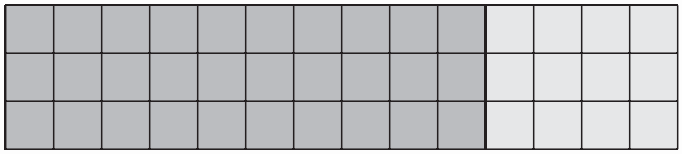
Add the products.
$30 + 12 = 42$

$3 \times 14 = 42$

Another Way

STEP 1

Model 3×14 with an area model.



3 rows of 10 3 rows of 4

STEP 2

Multiply the tens.

$3 \times 10 =$ _____

Multiply the ones.

$3 \times 4 =$ _____

STEP 3

Add the products.
$30 + 12 = 42$

$3 \times 14 = 42$

Math Talk Mathematical Practices

How are the two ways to find a product alike?

So, 42 students toured the capitol.

Share and Show

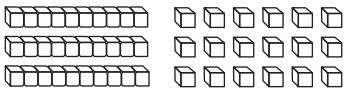
MATH BOARD

1. One way to model 18 is 1 ten 8 ones. How can knowing this help you find 4×18?

_____

_____

Find the product. Show your multiplication and addition.

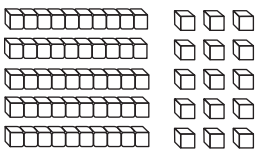
2. 

$3 \times 16 = \square$

_____

_____

_____

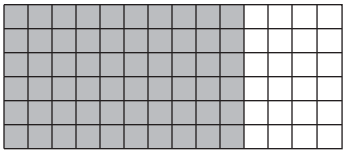
3. 

$5 \times 13 = \square$

_____

_____

_____

4. 

$6 \times 14 = \square$

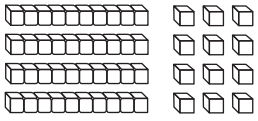
_____

_____

_____

On Your Own

Find the product. Show your multiplication and addition.

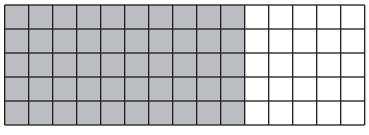
5. 

$4 \times 13 = \square$

_____

_____

_____

6. 

$5 \times 15 = \square$

_____

_____

_____

7. 

$3 \times 17 = \square$

_____

_____

_____

Problem Solving

Real World

8. Randy rakes yards for $5 an hour. How much money does he earn if he works for 12 hours? _____

Name _____

Model Division with Remainders

Essential Question How can you use counters to model division with remainders?

Unlock the Problem Real World

Madison has 13 seeds. She wants to put the same number of seeds in each of 3 pots. How many seeds can Madison put into each pot? How many seeds are left over?

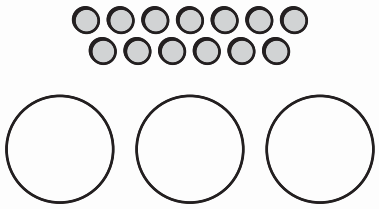
- How do you know how many groups to make?

_____

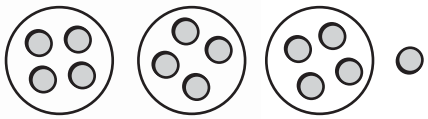
Activity Materials ■ counters

Use counters to find 13 ÷ 3.

STEP 1 Use 13 counters. Draw 3 circles for the 3 pots.



STEP 2 Place one counter in each group until there are not enough to put 1 more in each of the groups.



There are _____ counters in each circle.

There is _____ counter left over.

13 ÷ 3 is 4 with 1 left over.

The quotient is 4.

The remainder is 1.

So, Madison can put 4 seeds in each pot. There is 1 seed left over.

After dividing a group of objects into equal groups as large as possible, there may be some left over. The amount left over is called the **remainder**.

Math Talk Mathematical Practices

Explain why you cannot have a remainder of 3 when you divide by 3.

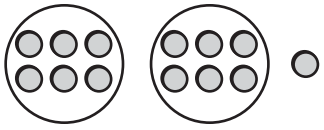
Try This! **What if** Madison wants to put 4 seeds in each pot. How many pots will Madison need? How many seeds will be left over?

