Amplify Desmos Math CALIFORNIA

Grade 3

Math Language Development Resources

Contents

Unit 1: Introducing Multiplication

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Name _____ Date _____

Words With Multiple Meanings

Draw a picture or write in words to show the math meaning and another meaning of the term.

Math meaning

product

Another meaning

Name _____ Date _____

Words With Multiple Meanings

Draw a picture or write in words to show the math meaning and another meaning of the term.

Math meaning

key

Another meaning

Vocabulary Cards, Unit 1

Directions: Make enough copies so that each student receives one card for each term. Pre-cut the cards and distribute them during the lesson(s) in which the term is introduced.

Commutative Property of Multiplication

The order in which two numbers are multiplied does not change the product.

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

Vocabulary Cards, Unit 1 · Lesson 9

factor

One of 2 or more numbers that are multiplied to make a product.

$$2 \times 3 = 6$$

factor factor

Vocabulary Cards, Unit 1 · Lesson 5

Identity Property of Multiplication

The product of any number and 1 is itself.

$$7 \times 1 = 7$$

Vocabulary Cards, Unit 1 · Lesson 7

key

The part of a picture graph that shows what each picture represents.

Vocabulary Cards, Unit 1 · Lesson 12

multiply

To determine the total amount of items that are in equal groups.

Vocabulary Cards, Unit 1 · Lesson 4

product

The result of multiplying 2 or more numbers.

$$5 \times 3 = 15$$

Vocabulary Cards, Unit 1 · Lesson 4

scale

On a bar graph, the scale is the amount represented by the space between the lines.

Vocabulary Cards, Unit 1 · Lesson 15

scaled bar graph

A bar graph where the scale is marked in units other than 1.

Vocabulary Cards, Unit 1 · Lesson 15

Vocabulary Cards, Unit 1

scaled picture graph

A picture graph where each picture or symbol represents an amount other than 1.

Vocabulary Cards, Unit 1 · Lesson 13

Name _____ Date _____

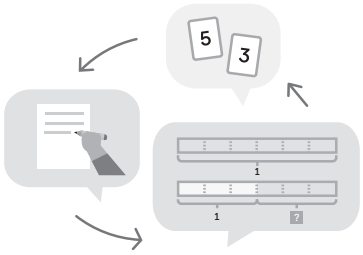
Ways to be a Mathematician
Formas de ser matemático/ matemática

1 I can take my time to think about a challenging problem before trying to solve it.

Puedo tomarme mi tiempo para pensar en un problema desafiante antes de intentar resolverlo.

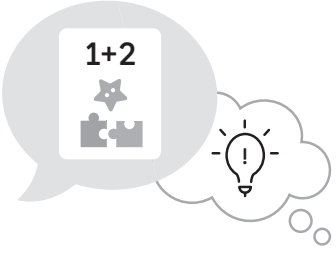
2 I can use numbers, words, and diagrams to make sense of math ideas and situations.

Puedo usar números, palabras y diagramas para entender ideas y situaciones matemáticas.



3 I can work carefully and try to be clear when I share my ideas.

Puedo trabajar con cuidado y tratar de ser claro/clara cuando comparto mis ideas.



Name _____ Date _____

Questions and Sentence Frames

Why did you choose this statement?

Did you choose any others? Why or why not?

How did you use this thinking during the Activity?

Can you tell me more?

I chose this statement because . . .

I also chose _____ because . . .

In the Activity, I . . .

Name _____ Date _____

Equal-Groups Situations

Use with Problems 1–3.

 basketball	 bike	 bin	 book
 insect	 player	 team	 wheel

The important information is . . .

I can use _____ equal groups
(number)

of _____.
(number)

I _____ equal groups by
(made/did not make)

counting by . . .

Word bank	
English	**Español**
equal	igual
group	grupo
information	información
numbers	números
situation	situación

Definition

To show something using numbers, symbols, or pictures.

represent
representar

Characteristics

Example

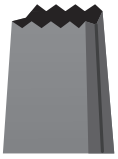
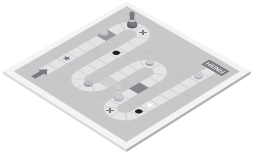
●●●●= 

Non-Example

Name _____ Date _____

Equal Groups

Use with Problems 1–3.

 bag	 board game	 card	 chair	 chorus
 dancing	 mushroom	 plane	 strawberry	 table

The important information is . . .

I can use _____ equal groups
(number)

of _____ .
(number)

I _____ equal groups by
(made/did not make)

counting by . . .

I drew . . .

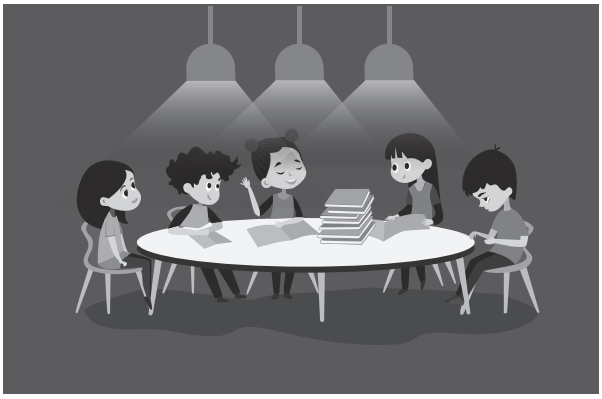
This represents the multiplication situation because . . .

Word bank	
English	**Español**
equal	igual
expression	expresión
group	grupo
information	información
important	importante
match	emparejar
multiplication	multiplicación
represent	representar
situation	situación

Name _____ Date _____

Book Clubs

Use with Problems 1–3.



book club

Word bank	
English	**Español**
book	libro
expression	expresión
how many	cuántos
more	más
multiply	multiplicar
product	producto
than	que
total	total

I notice . . .

I wonder . . .

The important information is . . .

How many _____ are there?

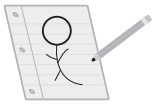
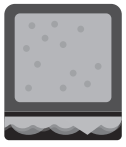
How many more _____ than _____ are there?

How many _____ are there in total?

Name _____ Date _____

Representing With Equations

Use with Problems 1–3.

 drawing	 ice
 plate	 sandwich

The important information is . . .

I need to find . . .

I can represent the story with . . .

The strategy I used was . . .

Word bank	
English	**Español**
equal	igual
equation	ecuación
factor	factor
group	grupo
multiplication	multiplicación
product	producto
slice	rebanada
strategy	estrategia
tape diagram	diagrama de cinta
table	mesa
unknown	desconocido

Definition

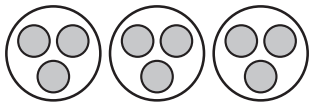
To show or explain something using pictures or objects

represent
representar

Characteristics

Example

3 × 3

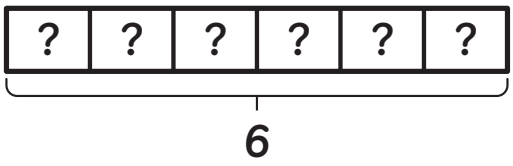


Non-Example

Name _____ Date _____

Card Sort: Unknown Numbers

Use with Problems 1 and 2.



tape diagram

The tape diagram represents . . .

This part of the tape diagram represents . . .

I know because . . .

Word bank	
English	**Español**
because	porque
card	tarjeta
equal	igual
equation	ecuación
factor	factor
group	grupo
know	saber
match	emparejar
part	parte
product	producto
represent	representar
unknown	desconocido

Name _____ Date _____

Looking for Patterns

Use with Problems 1–7.

Each number represents . . .

To solve the problem I . . .

I could represent this equation by . . .

A known product I could use is _____ because . . .

The strategy that is most helpful is . . .

Word bank	
English	**Español**
equation	ecuación
factor	factor
known	conocido
problem	problema
product	producto
strategy	estrategia
unknown	desconocido

Definition

The product of any number and itself

Characteristics

- always multiplying by 1
- number you are multiplying stays the same

identity property of multiplication
propiedad indentidad de la multiplicación

Example

$5 \times 1 = 5$

$1 \times 12 = 12$

Non-Example

Name _____ Date _____

Array Hunt

Use with Problems 1 and 2.

An array is . . . An array has . . .

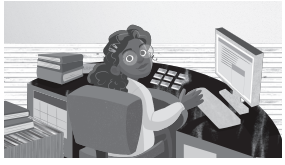
I found an array . . .

I see equal groups on . . .

An array shows equal groups because . . .

An array shows multiplication because . . .

Word bank	
English	**Español**
array	matriz
column	columna
equal	igual
group	grupo
multiplication	multiplicación
row	fila

Locations			
			
library	playground	computer desk	hallway

Name _____ Date _____

Testing Conjectures

Use with Activity 2.

I notice the expressions . . .

I can use arrays to prove . . .

The order of the factors does not affect the product because . . .

Word bank	
English	**Español**
array	matriz
column	columna
conjecture	conjetura
expression	expresión
factor	factor
product	producto
prove	demonstrar
row	fila

commutative property of multiplication
propiedad conmutativa de la multiplicación

Definition

The order in which 2 numbers are multiplied does not change the product

Characteristics

- you can change the order
- works for all numbers

Example

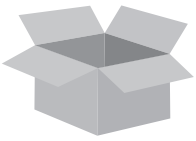
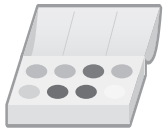
$3 \times 4 = 12$
$4 \times 3 = 12$

Non-Example

Name _____ Date _____

Array of Colors

Use with Problems 1–3.

Art Supplies				
 box	 crayon	 paint	 palette	 watercolor

The important information is . . .

I need to find . . .

I can represent the story by . . .

The _____ factor
(first/second)

represents . . .

The equations are _____
(similar/different)
because . . .

Word bank	
English	**Español**
array	matriz
box	caja
column	columna
commutative property	propiedad conmutativa
different	diferente
equation	ecuación
factor	factor
represent	representar
row	fila
similar	similar
solve	resolver

Name _____ Date _____

Seating Situations

Use with Problems 1 and 2.

 beanbag	 folding chair

I need to make . . .

I can show my array of _____ by making . . .

An array is helpful because . . .

Word bank	
English	**Español**
array	matriz
arrange	disponer
draw	dibujar
real-world	mundo real
represent	representar
stiuation	situación

Name _____ Date _____

Favorite Types of Books Survey

Use with Activity 1.

 book	 fantasy	 graphic novel	 science	 sports	 title

Every graph needs . . .

A picture graph needs . . .

A bar graph needs . . .

My graph represents the data because . . .

I can use equal groups to . . .

Word bank	
English	**Español**
bar graph	diagrama de barras
category	categoría
data	datos
favorite	favorito
key	leyenda
label	título
picture graph	gráfico de imágenes
represent	representar
scale	escala

Name _____ Date _____

So Many Responses

Use with Problems 1–3.

I can find how many students said they felt overwhelmed by . . .

The scale is . . .

_____ students said they felt overwhelmed.
(number)

Word bank	
English	**Español**
different	diferente
equal	igual
group	grupo
key	leyenda
similar	similar

The graphs are _____ because . . .
(similar/different)

A scale is similar to equal groups because . . .

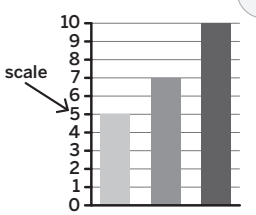
Definition

On a bar graph, the scale is the amount represented by the space between the lines.

scale
escala

Characteristics

Example



Non-Example

Name _____ Date _____

Representing Our Class Data

Use with Problems 1 and 2.

Every graph needs . . .

The scale of my graph is . . .

The scaled picture graph represents . . .

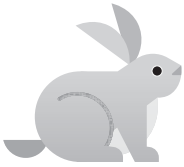
To represent an odd number, I . . .

Word bank	
English	**Español**
class	clase
data	datos
label	título
less	menos
more	más
odd	impar
picture	imagen
represent	representar

Name _____ Date _____

Class Collection

Use with Activity 1.

 cat	 dog	 rabbit	sticker

The graphs are similar because . . .

The graphs are different because . . .

The scale of this graph is . . .

Word bank	
English	**Español**
bar graph	diagrama de barras
collect	recolectar
different	diferente
notice	notar
same	igual
similar	similar

Name _____ Date _____

Mrs. Park's Interest Survey — Part 1

Use with Problems 1 and 2.

I notice . . .

I chose a scale of _____ *(number)* because . . .

The different scales affect . . .

The graph with a scale of _____ *(number)* is clearer because . . .

Word bank	
English	**Español**
choose	elegir
clearer	más claro
data	datos
graph	gráfico
notice	notar
scale	escala

Name _____ Date _____

Comparing Data on a Bar Graph

Use with Problems 1–4.