_____

Share and Show

MATH BOARD

1. Divide 13 counters into 2 equal groups.



There are _____ counters in each group, and

_____ counter left over.

Complete.

2. April divided 17 counters into 4 equal groups.

There were _____ counters in each

group and _____ counter left over.

3. Divide 20 counters into groups of 6.

There are _____ groups and _____ counters left over.

On Your Own

Complete.

4. Divide 14 pencils into 3 equal groups.

There are _____ pencils in each group

and _____ pencils left over.

5. Divide 60 pieces of chalk into groups of 8.

There are _____ groups and _____ pieces of chalk left over.

Find the total number of objects.

6. There are 2 shoes in each of 6 groups and 1 shoe left over.

There are _____ shoes in all.

7. There are 4 apples in each of 3 groups and 2 apples left over.

There are _____ apples in all.

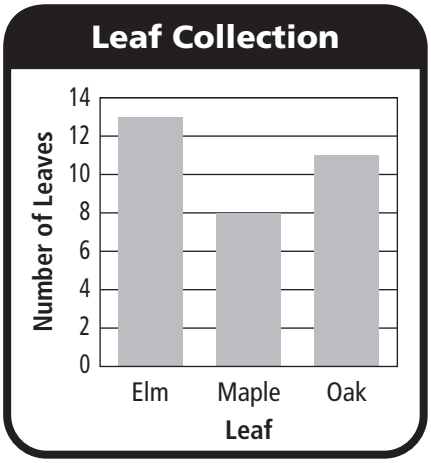
Problem Solving

Real World

Use the bar graph for 8.

8. If Hector divides the oak leaves evenly into 4 display boxes, how many leaves will be in each box? How many leaves will be left over?

_____



Name _____

Use Models to Divide Tens and Ones

Essential Question How can you model division with a 2-digit quotient?

Unlock the Problem

Real World

Emma baked 52 muffins. She wants to put an equal number of muffins on each of 4 trays. How many muffins can she put on each tray?

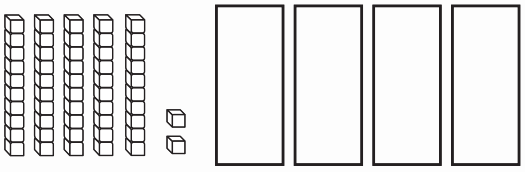
- Circle the numbers you need to use.
- How many equal groups are there?

_____

Find 52 ÷ 4.

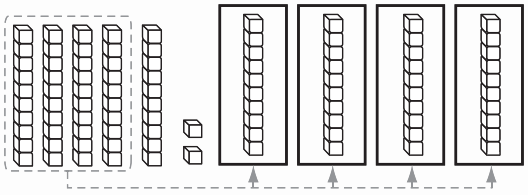
STEP 1

Use base-ten blocks to model the problem. Draw 4 rectangles to represent the 4 equal groups.



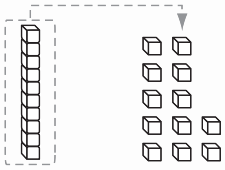
STEP 2

Share the tens. Place 1 ten in each group until there are not enough tens to put 1 more ten in each group.



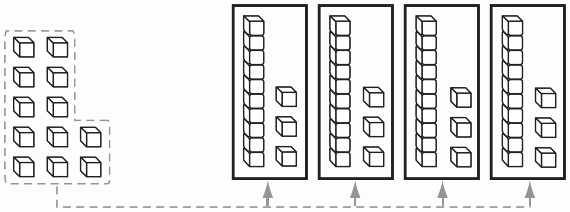
STEP 3

Regroup the remaining ten as ones. There are now 12 ones.



STEP 4

Share the ones. Place 1 one in each group until there are not enough ones to put 1 more one in each group.



So, Emma can put _____ muffins on each tray.

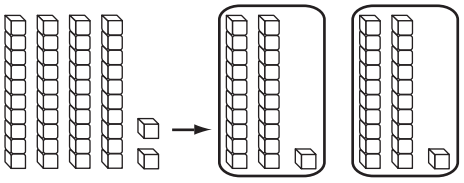
Math Talk Mathematical Practices

How you can check your answer.

Share and Show

MATH BOARD

1. Find 42 ÷ 2.



- How many equal groups are there? _____
- How many tens go in each group? _____
- How many ones go in each group? _____
- The quotient is _____.

Use base-ten blocks and your MathBoard to divide.

2. 65 ÷ 5 = _____

3. 90 ÷ 3 = _____

4. 88 ÷ 4 = _____

On Your Own

Use base-ten blocks and your MathBoard to divide.

5. 72 ÷ 2 = _____

6. 69 ÷ 3 = _____

7. 96 ÷ 6 = _____

Problem Solving

Real World

8. Roger has 84 trading cards. He wants to put an equal number in each of 3 boxes. How many cards will he put into each box?

_____

9. Riley has 78 postcards. She wants to put 6 on each poster board. How many poster boards will she need?

_____

Name _____

Model Tenths and Hundredths

Essential Question How can you model and write fractions in tenths and hundredths?

Unlock the Problem

Real World

You can use models to represent fractions in tenths and hundredths.

- What do you need to find to write the fraction?

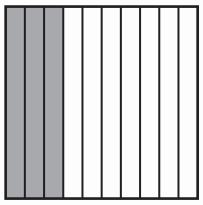
_____

Example

A

STEP 1

This model has 10 equal parts. Each part is one **tenth**.Shade three parts out of ten equal parts.



STEP 2

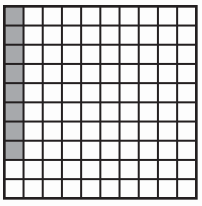
Write the fraction.
Think: Three tenths are shaded.

_____

B

STEP 1

This model has 100 equal parts. Each part is one **hundredth**.Shade eight of one hundred equal parts.



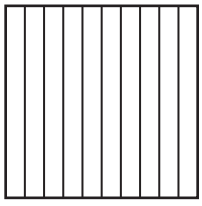
STEP 2

Write the fraction.
Think: Eight hundredths are shaded.

_____

Try This!

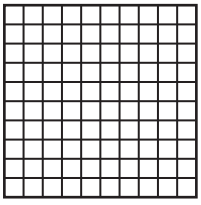
Shade the model to show nine of the ten equal parts.



Read: _____

Write: _____

Shade the model to show sixty-five of the hundred equal parts.



Math Talk

Mathematical Practices

Which number in a fraction represents the number of parts being counted, and which represents the number of equal parts in the whole?

Read: _____

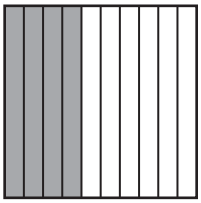
Write: _____

Share and Show

MATH BOARD

Write the fraction that names the shaded part.

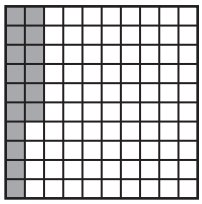
1.



Think: How many equal parts are shaded?

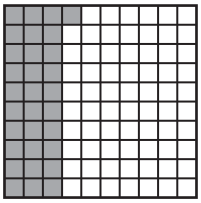
_____

2.



_____

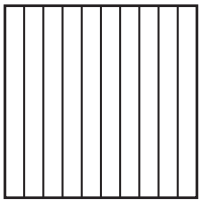
3.



_____

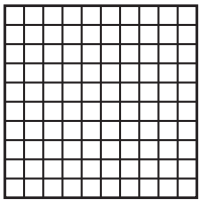
Shade to model the fraction. Then write the fraction in numbers.

4. three tenths



_____

5. twenty-three hundredths

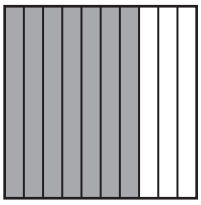


_____

On Your Own

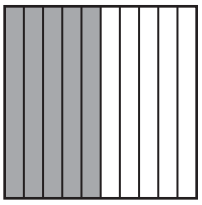
Write the fraction that names the shaded part.