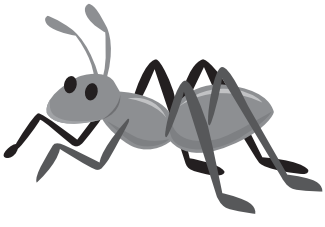
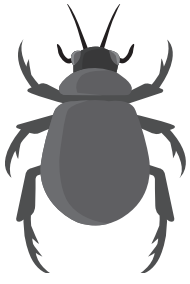
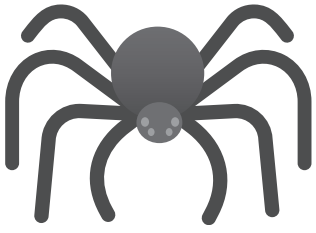
The key words are . . .

The question is asking me to find . . .

I could solve this problem by . . .

The strategies are _____ (*similar/different*) because . . .

Word bank	
English	**Español**
bar graph	diagrama de barras
compare	comparar
data	datos
fewer	menor cantidad
more	más
strategy	estrategia
total	total

Bugs			
			
ant	beetle	ladybug	spider

Name _____ Date _____

Three Reads

Use with Problems 1–3.

I notice that . . .

The important information is . . .

I can solve the problem by . . .

_____ more students chose summer than fall.

Word bank	
English	**Español**
important	importante
information	información
known	conocido
problem	problema
season	estación
solve	resolver
unknown	desconocido
value	valor

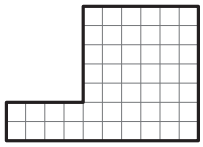
Seasons			
			
winter	spring	summer	fall

Vocabulary Cards, Unit 2

Directions: Make enough copies so that each student receives one card for each term. Pre-cut the cards and distribute them during the lesson(s) in which the term is introduced.

area

The number of square units that cover a flat shape without gaps or overlaps.



Vocabulary Cards, Unit 2 · Lesson 2

parentheses

Grouping symbols that can be used in expressions or equations, such as $(3 \times 5) + (2 \times 10)$.

Vocabulary Cards, Unit 2 · Lesson 11

square centimeter

A square with side lengths of 1 centimeter.

Vocabulary Cards, Unit 2 · Lesson 4

square foot

A square with side lengths of 1 foot.

Vocabulary Cards, Unit 2 · Lesson 4

square inch

A square with side lengths of 1 inch.

Vocabulary Cards, Unit 2 · Lesson 4

square meter

A square with side lengths of 1 meter.

Vocabulary Cards, Unit 2 · Lesson 4

square unit

The area of a square with the side length of 1 unit. It is used as the standard measurement of area.

Vocabulary Cards, Unit 2 · Lesson 3

Name _____ Date _____

Ways to be a Mathematician

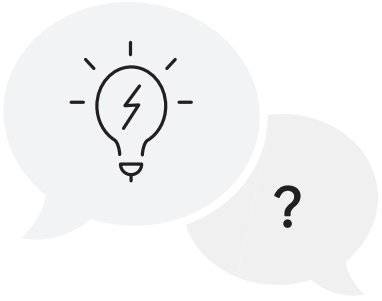
Formas de ser matemático/ matemática

1 I can take my time to think about a challenging problem before trying to solve it.

Puedo tomarme mi tiempo para pensar en un problema desafiante antes de intentar resolverlo.

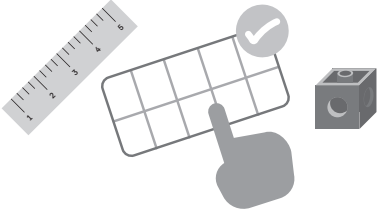
2 I can explain why my thinking makes sense and ask questions to understand the thinking of others.

Puedo explicar por qué mi pensamiento tiene sentido y hacer preguntas para comprender el pensamiento de los demás.



3 I can choose the tool that is just right for the problem I am solving.

Puedo elegir la herramienta adecuada para el problema que estoy resolviendo.



Name _____ Date _____

Questions and Sentence Frames

Why did you choose this statement?

Did you choose any others? Why or why not?

How did you use this thinking during the Activity?

Can you tell me more?

I chose this statement because . . .

I also chose _____ because . . .

In the Activity, I . . .

Name _____ Date _____

Using Pattern Blocks to Compare Shapes

Use with Problem 2.

Pattern blocks			
			
hexagon	rhombus	trapezoid	triangle

Word bank	
English	Español
area	área
attribute	cualidad
space	espacio

Shape _____ uses the most pattern blocks.

Shape _____ is the biggest because . . .

Shape _____ takes up the most space because . . .

Shape _____ is bigger than Shape _____ because . . .

Shape _____ is made up of _____ pattern blocks.
(number)

I can fit _____ pattern blocks in Shape _____.
(number)

Name _____ Date _____

Tiling Figures

Use with Problem 4.

Definition

The number of square units that cover a flat shape without gaps or overlaps.

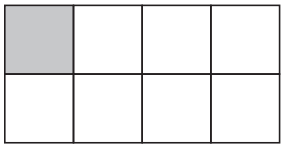
area
área

Characteristics

Area is measured by square units.

1 square unit 

Example



This figure has an area of 8 square units.

I used square tiles to . . .

I placed the square tiles . . .

Word bank	
English	**Español**
bedroom	dormitorio
furniture	muebles
hallway	pasillo
patio	patio
square tile	tesela cuadrada
square unit	unidad cuadrada

Name _____ Date _____

Area Hunt

Use with Problem 4.

Unit of measurement	square centimeter	square foot	square inch	square meter
Example	 button	 desk	 pencil	 classroom

I used _____ to measure _____.
(unit of measurement) *(object)*

I determined the unit of measurement by . . .

Objects that are smaller use . . .

Objects that are larger use . . .

I can estimate the area by . . .

Word bank					
English	area	square centimeter	square feet	square inch	square meter
Español	área	centímetro cuadrado	pies cuadrados	pulgada cuadrada	metro cuadrado

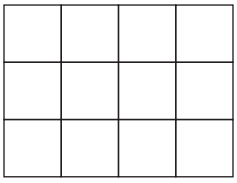
Name _____ Date _____

What Did I Create?

Use with Problems 2 and 4.

describing area

Rectangle



Description 1

The rectangle has __ rows.

Description 2

Each row has __ square units.

Description 3

The area of the rectangle is ___ square units.

I described the rectangle by . . .

My partner described the rectangle by . . .

The **area** can be used to draw a rectangle because . . .

The **total number of squares** can be used to draw a rectangle because . . .

My rectangle has . . .

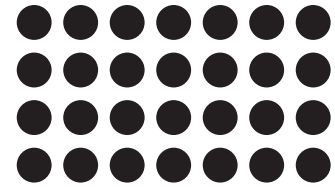
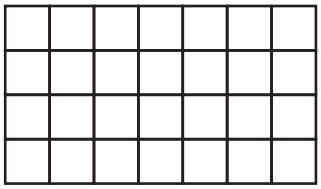
The rectangles are _____ because . . .
(similar/different)

Word bank	
English	**Español**
area	área
backyard	patio trasero
describe	describir
garden	jardín
rectangle	rectángulo
shed	cobertizo
square unit	unidad cuadrada

Name _____ Date _____

Expressions and Areas

Use with Problem 9.

 ___ × ___ = ___ array	 ___ × ___ = ___ square units in a rectangle

Word bank				
English	area	expression	multiplication	rug
Español	área	expresión	multiplicación	alfombra

The expression is related to the rectangle because . . .

The factors represent the _____ and _____ of a rug.

The area of a rectangle is the number of _____ that fit inside.

The units are arranged in . . .

A rectangle is like an array because . . .

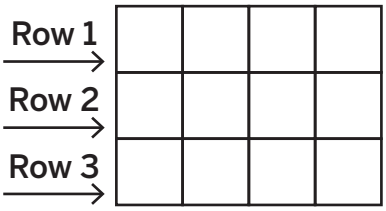
I found the area of each rectangle by . . .

Name _____ Date _____

Expressions and Areas (continued)

area expressions

Rectangle



Expression 1

3×4

Expression 2

4×3

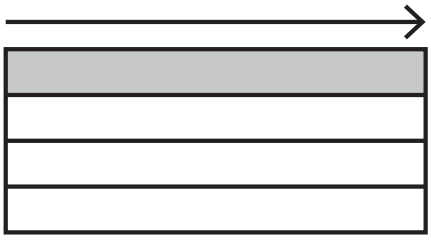
Area

The area of the rectangle is _____ square units.

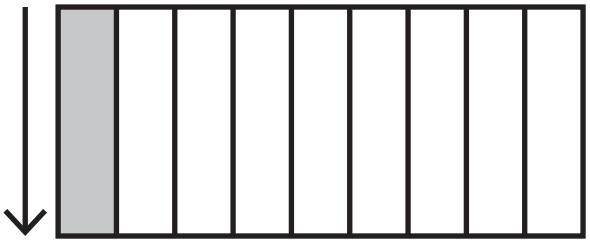
Name _____ Date _____

Partially Tiled

Use with Activity 1.



This rectangle has 4 **rows.**



This rectangle has 9 **columns.**

Word bank					
English	area	each	foot	multiplication	tile
Español	área	cada	pie	multiplicación	tesela

First, Cheri can _____ because . . .

Then/Next, Cheri can _____ because . . .

Cheri could use the tiles to . . .

Cheri can _____ to determine the area of the rectangle.

Name _____ Date _____

Using a Ruler to Determine Area

Use with Problem 3.

Measurement tools	
Tool	**Measurement units**
ruler	1 _____ 12 _____ 30 _____
yardstick	1 _____ 3 _____ 36 _____
meterstick	1 _____ 100 _____

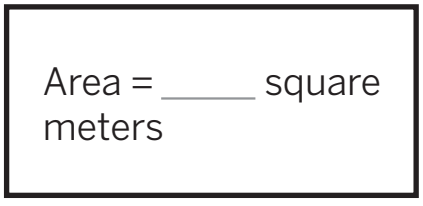
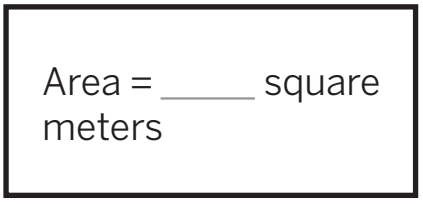
Word bank	
English	**Español**
area	área
equation	ecuación
length	longitud
multiplication	multiplicación
rectangle	rectángulo
unit	unidad

I used a _____ to measure the _____ because . . .
(measurement tool) *(object)*

Name _____ Date _____

Painting a Wall

Use with Problems 1–2.

Problem 1	Problem 2
	

Word bank					
English	area	factor	height	length	product
Español	área	factor	altura	longitud	producto

I need to find . . .

I know . . .

Cheri and her mom have _____ cans of paint.

Each can covers _____ square meters of the wall.

_____ cans of paint will cover _____ square meters of the wall.

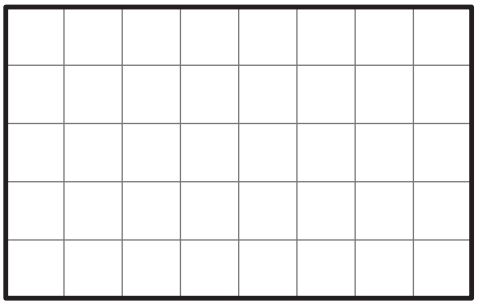
I can find the _____ by . . .

The _____ of the wall is _____ meters.

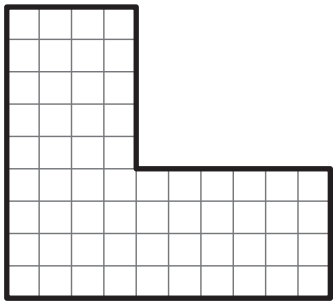
Name _____ Date _____

Area of the Puzzle Piece

Use with Problems 1–2.



rectangle



puzzle piece

Word bank					
English	add	area	decompose	multiply	row
Español	sumar	área	descomponer	multiplicar	fila

To determine the area of the puzzle piece, I can . . .

To determine the area of a rectangle, I can . . .

The strategies are similar because . . .

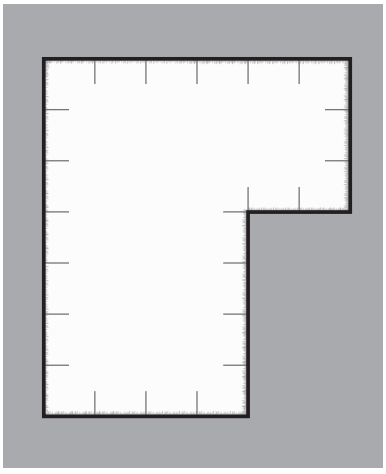
The strategies are different because . . .

Name _____ Date _____

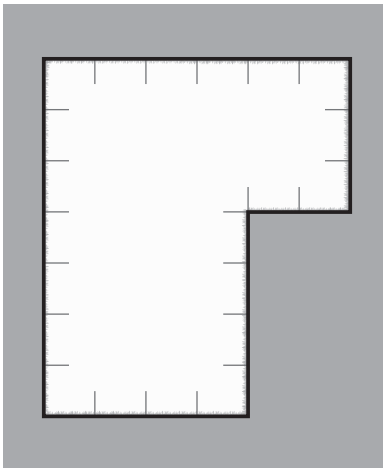
An Unpainted Wall Space

Use with Activity 1.

Diego
(4 × 7) and (3 × 2)



Clare
(3 × 6) and (4 × 4)



I agree with _____ because . . .

_____'s first/second expression represents . . .

Both of them can be correct because . . .

_____ decomposed the shape by . . .

Word bank	
English	**Español**
add	sumar
area	área
decompose	descomponer
expression	expresión
multiply	multiplicar
rectangle	rectángulo

Name _____ Date _____

Unknown Side Lengths

Use with Problem 2.

I decomposed the figure into . . .

The unknown side length was . . .

I used the expression _____ to find the unknown side length.

The unknown side length is _____ centimeters.

After I found the unknown side length, I . . .

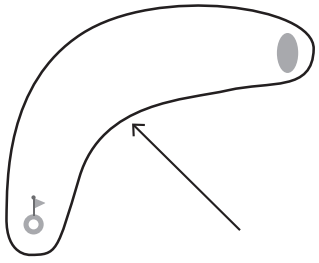
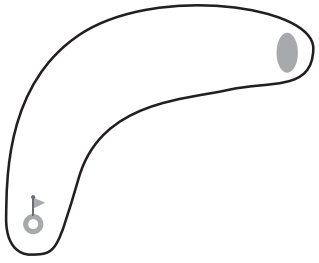
The total area of the figure is _____ square centimeters.

Word bank	
English	**Español**
area	área
attribute	atributo
decompose	descomponer
expression	expresión
figure	figura
side length	longitud del lado
square centimeter	centímetro cuadrado
parentheses	paréntesis
unknown	desconocido

Name _____ Date _____

Area on the Green

Use with Problem 1.

Mini-golf		
		
bend	landscape	putting green

We decided to . . .

We used . . .

Our putting green has an area of _____ square feet.

We found the area of our putting green by . . .

Word bank	
English	**Español**
architect	arquitecto
area	área
championship	campeonato
course	campo
design	proyecto
model	modelo
square feet	pies cuadrados

Vocabulary Cards, Unit 3

Directions: Make enough copies so that each student receives one card for each term. Pre-cut the cards and distribute them during the lesson(s) in which the term is introduced.

algorithm

A set of steps that can be followed when making calculations.

Vocabulary Cards, Unit 3 · Lesson 5

partial sum

The sum of one place value column in an addition problem with at least one multi-digital number.

Vocabulary Cards, Unit 3 · Lesson 5

rounding

A way to estimate the value of a number by determining the nearest ten, hundred, or other place value.

Vocabulary Cards, Unit 3 · Lesson 17

algorithm

A set of steps that can be followed when making calculations.

Vocabulary Cards, Unit 3 · Lesson 5

partial sum

The sum of one place value column in an addition problem with at least one multi-digital number.

Vocabulary Cards, Unit 3 · Lesson 5

rounding

A way to estimate the value of a number by determining the nearest ten, hundred, or other place value.

Vocabulary Cards, Unit 3 · Lesson 17

Name _____ Date _____

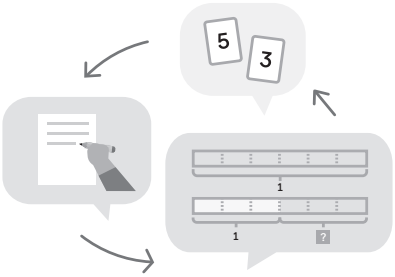
Ways to be a Mathematician
Formas de ser matemático/ matemática

1 I can take my time to think about a challenging problem before trying to solve it.

Puedo tomarme mi tiempo para pensar en un problema difícil antes de intentar resolverlo.

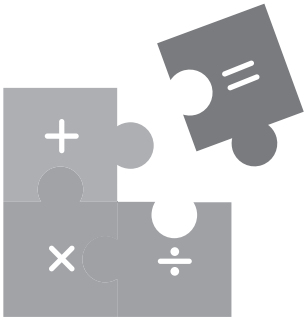
2 I can use numbers, words, and diagrams to make sense of math ideas and situations.

Puedo usar números, palabras y diagramas para entender ideas y situaciones matemáticas.



3 I can use math to help solve real-world problems.

Puedo usar las matemáticas para ayudar a resolver problemas del mundo real.



Name _____ Date _____

Questions and Sentence Frames

Why did you choose this statement?

Did you choose any others? Why or why not?

How did you use this thinking during the Activity?

Can you tell me more?

I chose this statement because . . .

I also chose _____ because . . .

In the Activity, I . . .

Name _____ Date _____

Adding 11 or 9

Use with Activity 1.

 bamboo	 island	 panda

Addition	Subtraction
$2 + 11 = 13$ ↑ sum	$13 - 11 = 2$ ↑ difference

When I add _____ to a number, I . . .
(11/9)

The pattern I notice is . . .

I can use the number 10 to help me add _____ by . . .
(11/9)

Adding 11 and adding 9 are _____ because . . .
(similar/different)

Name _____ Date _____

Decompose to Add

Use with Problems 1–2.

Parts of an addition equation
252 + 103 = 355 addends sum

Addition strategies			
252 + 103 100 3 252 + 100 = 352 352 + 3 = **355** count on	252 + 103 200 2 100 3 50 200 + 100 = 300 50 + 0 = 50 2 + 3 = 5 300 + 50 + 5 = **355** place value	252 + 103 200 52 100 3 200 + 100 = 300 52 + 3 = 55 300 + 55 = **355** familiar sums	252 + 103 100 3 252 + 3 = 255 255 + 100 = **355** reasoning

I chose to use _____ because . . .
(strategy)

I decomposed _____ because . . .

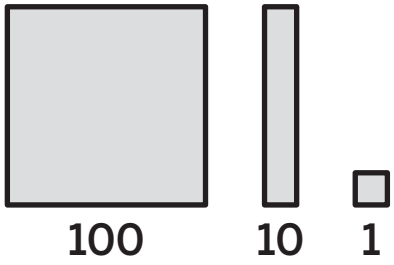
This strategy helped me find the sum because . . .

I could use tens and hundreds to add by . . .

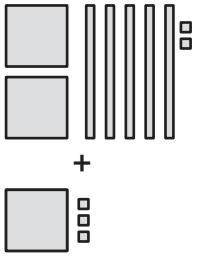
Name _____ Date _____

From Blocks to Numbers

Use with Problem 6.

252 + 103 = 355 addends sum parts of an addition equation	 base-ten blocks

Addition strategies

base-ten blocks	count on	place value	familiar sums	reasoning
	252 + 103 100 3 252 + 100 = 352 352 + 3 = **355**	252 + 103 200 | 2 100 3 50 200 + 100 = 300 50 + 0 = 50 2 + 3 = 5 300 + 50 + 5 = **355**	252 + 103 200 52 100 3 200 + 100 = 300 52 + 3 = 55 300 + 55 = **355**	252 + 103 100 3 252 + 3 = 255 255 + 100 = **355**

_____ represented 215 + 162 using _____.
(Priya/Clare/Jada) *(strategy)*

The representations are the _____ because . . .
(similar/different)

Name _____ Date _____

Adding It Up

Use with Problem 2.

147 + 232 100 + 40 + 7 + 200 + 30 + 2 300 + 70 + 9 **answer: 379** expanded form algorithm	**147 + 232** 1 4 7 + 2 3 2 9 7 0 + 3 0 0 3 7 9 **answer: 379** partial sums algorithm

Han represented the equation using _____.

Clare represented the equation using _____.

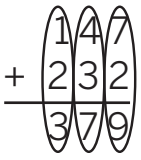
Their representations are the same because . . .

Their representations are different because . . .

Name _____ Date _____

A New Algorithm

Use with Problem 1.

147 + 232	**147 + 232**
147 + 232 9 70 + 300 379	
answer: 379	**answer: 379**
expanded form algorithm	partial sums algorithm

I notice that the partial sums algorithm . . .

I notice that the standard form algorithm . . .

There are _____ steps.

The 2 algorithms are similar because . . .

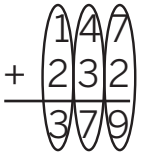
The 2 algorithms are different because . . .

The steps are different because . . .

Name _____ Date _____

Composing Units

Use with Problem 3.

147 + 232	**147 + 232**	**147 + 232**
100 + 40 + 7 + 200 + 30 + 2 300 + 70 + 9	1 4 7 + 2 3 2 9 7 0 + 3 0 0 3 7 9	
answer: 379	**answer: 379**	**answer: 379**
expanded form algorithm	partial sums algorithm	standard form algorithm

In both Problems 1 and 2, I composed _____.

In Problem _____, I composed _____.

In Problem _____, I composed more than 1 unit because . . .

Name _____ Date _____

Is Your Answer Reasonable?

Use with Problems 1–6.

Solve	Estimate
1 2 3 ← addends + 4 7 3 ← 5 9 6 ← sum	123 + 473 100 + 500 ≈ 600 estimates estimate sum

359 is closest to _____ 00.

113 is closest to _____ 00.

A reasonable estimate for 359 + 113 is _____.

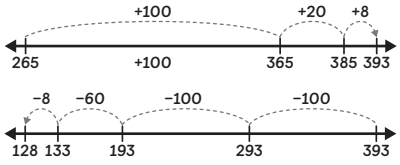
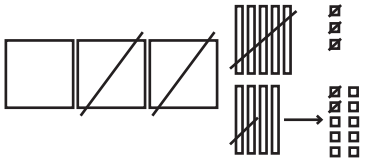
An estimate is reasonable if . . .

An estimate is not reasonable if . . .

Name _____ Date _____

Subtracting by Place

Use with Problem 6.

300 − 200 = 100 90 − 60 = 30 3 − 5 = 2 100 + 30 + 2 = 132		
decompose	count up or count back	base-ten blocks

Word bank					
English	different	partner	represent	same	solve
Español	diferente	pareja	representar	igual	solucionar

The strategy I used to determine 343 – 134 is . . .

The strategy my partner used to determine 343 – 134 is . . .

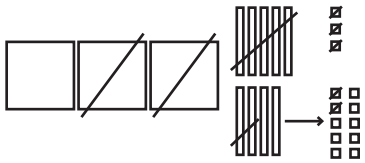
Our representations are _____ because . . .
(similar/different)

One thing that is _____ is . . .
(the same/different)

Name _____ Date _____

From Diagrams to an Algorithm

Use with Problem 3.

$\begin{array}{r} 300 + 90 + 5 \\ -\ 200 + 60 + 3 \\ \hline 100 + 30 + 2 \end{array}$	
expanded form algorithm	base-ten diagram

_____ represented 398 – 215 using _____.
(Shawn/Jada)

To complete _____ representation, I . . .
(Shawn/Jada)

The representations are similar because they both . . .

The representations are different because . . .

Word bank	
English	**Español**
complete	completar
different	diferente
represent	representar
similar	similar
subtraction	sustracción
work	trabajo

Name _____ Date _____

Hundreds and Tens

Use with Problem 10.

Subtraction algorithms	
$\begin{array}{r} {\scriptstyle 80\quad 13} \\ 300 + \cancel{90} + \cancel{3} \\ -\ 200 + 60 + 5 \\ \hline 100 + 20 + 8 \\ 128 \end{array}$	$\begin{array}{r} {\scriptstyle 8\,13} \\ 3\cancel{9}\cancel{3} \\ -\ 2\,6\,5 \\ \hline 1\,2\,8 \end{array}$
expanded form algorithm	standard algorithm

I notice that the _____ algorithm . . .
(expanded form/standard)

The expanded form algorithm and the standard algorithm both . . .

The expanded form algorithm and the standard are different because . . .

Word bank						
English	calculate	complete	different	example	represent	similar
Español	calcular	completar	diferente	ejemplo	representar	similar

Name _____ Date _____

Expressions That Decompose

Use with Activity 1.

When do I decompose?

Tens unit	Ones unit
$5\boxed{4}2 - 160$ ↓ $\overset{4}{\cancel{5}}\overset{1}{4}2 - 160$	$54\boxed{0} - 162$ ↓ $5\overset{3}{\cancel{4}}\overset{1}{2} - 103$

Word bank	
English	**Español**
decompose	descomponer
digit	dígito
equation	ecuación
expression	expresión
unit	unidad

I knew I _____ to decompose because . . .
(had/did not have)

To decompose _____, I borrow _____ from _____ .
(hundreds/tens)

The digit I decomposed becomes _____.

$\begin{array}{r} 541 \\ -\ 120 \end{array}$ → numbers stacked vertical	$541 - 120 =$ ↓ numbers next to each other horizontal

Name ______________________ Date ____________

An Algorithm Problem

Use with Problem 4.

Word bank			
English	decompose	equation	expression
Español	descomponer	ecuación	expresión

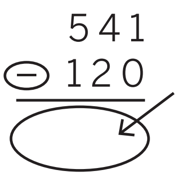
301 is decomposed into ________.

167 is decomposed into ________.

I know that there are ________ hundreds in a thousand, ________ tens in a hundred, and ________ ones in a ten.

Priya could have looked at the ________ place to borrow ________.