6.



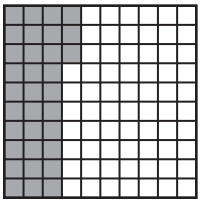
_____

7.



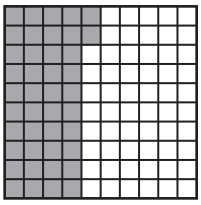
_____

8.



_____

9.



_____

Problem Solving

Real World

10. Each player shot a basketball 10 times. Eric made 4 baskets. Write a fraction to represent the part of Eric's shots that were baskets.

_____

11. Nina asked 100 students if they have a pet. Of the students, $\frac{19}{100}$ have a cat. How many students have a cat?

_____

Name _____

Fractions Greater Than One

Essential Question When might you use a fraction greater than 1 or a mixed number?

Unlock the Problem

Troy uses $\frac{1}{4}$ of a box of clay to make one model of a car. How many boxes of clay does he use to make 5 model cars?

- How much clay does Troy use to make each model car?

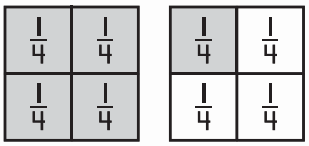
  _____

- How many model cars does Troy make?

  _____

Make a model.

- Draw squares divided into fourths to show the boxes of clay. Shade $\frac{1}{4}$ for the amount of clay Troy uses for each of the 5 model cars.
- Count the number of shaded parts. There are _____ shaded parts.
- Write the fraction.



Think: $\frac{4}{4} = 1$

One whole and one fourth are shaded.

Write: $1\frac{1}{4}$

$\frac{\square}{\square}$ shaded parts

parts in the whole

The number $\frac{5}{4}$ is a fraction greater than 1. A fraction greater than 1 can be written as a **mixed number**. A mixed number has a whole number and a fraction.

Read Math

Read $1\frac{1}{4}$ as *one and one fourth*.

So, Troy uses $\frac{5}{4}$ or $1\frac{1}{4}$ boxes of clay to make 5 model cars.

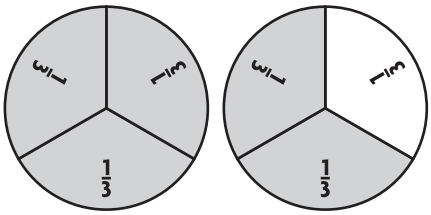
Math Talk Mathematical Practices

Why are $\frac{5}{4}$ and $1\frac{1}{4}$ equal?

Share and Show

MATH BOARD

1. Each fraction circle is 1 whole. Write a mixed number for the parts that are shaded.



There are _____ parts shaded.

There are _____ equal parts in the whole.

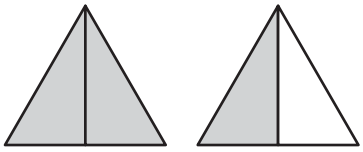
Fraction: $\frac{\square}{\square}$ shaded parts / parts in a whole

There is _____ whole shaded and _____ thirds shaded.

The mixed number is _____.

Each shape is 1 whole. Write a mixed number for the parts that are shaded.

2.



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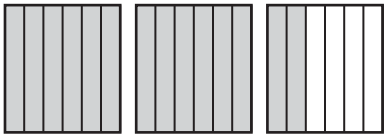
3.

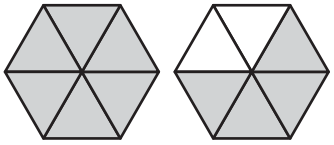


_____

On Your Own

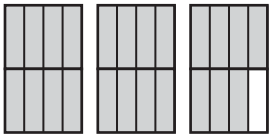
Each shape is 1 whole. Write a mixed number for the parts that are shaded.

4.



_____

5.



_____

Problem Solving

Real World

6. Luis played $\frac{6}{4}$ games of soccer this season. How can you write the number of games Luis played as a mixed number?

_____

7. Marci used $\frac{7}{3}$ packages of juice drinks. How can you write the number of packages of juice drinks Marci used as a mixed number?

_____