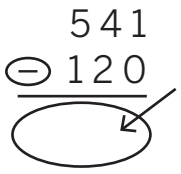
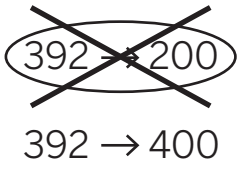
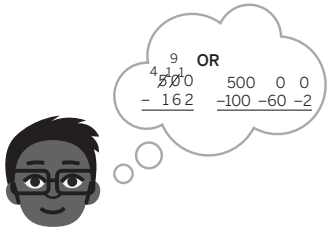
I ____________ with Priya because . . .
(agree/disagree)

 agree	 disagree	 calculate	 difference	542 − 160 standard algorithm

Name _____ Date _____

Is Your Answer Reasonable?

Use with Problems 3–5.

			
difference	estimate	reasonable	strategy

I chose to use the _____ method to find 582 – 390.

I estimated that 612 rounded to _____.

I estimated that 488 rounded to _____.

The estimated equation is _____ – _____ = _____.

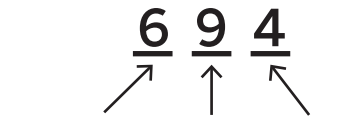
My estimate was only _____ away from the actual answer.

Name _____ Date _____

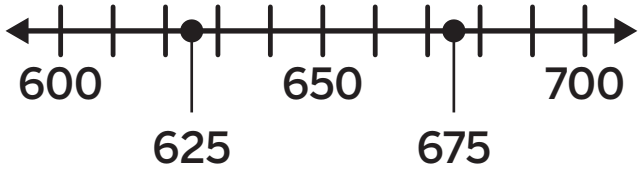
Numbers on a Number Line

Use with Problems 1–2.

Place value chart



Number line



The number _____ has _____ **hundreds** because it is located in the _____ place.

The number _____ has _____ **tens** because it is located in the _____ place.

The number _____ has _____ **ones** because it is located in the _____ place.

I put the number _____ between _____ and _____ because . . .

I placed the number closer to _____ on the number line because . . .

Word bank		
English	label	locate
Español	rótulo	localizar

Name _____ Date _____

Bug Buffet

Use with Activity 2.

 bug	 rock

Word bank	
English	**Español**
location	posición
near	cerca

You always look at the number to the _____ when rounding.

There are _____ tens/ones in the number _____ because . . .

The ten closest to _____ is _____.

When I decide which ten is closest to my number, I look at the number in the _____ place.

If a 4 or below is in the ones place, the number of tens _____.

If a 5 or above is in the ones place, the number of tens _____.

Name _____ Date _____

What About the Middle?

Use with Problems 1–2.

Rounding a number means . . .

There are _____ **hundreds** in the number _____ because . . .

There are _____ **tens** in the number _____ because . . .

There are _____ **ones** in the number _____ because . . .

You round _____ when . . .
(up/down)

When you round _____, the digit you are rounding
(up/down)

_____.
(increases/stays the same)

Word bank			
English	maintenance worker	national park	round
Español	trabajador de mantenimiento	parque nacional	redondear

Name _____ Date _____

What About the Middle? (continued)

Gateway Arch National Park

Map Key			
cafe		common area	
mezzanine		observation deck	
park grounds		tram	
tram lobby			

Name _____ Date _____

All the Numbers

Use with Problems 2–4.

I round by . . .

If the number to the right is a 4 or below, it rounds _____.

If the number to the right is a 5 or above, it rounds _____.

A number rounds up to the next hundred if it is . . .

A number rounds down and stays in the same 100 if it is . . .

Word bank				
English	greatest	least	number line	round
Español	mayor	menos	recta numérica	redondo

Name _____ Date _____

Does It Make Sense?

Use with Problem 2.

I know that Max took _____ photos at _____.

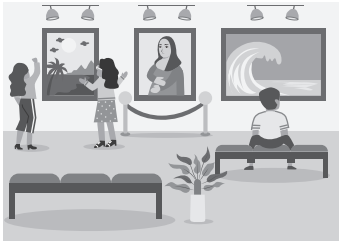
I know Max deleted _____ of those photos at the end of the day.

I rounded 452 to _____.

I rounded 302 to _____.

I rounded 182 to _____.

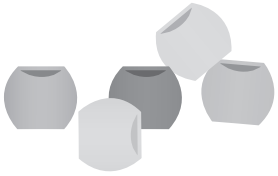
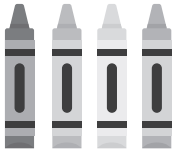
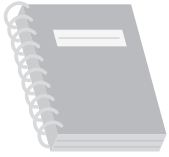
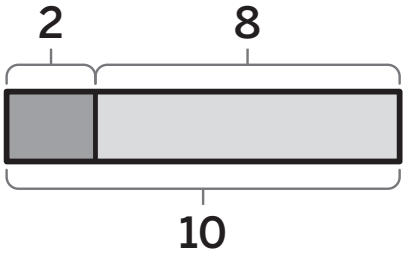
Estimating is similar to rounding because . . .

 art show	 beach	 delete
 Golden Gate Bridge	 photo	 San Francisco

Name _____ Date _____

Card Sort: Situations, Diagrams, and Equations

Use with Problems 1 and 2 and for Activity 2.

 baseball cards	 beads	 bracelet	 crayons
 notebook	 tape diagram	 paperclip	 parentheses

I know _____ and I am trying to solve for _____.

This **equation** matches the situation because . . .

This **tape diagram** matches the situation because . . .

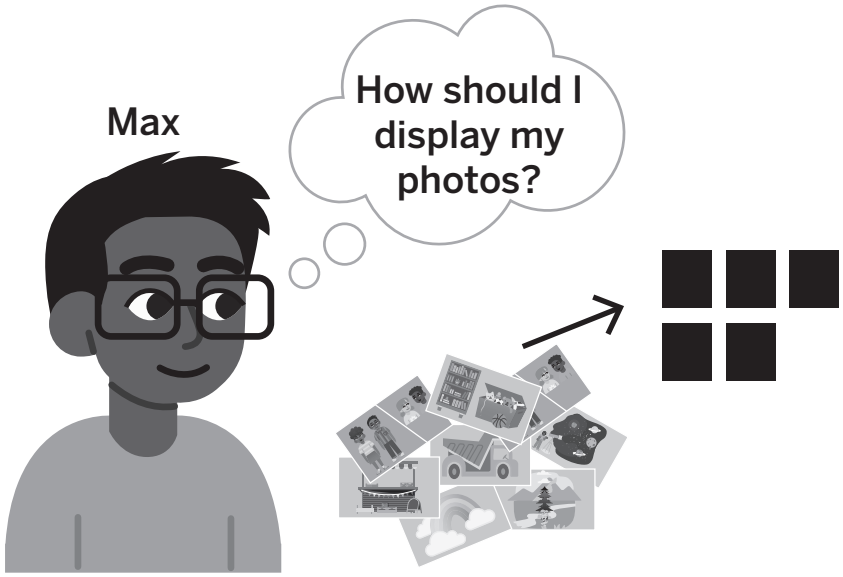
I matched these 3 cards together because . . .

Word bank	
English	**Español**
collection	colección
diagram	diagrama
equation	ecuación
match	emparejar
pack	paquete
situation	situación

Name _____ Date _____

Introducing Info Gap Cards

Use with Problems 1–3.



I know . . .

I am missing . . .

I created the equation _____ to represent _____ .

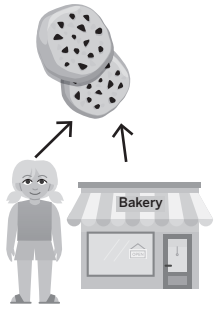
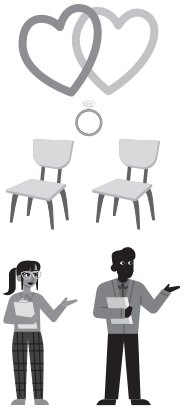
The number _____ in the equation means _____.

Word bank					
English	display	equation	parentheses	pile	row
Español	mostrar	ecuación	paréntesis	montón	fila

Name _____ Date _____

The "Makes Sense to Me" Gallery Tour

Use with the situation cards.

A	B	C	D	E	F
					

We know that _____ represents _____, and _____ represents _____.

We are solving for _____.

The picture for the problem means . . .

We created the equation _____ for this story problem because . . .

It was easy to use rounding to solve the story problems because . . .

Activity 2: Situation Word Banks

Directions: Make enough copies so that each student receives a card that matches their situation. Pre-cut the cards and distribute them during the Monitor.

Situation A

English	Español
company	compañía
office	oficina
printer	impresora
packs of paper	paquetes de papel
supplies	suministros

Situation B

English	Español
bead	abalorio
bracelet	pulsera
create	crear
save	guardar

Situation C

English	Español
bakery	panadería
cookie exchange	intercambio de galletas
donate	donar
dozen	docena
organize	organizar
spring festival	festival de primavera

Situation D

English	Español
event planner	planificador de eventos
row	fila
seat/chair	sillón
wedding	boda

Activity 2: Situation Word Banks

Situation E

English	Español
baseball cards	tarjetas de béisbol
box	caja
organize	organizar
pack	paquete
scattered	disperso
unopened	sin abrir

Situation F

English	Español
book	libro
finish	finalizar
page	página
read	leer
week	semana

Vocabulary Cards, Unit 4

Directions: Make enough copies so that each student receives one card for each term. Pre-cut the cards and distribute them during the lesson(s) in which the term is introduced.

Associative Property of Multiplication

The product of 3 or more numbers remains the same regardless of how the numbers are grouped.

Vocabulary Cards, Unit 4 · Lesson 11

Distributive Property

Multiplying a number by a sum is equal to multiplying the number by each addend first and then finding the sum.

$$4(2 + 3) = 4(2) + 4(3)$$

Vocabulary Cards, Unit 4 · Lesson 9

dividend

The total number of objects being divided.

$8 \div 2 = 4$

dividend

Vocabulary Cards, Unit 4 · Lesson 2

divisor

The number the dividend is divided by (the number of groups or the number of objects in each group).

$8 \div 2 = 4$

divisor

Vocabulary Cards, Unit 4 · Lesson 2

divide

To make equal groups from a total amount.

Vocabulary Cards, Unit 4 · Lesson 2

quotient

The result of dividing 2 numbers.

$8 \div 2 = 4$

quotient

Vocabulary Cards, Unit 4 · Lesson 3

Name _____ Date _____

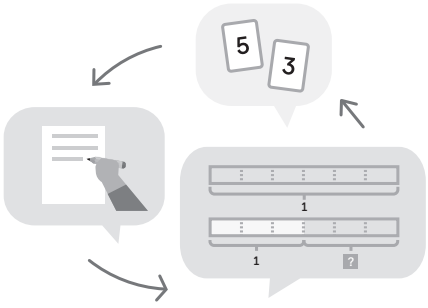
Ways to be a Mathematician
Formas de ser matemático/ matemática

1 I can take my time to think about a challenging problem before trying to solve it.

Puedo tomarme mi tiempo para pensar en un problema difícil antes de intentar resolverlo.

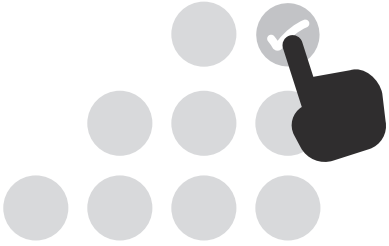
2 I can use numbers, words, and diagrams to make sense of math ideas and situations.

Puedo usar números, palabras y diagramas para entender ideas y situaciones matemáticas.



3 I can see how ideas are connected and use patterns to help solve problems.

Puedo ver cómo se conectan las ideas y utilizar patrones para resolver problemas.



Name _____ Date _____

Questions and Sentence Frames

Why did you choose this statement?

Did you choose any others? Why or why not?

How did you use this thinking during the Activity?

Can you tell me more?

I chose this statement because . . .

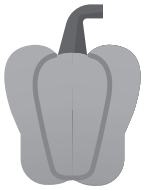
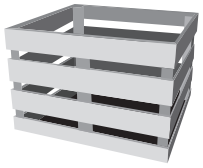
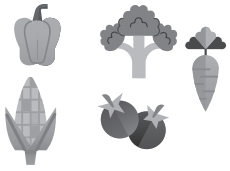
I also chose _____ because . . .

In the Activity, I . . .

Name _____ Date _____

Too Many Tomatoes

Use with Activities 1 and 2.

 bell pepper	 box	 broccoli head	 bundle	 carrot
 crate	 ear of corn	 farmer's market	 ingredients	 tomatoes

The drawing shows _____ objects in _____ groups of _____.

The problem is asking . . .

The drawing represents division because . . .

The expression _____ relates to the situation because . . .

Word bank					
English	divide	equal groups	expression	represent	value
Español	dividir	grupos iguales	expresión	representar	valor

Name _____ Date _____

Too Many Tomatoes (continued)

dividend
dividendo

Definition

The number that is being divided

Characteristics

- Whole number
- Split into smaller parts

Example

$10 \div 2$

dividend

Non-Example

$10 \div 2$

divisor

divisor
divisor

Definition

A number that another number is divided into

Characteristics

- Usually smaller than the dividend
- Makes the dividend smaller

Example

$10 \div 2$

divisor

Non-Example

$10 \div 2$

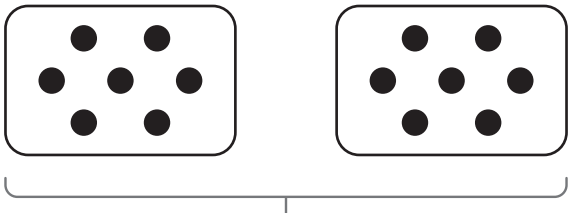
dividend

Name _____ Date _____

Bags of Lemons

Use with Activities 1 and 2.

Divide - make equal groups from a number of objects

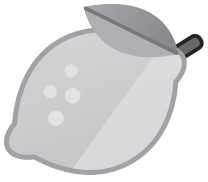


$10 \div 2 = 5$ ↑ ↑ ↑ dividend divisor quotient equation	$10 \div 2$ ↑ ↑ dividend divisor expression

There are _____ total _____.
(number) *(objects)*

The _____ is _____ because . . .
(dividend/divisor/quotient)

The expression represents . . .

 fig	 flowers	 lemon	 vase

Name _____ Date _____

Representing Equal-Groups Problems

Use with Problems 1–3.

dividend divisor quotient
↑ ↑ ↑
10 ÷ 2 = 5
"10 divided by 2 equals 5."
equation

Word bank	
English	**Español**
group	grupo
sort	clasificar

I organized the _____ into _____ equal groups of _____.
(objects) *(number)* *(number)*

There are _____ _____ in total.
(number) *(objects)*

My equation is _____ divided by _____ equals _____.

The number _____ represents _____.

The quotient is _____ because . . .

Objects					
					
bin	farmer	library book	plant pot	seed	teacher

Name _____ Date _____

Chili Ingredients

Use with Activity 1.

division equation	multiplication equation
$10 \div 2 = ?$	$2 \times ? = 10$
unknown quotient	unknown factor

I matched this equation to this story card because . . .

The _____ equation matches the story problem
(multiplication/division)
because . . .

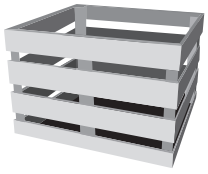
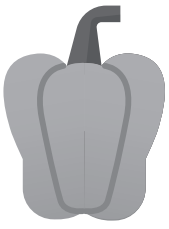
The missing factor in this division equation is _____ because . . .

Items			
 bag	 chili	 jalapẽno	 jar
 mild	 poblano	 pot	 spicy	 tomato

Name _____ Date _____

Problems and Equations

Use with Problem 1.

Objects		
		
crate	pepper	pepper farm

Word bank	
English	**Español**
divide	dividir
equation	ecuación
group	grupo
multiply	multiplicar

I wrote my story problem about . . .

I drew a picture of . . .

The _____ represents the _____ in my _____ equation.
(multiplication/division)

I recognize that multiplication and division work together in this story because . . .

Name _____ Date _____

Card Sort: Multiplication

Use with Activity 1.

division equation

$10 \div 2 = ?$

unknown quotient

multiplication equation

$2 \times ? = 10$

unknown factor

Commutative Property of Multiplication

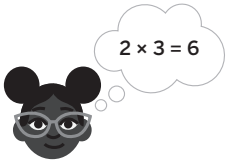
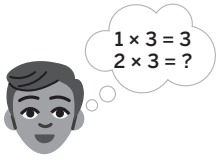
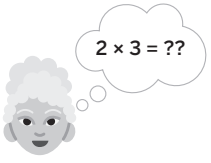
$2 \times 5 = 5 \times 2$

Word bank	
English	**Español**
divide	dividir
dividend	dividendo
divisor	divisor
expression	expresión
factor	factor
multiply	multiplicar
product	producto
quotient	cociente

The product of this multiplication expression is . . .

I used division to find the product of this multiplication expression because . . .

The Commutative Property of Multiplication helped me find the product of this expression because . . .

Sorting cards		
		
I know!	This will help!	I don't know!

Name _____ Date _____

Even and Odd Products

Use with Problem 3.

25_ (ones)	25_ (ones)
0, 2, 4, 6, 8	1, 3, 5, 7, 9
even	odd

Multiplication equation

$2 \times 5 = 10$

product

I noticed that any number ending with a 1, 3, 5, 7, or 9 is _____. *(even/odd)*

I noticed that any number ending with a 2, 4, 6, 8, or 0 is _____. *(even/odd)*

When I multiply two _____ numbers together, the product *(even/odd)*
is _____. *(even/odd)*

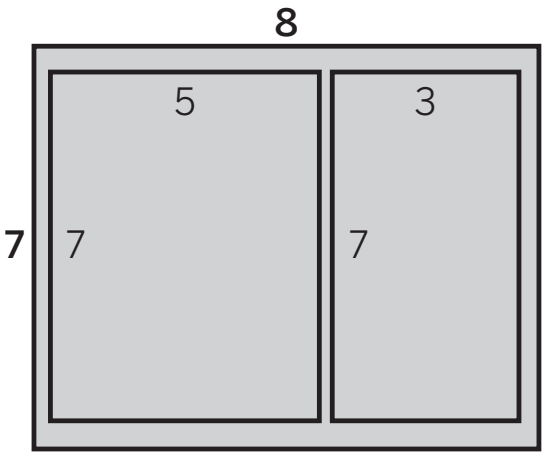
When I multiply an even number and an odd number together, the product is _____. *(even/odd)*

I noticed the patterns in the multiplication chart . . .

Name _____ Date _____

From Rectangles to Equations

Use with Activity 2.



Distributive Property

$$7 \times 8 = 7 \times 5 + 7 \times 3$$

(large rectangle) (2 small rectangles)

I can break _____ into 2 parts with the numbers _____ and _____.

I composed 2 smaller rectangles with side lengths of . . .

The 2 small rectangles fit inside the larger rectangle because . . .

The area of each of the small rectangles is _____ and _____ which equals _____.

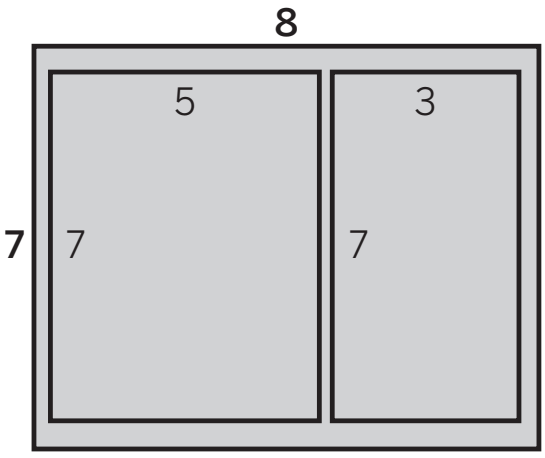
I used the Distributive Property to create equations for my rectangles because . . .

Word bank				
English	area	compose	equation	rectangle
Español	área	componer	ecuación	rectángulo

Name _____ Date _____

More Rectangles and Expressions

Use with Problems 1–3.



Distributive Property

$$7 \times 8 = (7 \times 5) + (7 \times 3)$$

(large rectangle) (small rectangle 1) (small rectangle 2)

_____ decomposed the rectangle into . . .
(Han/Priya)

_____ used the expression _____ to represent their rectangle.
(Han/Priya)

Han's and Priya's methods are _____ because . . .
(similar/different)

I decomposed the 5 by 8 rectangle into . . .

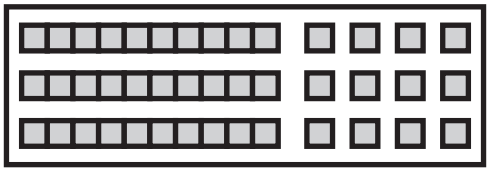
The expression I created for the 5 by 8 rectangle is . . .

Word bank					
English	area	decompose	expression	multiply	parentheses
Español	aréa	descomponer	expresión	multiplicar	paréntesis

Name _____ Date _____

2 Strategies for Tens

Use with Problem 2.



base-ten blocks

Word bank	
English	**Español**
count	contar
decompose	descomponer
expression	expresión
factor	factor
multiply	multiplicar
product	producto

_____ counted by . . .
(Clare/Diego)

_____ counted _____ blocks.
(She/He) *(number)*

_____ could show this with base-ten blocks by . . .
(She/He)

Clare's and Diego's strategies were _____ because . . .
(similar/different)

Name _____ Date _____

Ways to Represent

Use with Problem 5.

Multiplication equation

$2 \times \underset{\text{unknown factor}}{?} = 10$

Word bank	
English	**Español**
decompose	descomponer
expression	expresión
factor	factor
multiply	multiplicar
product	producto
represent	representar

The factors in _____ (*Han/Jada/Priya*)'s representation are _____ and _____.

There are _____ rows.

There are _____ columns.

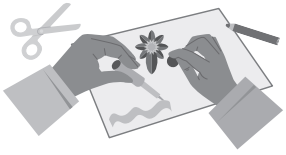
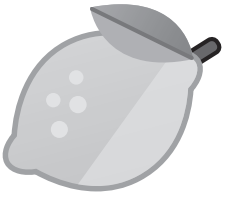
I know this because . . .

The representations are _____ (*similar/different*) because . . .

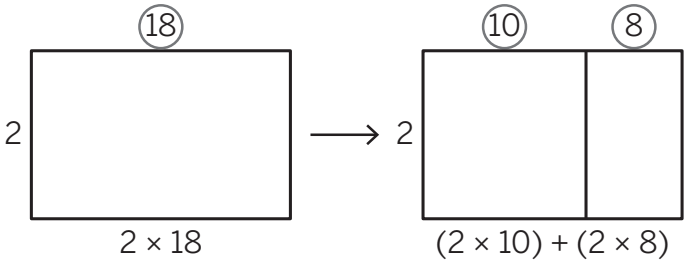
Name _____ Date _____

At the Farm

Use with Problems 1–3

Goods from the orchard			
			
flower	handmade card	lemon	lemon tree

Distributive Property



Word bank	
English	**Español**
decompose	descomponer
expression	expreción
factor	factor
farm	granja
multiply	multiplicar
pick	recoger
restaurant	restaurante

I can draw _____ to represent the

_____.

(flower section/lemon trees/handmade cards)

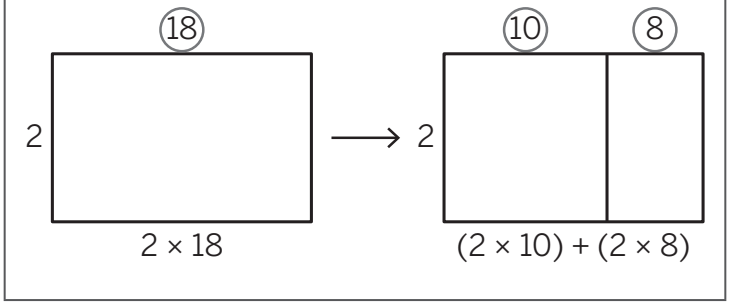
I can decompose _____ into _____ and _____.

This will help me find the area because . . .

Name _____ Date _____

A Factor Greater Than 20

Use with Problems 1–4.

Distributive Property


Word bank	
English	**Español**
decompose	descomponer
determine	determinar
factor	factor

Jada's equation is missing . . .

The strategy that Jada is using to multiply is . . .

Jada can complete this problem by . . .

I will decompose _____ because . . .

I will decompose _____ into _____ and _____.

I can use _____ to help me multiply.

Name _____ Date _____

Planting Pepper Seeds

Use with Problem 1.

 Baklouti pepper	 farmer	 packet of seeds	 seeds

Word bank	
English	**Español**
decompose	descomponer
multiply	multiplicar

The farmer has _____ seeds.

I can find how many seeds the farmer put into packets by . . .

I can decompose _____ into _____ and _____.

I can find how many seeds are left by . . .

The information that is not important to finding an answer is . . .

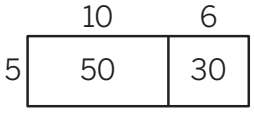
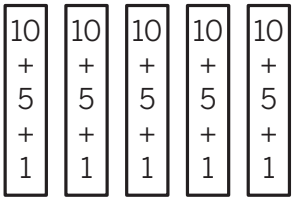
Name _____ Date _____

Balloon Decorations

Use with Problems 1 and 2.

Equation	10 ÷ 2 = 2
	↑ dividend ↑ divisor ↑ quotient

Birthday party	
	
balloon	chair

Division strategies			
 decompose tens and ones	 equal groups	16 + 16 = 32 32 + 16 = 48 48 + 16 = 64 64 + 16 = 80 repeated addition	5 x _____ = 80 multiplication

The division equation is _____ ÷ _____ = _____.

Amy and Mateo have _____ balloons.

They are tying _____ balloons to each chair.

I need to find . . .

The division strategy _____ used to solve this problem is . . .
(I/my partner)

Our strategies are _____ because . . .
(similar/different)

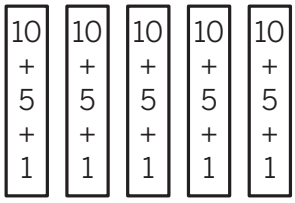
Name _____ Date _____

Base-Ten Blocks to Divide

Use with Problems 1–3.

Equation $10 \div 2 = 2$

↑ dividend ↑ divisor ↑ quotient

Division strategies			
10 6 5 | 50 | 30 decompose tens and ones	 equal groups	16 + 16 = 32 32 + 16 = 48 48 + 16 = 64 64 + 16 = 80 repeated addition	5 x _____ = 80 multiplication

The strategy I will use to solve _____ ÷ _____ is . . .

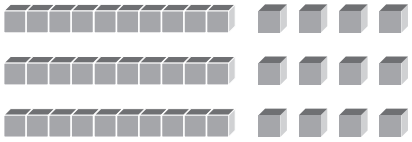
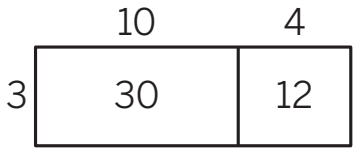
I chose this strategy because . . .

I _____ always use the same strategy because . . .
(do/do not)

Name _____ Date _____

What Were They Thinking?

Use with Activities 1 and 2.

Division strategies		
	30 ÷ 3 = 10 12 ÷ 3 = 4 10 + 4 = 14 42 ÷ 3 = 14	
base-ten blocks	known facts	area model

Han can split the base-ten blocks into 6 equal groups by . . .

The number in each group is _____.

Diego can divide the numbers by . . .

The quotient is _____.

Clare can use multiplication by . . .

She can complete the area model by . . .

Decomposing the dividend helps determine the quotient . . .

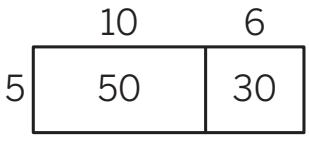
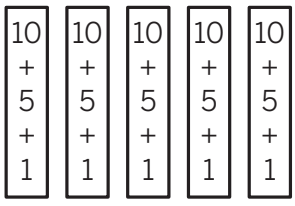
I will use the _____ strategy because . . .

Word bank	
English	**Español**
break apart	separar
complete	completo
determine	determinar
divide	dividir
split	dividir

Name _____ Date _____

Same Strategy or Different?

Use with Activity 1.

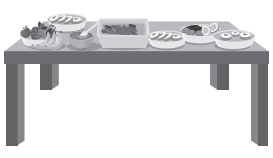
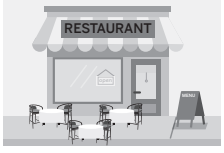
Division strategies			
 decompose tens and ones	 equal groups	16 + 16 = 32 32 + 16 = 48 48 + 16 = 64 64 + 16 = 80 repeated addition	5 x _____ = 80 multiplication

Word bank					
English	arrange	decompose	dividend	divisor	quotient
Español	disponer	descomponer	dividendo	divisor	cociente

The problem asks us to . . .

I can use the _____ strategy to solve the problem because . . .

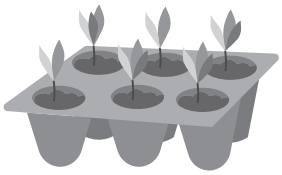
I used _____ strategies to solve Problem _____ because . . .
(the same/different)

 buffet table	 cardstock	 menu	 napkins with silverware	 restaurant

Name _____ Date _____

Pepper Party Favors

Use with Problems 5–6.

 Baklouti	 café	 seedlings	 tray

	Problem 5	Problem 6
Step 1	Expression: _____	Expression: _____
Step 2	Expression: _____	Expression: _____
Equation	_____ = _____ *(Step 1 in parentheses)* *(letter)*	_____ = _____ *(Step 1 in parentheses)* *(letter)*

The _____ step was . . .
(first/second)

I represented this step with . . .

I represented _____ with the letter _____.
(quotient)

Word bank	
English	**Español**
division	división
equation	ecuación
expression	expresión
parentheses	paréntesis
unknown value	valor desconocido

Vocabulary Cards, Unit 5

Directions: Make enough copies so that each student receives one card for each term. Pre-cut the cards and distribute them during the lesson(s) in which the term is introduced.

denominator

The bottom number in a fraction that tells how many equal parts the whole is partitioned into.

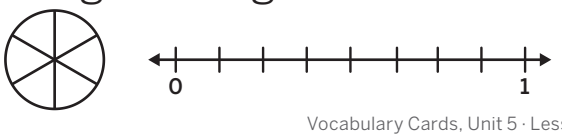
$\frac{3}{4}$

denominator

Vocabulary Cards, Unit 5 · Lesson 4

an eighth/eighths

Each part of a whole that is split into 8 equal parts. The plural of an eighth is eighths.



Vocabulary Cards, Unit 5 · Lesson 2

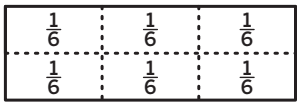
equivalent fractions

2 fractions that represent the same value.

Vocabulary Cards, Unit 5 · Lesson 10

fraction

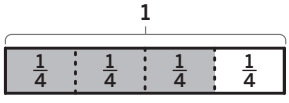
A number that describes the parts of a whole that has been partitioned into equal parts.



Vocabulary Cards, Unit 5 · Lesson 2

non-unit fraction

A fraction that describes more than 1 part of an equipartitioned shape.



$\frac{3}{4}$

Vocabulary Cards, Unit 5 · Lesson 4

numerator

The top number in a fraction that tells how many of the equal parts are being described.

numerator

$\frac{3}{4}$

Vocabulary Cards, Unit 5 · Lesson 4

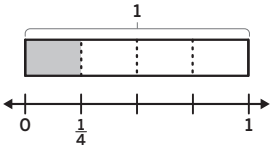
a sixth/sixth

Each part of a whole that is split into 6 equal parts. The plural of a sixth is sixths.

Vocabulary Cards, Unit 5 · Lesson 2

unit fraction

A fraction that describes exactly 1 part of an equipartitioned shape.



Vocabulary Cards, Unit 5 · Lesson 3

Name _____ Date _____

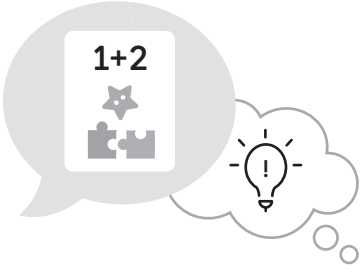
Ways to be a Mathematician
Formas de ser matemático/ matemática

1 I can take my time to think about a challenging problem before trying to solve it.

Puedo tomarme mi tiempo para pensar en un problema difícil antes de intentar resolverlo.

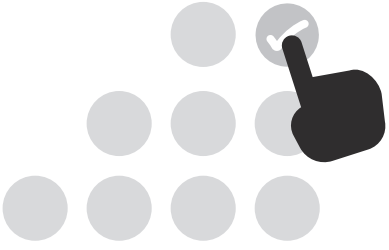
2 I can work carefully and try to be clear when I share my ideas.

Puedo trabajar con cuidado y tratar de ser claro/clara cuando comparto mis ideas.



3 I can see how ideas are connected and use patterns to help solve problems.

Puedo ver cómo se conectan las ideas y utilizar patrones para resolver problemas.



Name _____ Date _____

Questions and Sentence Frames

Why did you choose this statement?

Did you choose any others? Why or why not?

How did you use this thinking during the Activity?

Can you tell me more?

I chose this statement because . . .

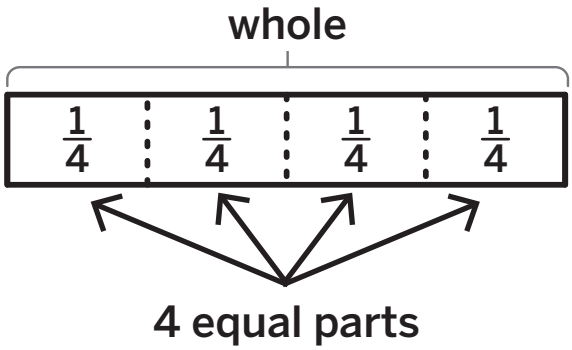
I also chose _____ because . . .

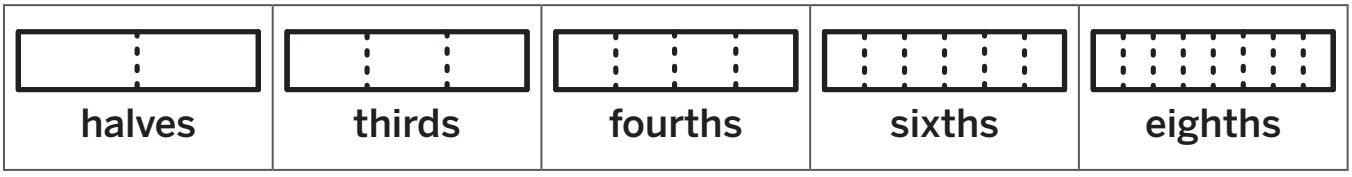
In the Activity, I . . .

Name _____ Date _____

Folding Paper Strips

Use with Problem 3.





First, I folded . . .

Then, I folded . . .

There are _____ equal parts of the whole.

Each part represents _____ because there are _____ equal parts.

Fraction parts have to be equal because . . .

Word bank						
English	each	equal	fraction	part	strip	whole
Español	cada	igual	fracción	parte	franja	entero

Name _____ Date _____

What's Shaded?

Use with Problems 2–7.

Word bank					
English	equal	numerator	part	unit fraction	whole
Español	igual	numerador	parte	fracción unitaria	entero

The shaded part _____ represent a unit fraction.
(does/does not)

I know it is a unit fraction because . . .

The fraction has _____ equal parts.

The fraction has _____ part(s) shaded.

_____ equal part(s) shaded means . . .

Name _____ Date _____

How Much is Shaded?

Use with Problem 6.

 french toast sticks	 unit fraction	 non-unit fraction

On Monday through Wednesday they ate . . .

On Thursday and Friday they ate . . .

They are different because . . .

There is/are _____ whole(s).

_____ part(s) is/are shaded.

Word bank	
English	**Español**
equal	igual
part	parte
represent	representar
whole	entero

Name _____ Date _____

Representing Fractions

Use with Problem 3.

First, I _____ because . . .

Then I _____ because . . .

Last, I _____ because . . .

I noticed _____, so I . . .

The numerator is _____.

The denominator is _____.

I split each strip into . . .

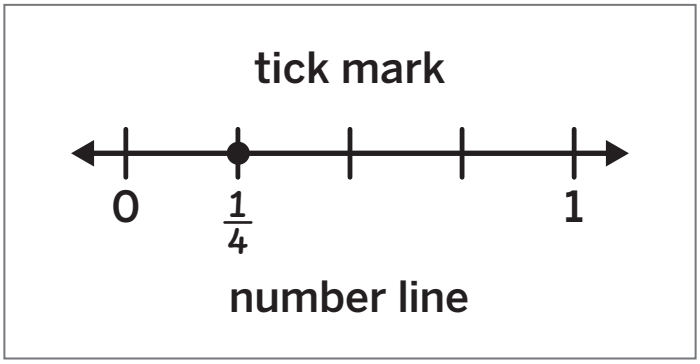
I shaded _____ parts.

Word bank	
English	**Español**
denominator	denominador
equal	igual
numerator	numerador
part	parte
represent	representar

Name _____ Date _____

Where Should It Go?

Use with Problem 7.



I located the fraction _____ by . . .

I partitioned the number line into _____ equal parts because . . .

I labeled _____ on the number line because . . .

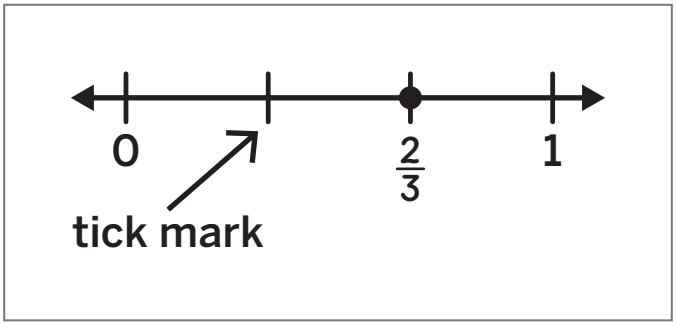
The _____ tick mark represents the fraction because . . .

Word bank					
English	denominator	equal	numerator	part	represent
Español	denominador	igual	numerador	parte	representar

Name _____ Date _____

Hiking Trail

Use with Problem 5.



I located the fraction _____ by . . .

I partitioned the number line into _____ equal parts because . . .

The denominator is _____ , so . . .

I labeled _____ on the _____ tick mark because . . .

The numerator is _____ , so . . .

Word bank					
English	denominator	equal	numerator	part	represent
Español	denominador	igual	numerador	parte	representar

Name _____ Date _____

Purr-fectly 1 Whole

Use with Activity 2.

 cat	 cat food

Word bank	
English	**Español**
equal	igual
fraction	fracción
part	parte

To be equal to 1 whole, the numerator and denominator . . .

The _____ tells . . .
(numerator/denominator)

If the numerator and denominator are the same, it means . . .

Name _____ Date _____

Locating 1

Use with Problem 5.

I know the first tick mark

represents _____.

I counted _____ equal parts to find 1.

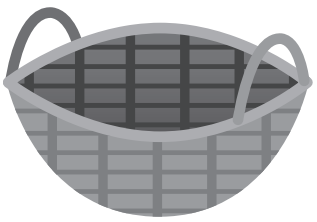
I know the 1 is located here because . . .

Word bank	
English	**Español**
denominator	denominador
distance	distancia
fraction	fracción
located	ubicado
number line	línea de números
numerator	numerador
tick mark	marca indicadora

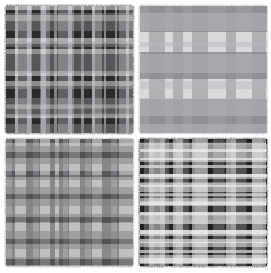
Name _____ Date _____

More Than 1 Way

Use with Activity 1.



basket



quilt patch

Word bank	
English	**Español**
area	área
denominator	denominador
equal	igual
fraction	fracción
numerator	numerador

This quilt patch has _____ parts, and _____ parts are shaded.

The quilt patch in the basket has _____ parts, and _____ parts are shaded.

The shaded areas are _____ because . . .
(similar/different)

I know the shaded areas are equal because . . .

Name _____ Date _____

Equivalent or Not?

Use with Problem 3.

Word bank						
English	diagram	equal	fraction	part	strip	whole
Español	diagrama	igual	fracción	parte	franja	entero

The diagrams model . . .

The fraction strips show . . .

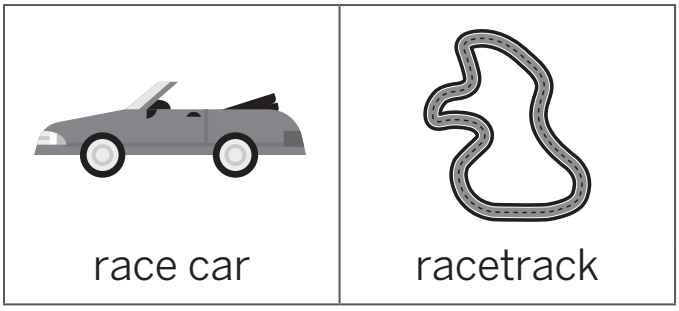
I know they are equal because . . .

Han can correct his work by . . .

Name _____ Date _____

Driving Down the Racetrack

Use with Problem 1.



Word bank			
English	**Español**	**English**	**Español**
area	área	equivalent	equivalente
denominator	denominador	number line	recta numérica
distance	distancia	numerator	numerador
drive	conducir		

_____ and _____ are equivalent fractions.

I know they are equivalent because . . .

The number line shows they are equivalent because . . .

Name _____ Date _____

Hidden Whole Numbers

Use with Problem 3.

When I looked at the number line, I noticed . . .

_____ and _____ are equivalent because . . .
(fraction) *(whole number)*

The _____ of the fraction means . . .
(denominator/numerator)

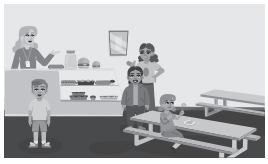
The fraction makes _____ wholes because . . .

Word bank	
English	**Español**
denominator	denominador
distance	distancia
fraction	fracción
number line	recta numérica
numerator	numerador
part	parte
whole	entero

Name _____ Date _____

Sharing Wholes

Use with Problems 1–3.

 basketball player	 cafeteria	 granola bar	 student	 veggie slider

Word bank			
English	**Español**	**English**	**Español**
denominator	denominador	part	parte
fraction	fracción	share	compartir
numerator	numerador	whole	entero

In Problem _____ (1/2), _____ (number) people are sharing _____ (number) _____ (objects).

These problems are different because . . .

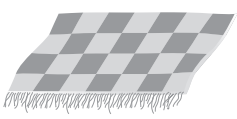
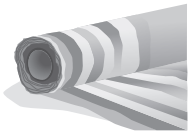
A denominator of 1 means . . .

That means _____ (fraction) is equivalent to _____ wholes because . . .

Name _____ Date _____

Bigger, Smaller, Fewer, More

Use with Problem 3.

 blanket	 fabric	 large dog

Word bank				
English	bigger	fewer	more	smaller
Español	más grande	menos	más	más pequeño

I agree with _____ because . . .
(Obita/Coen)

The Humane Society should use _____ of the fabric because . . .
(fraction)

When the denominator is _____, . . .
(greater/smaller)

_____ pieces of fabric means . . .
(Fewer/More)

Name _____ Date _____

One Numerator, Many Fractions

Use with Problem 10.

The same numerator means . . .

I made the denominator on the **left** _____ because . . .

I made the denominator on the **right** _____ because . . .

Word bank	
English	**Español**
denominator	denominador
equal size	mismo tamaño
greater than	más que
less than	menos que
numerator	numerador
piece	pieza

The smaller the _____, the larger the pieces.

The greater the _____, the smaller the pieces.

Name _____ Date _____

One Denominator, Many Fractions

Use with Activity 1.

I can compare fractions with the same denominator by . . .

The size of the pieces are . . .

The same denominator means . . .

The numerator represents . . .

When the numerator is greater . . .

One fraction is greater than another when . . .

Word bank	
English	**Español**
compare	comparar
denominator	denominador
equal size	mismo tamaño
greater than	mayor que
less than	menor que
numerator	numerador
piece	pieza

Vocabulary Cards, Unit 6

Directions: Make enough copies so that each student receives one card for each term. Pre-cut the cards and distribute them during the lesson(s) in which the term is introduced.

gram

A gram is a metric unit of weight. There are 1,000 grams in a kilogram.

Vocabulary Cards, Unit 6 · Lesson 7

kilogram

A kilogram is a metric unit of weight.
There are 1,000 grams in a kilogram.

Vocabulary Cards, Unit 6 · Lesson 7

liquid volume

The amount of space that a liquid takes up.

Vocabulary Cards, Unit 6 · Lesson 9

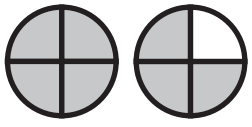
liter

A liquid volume unit that is in the metric measurement system.

Vocabulary Cards, Unit 6 · Lesson 9

mixed number

A number expressed as a whole number and a fraction less than 1.



$1\frac{3}{4}$

Vocabulary Cards, Unit 6 · Lesson 2

weight

How heavy something is.

Vocabulary Cards, Unit 6 · Lesson 7

Name _____ Date _____

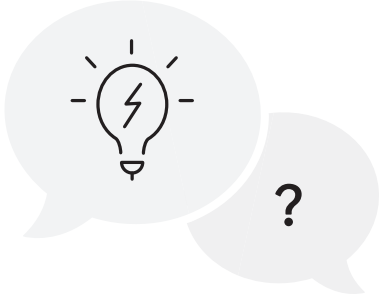
Ways to be a Mathematician
Formas de ser matemático/ matemática

1 I can take my time to think about a challenging problem before trying to solve it.

Puedo tomarme mi tiempo para pensar en un problema difícil antes de intentar resolverlo.

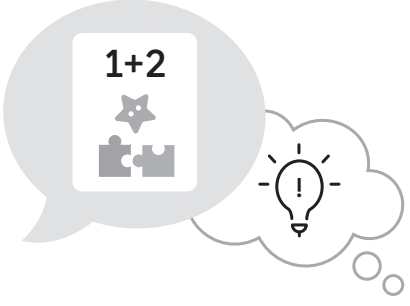
2 I can explain why my thinking makes sense and ask questions to understand the thinking of others.

Puedo explicar por qué mi razonamiento tiene sentido y hacer preguntas para comprender el razonamiento de los demás.



3 I can work carefully and try to be clear when I share my ideas.

Puedo trabajar con cuidado y tratar de ser claro/clara cuando comparto mis ideas.



Name _____ Date _____

Questions and Sentence Frames

Why did you choose this statement?

Did you choose any others? Why or why not?

How did you use this thinking during the Activity?

Can you tell me more?

I chose this statement because . . .

I also chose _____ because . . .

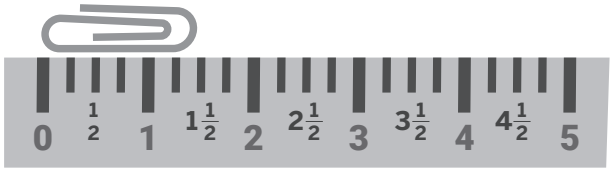
In the Activity, I . . .

Name _____ Date _____

Partitioning Inches

Use with Problems 1–3.

measuring with a ruler in half inches



Word bank					
English	fraction	half	inch	mixed number	object
Español	fracción	mitad	pulgada	número mixto	objeto

The objects I measured were _____, _____, _____, and _____.

The _____ was _____ inches.

The _____ measured to a half inch.

Measuring in half inches is **the same as** measuring in whole inches because . . .

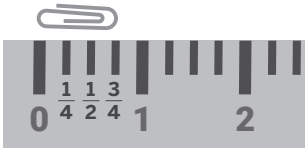
Measuring in half inches is **different from** measuring in whole inches because . . .

Name _____ Date _____

Partitioning Inches Into Fourths

Use with Problems 1–3.

measuring with a ruler in quarter inches



Word bank					
English	fourth, quarter	half	inch	mixed number	object
Español	cuarto	mitad	pulgada	número mixto	objeto

The objects I measured were _____, _____, _____, _____ and _____.

The _____ was _____ inches.

The _____ measured to a quarter inch.

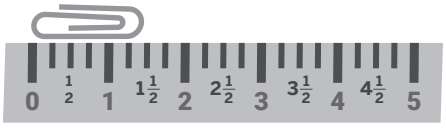
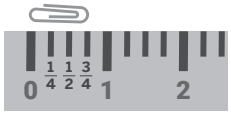
Measuring in quarter inches is **the same as** measuring in half inches because . . .

Measuring in quarter inches is **different from** measuring in half inches because . . .

Name _____ Date _____

Whole, Half, and Quarter Inches

Use with Problem 8.

whole inches	half inches	quarter inches
		

Word bank					
English	fourth, quarter	half	inch	mixed number	object
Español	cuarto	mitad	pulgada	número mixto	objeto

All of the measurements were _____.
(the same/different)

All 3 measurements were different for number _____.

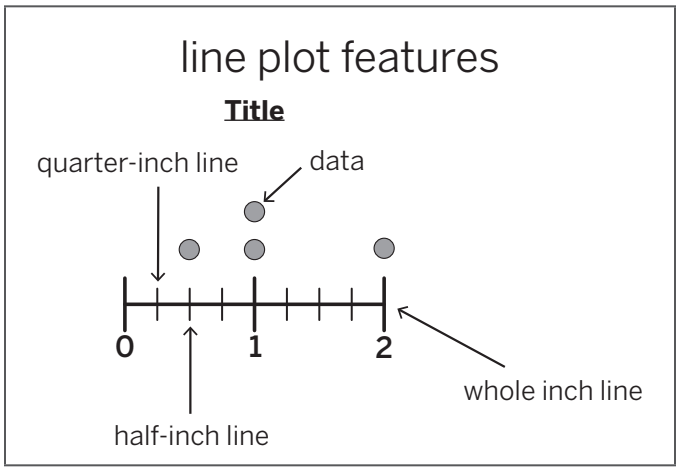
Some measurements were different for the same object because . . .

The measurement that is most precise is the _____ inch because . . .

Name _____ Date _____

Mrs. Wilson's Chicken Coop

Use with Activity 1.



Word bank	
English	Español
chicken	pollo
dots	puntos
middle	medio

I represented my data by . . .

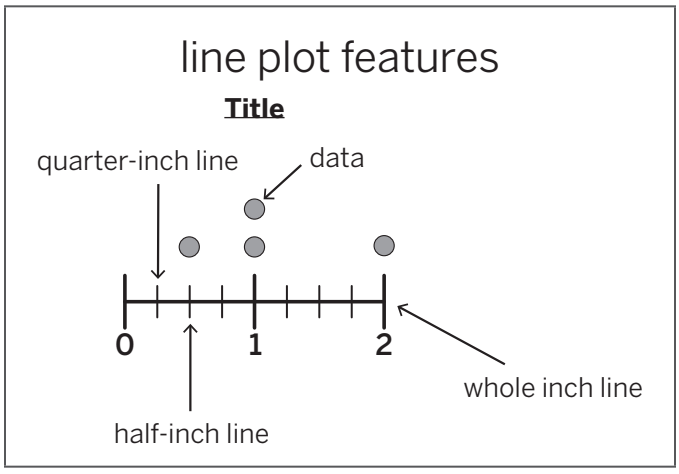
I put each _____ dot . . .
(whole inch/half-inch/quarter-inch)

The feature of the line plot that is most helpful when representing a _____ is . . .
(whole inch/half-inch/quarter-inch)

Name _____ Date _____

Let's Make a Line Plot

Use with Problem 4.



Word bank	
English	Español
dot	punto
title	título

Our group measured _____.

The measurements of each object were . . .

We will label our tick marks with _____ numbers.

We will use a _____ scale.

The details we will include to help people understand our data are . . .

Our line plot title is _____.

Our units are _____.

We will represent our data with _____.

Name _____ Date _____

Estimating Weight

Use with Problems 1–3.

 balance	 basket of apples	 paperclip

Word bank	
English	**Español**
between	entre
estimate	estimar
gram	gramo
heavy	pesado
justify	justificar
kilogram	kilogramo
less than	menos que
light	ligero
more than	más que
weight	peso

I think _____ weighs about 1 gram because . . .

I will estimate which objects are closest to each weight because . . .

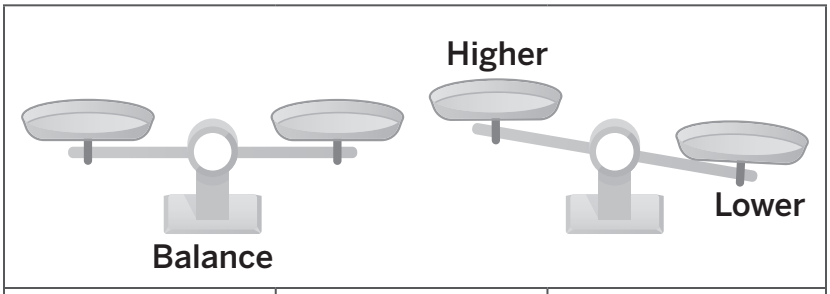
I know that _____ weighs about _____ because . . .

One object that I estimate weighs between 100 grams and 1 kilogram is _____ because . . .

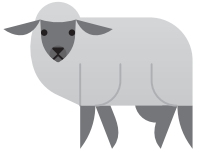
Name _____ Date _____

Weight and See

Use with Activity 1.




duck


sheep


rabbit

Word bank	
English	**Español**
equal	igual
gram	gramo
kilogram	kilogramo
less than	menos que
more than	más que
weight	peso

I will know both sides of the balance are the same weight because . . .

The duck weighs _____.

The rabbit weighs _____.

I notice the sheep and the rabbit . . .

The balances are **the same** because . . .

The balances are **different** because . . .

Name _____ Date _____

How Much Is Enough?

Use with Problem 3.

container A	container B	unit container
		

Word bank							
English	estimate	less than	liquid	liter	more than	unit	volume
Español	estimar	menos que	líquido	litro	más que	unidad	volumen

I will compare the amount of liquid that Containers A and B hold by . . .

Container _____ looks bigger.

I estimated that Container A can hold _____ units of liquid and Container B can hold _____ units of liquid.

Container _____ holds more liquid.

Container **A** can hold _____ units of liquid.

Container **B** can hold _____ units of liquid.

Name _____ Date _____

Estimating Liquid Volume

Use with Problem 1.

Word bank							
English	estimate	less than	liquid	liter	more than	unit	volume
Español	estimar	menos que	líquido	litro	más que	unidad	volumen

I estimate that a bathtub could hold about _____, liters of liquid.

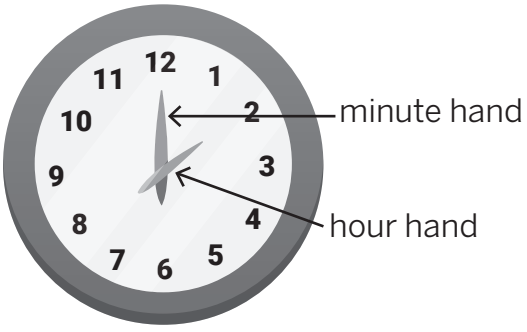
I know that _____ holds about _____ liters of liquid.

I think _____ is correct because . . .

Name _____ Date _____

Two Hands, One Clock

Use with Problem 6.



clock

Word bank			
English	**Español**	**English**	**Español**
change	cambiar	minute	minuto
clock hand	manecilla del reloj	position	posición
hour	hora	time	tiempo

When it is 9:00, the **minute hand** is on _____, and the **hour hand** is on _____.

To change the clock from 8:00 to 9:00, you have to . . .

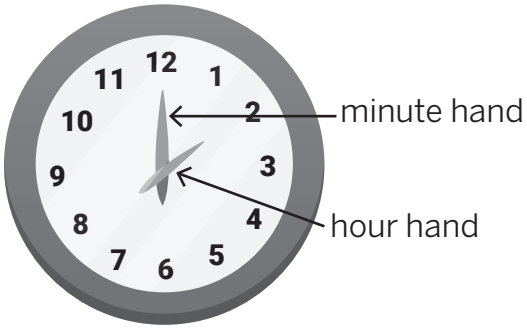
When the clock is at both 8:00 and 9:00, the _____ hand is on _____.

When the clock is at **8:00**, the _____ hand is on _____.
When the clock is at **9:00**, the _____ hand is on _____.

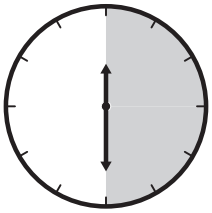
Name _____ Date _____

Cleaning the Coop

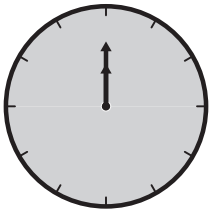
Use with Problems 3–5.



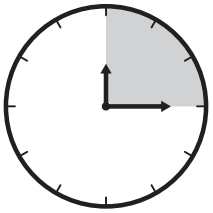
clock



half hour
(30 minutes)



1 hour
(60 minutes)



quarter hour
(15 minutes)

Word bank	
English	**Español**
a.m.	de la mañana
clean	limpiar
coop	gallinero
different	diferente
finish	terminar
p.m.	de la tarde
quarter past	y cuarto
quarter to	un cuarto para
similar	semejante
start	comenzar
strategy	estrategia

In Problem _____, I know that . . .
(number)

I am looking for . . .

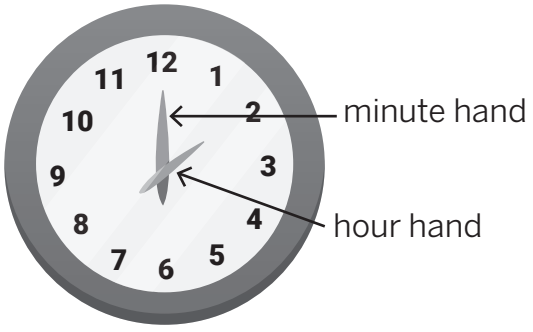
The strategy I will use to solve is . . .

Problems 1 and 2 are _____ because . . .
(similar/different)

Name _____ Date _____

Visiting the Vet

Use with Problems 1 and 3.



clock

Word bank	
English	**Español**
a.m.	de la mañana
begin/start	comenzar
determine	determinar
end/finish	terminar
p.m.	de la tarde
strategy	estrategia
vet	veterinario

Sasha and Evelyn's visit **began** at _____.

Sasha and Evelyn's visit **ended** at _____.

I know because the hour hand is on _____, and the minute hand is on _____.

Sasha and Evelyn were at the vet for _____ minutes.

Name _____ Date _____

Make Your Own Math Problem

Use with Problems 5–6.

?			
create your own	farm	library	store

Story problems for unknown . . .		
elapsed time	end time	start time
Sasha and Evelyn went to the farm. They left at __ and got there at __. How long did it take them to get there?	Sasha and Evelyn went to the library. They left at __ and it took them __ minutes to get there. What time did they arrive?	Sasha and Evelyn went to the store. They arrived at __. It took them __ minutes to get there. What time did they leave?

My unknown is _____.

The information I know is . . .

The minutes and times I chose are reasonable because . . .

Name _____ Date _____

Liquid Volume Questions

Use with Problems 1–3.

 bottle	 cup	 juice	pitcher

Asking questions about liquid volume			
How much water is left?	How much juice in all?	How much liquid in each?	How much more in Container A than Container B?

How much . . .

To solve this problem, I would need to know . . .

I could represent this problem with the equation _____.

The strategy that I would use to solve this problem is _____.

Name _____ Date _____

Weight Questions

Use with Problems 1–3.

Asking questions about weight		
How much does it weigh?	How much do they weigh all together?	How much more does Item A weigh than Item B?

Word bank					
English	giant	question	pumpkin	small	weigh
Español	gigante	pregunta	calabaza	pequeño	pesar

How much . . .

To solve this problem, I would need to know . . .

I could represent this problem with the equation _____.

The strategy that I would use to solve this problem is _____.

The mathematical questions for the problems are _____ *(similar/different)* because . . .

Name _____ Date _____

A Day at the Fair

Use with Problems 1–4 and poster creation.

 carnival/fair	 grilled corn on the cob
 life-size sculpture of a cow made with butter	+ add − subtract × multiply ÷ divide operations

I represented the story problem by . . .

The operation I used to solve is _____.

The known values were _____ and _____.

The unknown value was _____.

The strategy I used to solve this problem was _____.

Vocabulary Cards, Unit 7

Directions: Make enough copies so that each student receives one card for each term. Pre-cut the cards and distribute them during the lesson(s) in which the term is introduced.

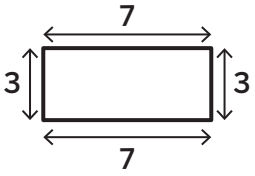
rhombus

An equilateral shape with 4 sides and 4 corners.

Vocabulary Cards, Unit 7 · Lesson 3

perimeter

The total length of the boundary of a two-dimensional shape.



Vocabulary Cards, Unit 7 · Lesson 6

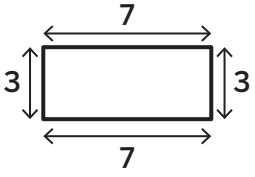
rhombus

An equilateral shape with 4 sides and 4 corners.

Vocabulary Cards, Unit 7 · Lesson 3

perimeter

The total length of the boundary of a two-dimensional shape.



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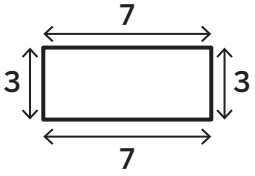

Vocabulary Cards, Unit 7 · Lesson 6

rhombus

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Vocabulary Cards, Unit 7 · Lesson 3

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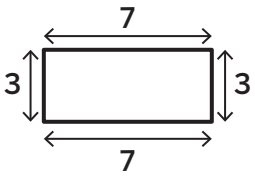


Vocabulary Cards, Unit 7 · Lesson 6

Name _____ Date _____

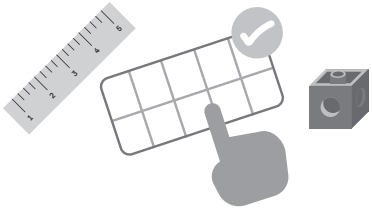
Ways to be a Mathematician
Formas de ser matemático/ matemática

1 I can take my time to think about a challenging problem before trying to solve it.

Puedo tomarme mi tiempo para pensar en un problema difícil antes de intentar resolverlo.

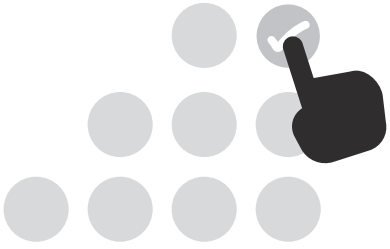
2 I can choose the tool that is just right for the problem I am solving.

Puedo elegir la herramienta adecuada para el problema que estoy resolviendo.



3 I can see how ideas are connected and use patterns to help solve problems.

Puedo ver cómo se conectan las ideas y utilizar patrones para resolver problemas.



Name _____ Date _____

Questions and Sentence Frames

Why did you choose this statement?

Did you choose any others? Why or why not?

How did you use this thinking during the Activity?

Can you tell me more?

I chose this statement because . . .

I also chose _____ because . . .

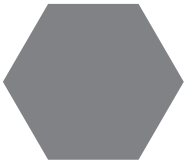
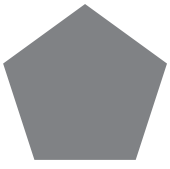
In the Activity, I . . .

Name _____ Date _____

Guess My Shape, Piho!

Use with Problems 5–9.

Word bank					
English	attribute	corner	length	quadrilateral	side
Español	atributo	esquina	longitud	cuadrilátero	lado

 hexagon	 pentagon	 rectangle	 square	 triangle

The attributes of a square are . . .

Both a square and a rectangle have . . .
A square has _____ but a rectangle does not.

You can describe shapes by . . .

To find clues that fit one shape but not the others, I . . .

Name _____ Date _____

Rhombuses

Use with Problems 6–7.

 rectangle	 rhombus	 square

Word bank	
English	**Español**
attribute	atributo
corner	esquina
length	longitud
quadrilateral	cuadrilátero
side	lado

The attributes of a **rhombus** are . . .

The attributes of a **square** are . . .

The attributes of a **rectangle** are . . .

A rhombus, a square and a rectangle all have . . .

Only a rhombus can have . . .

Name _____ Date _____

Categorizing Quadrilaterals

Use with Problem 5.

Definition	Characteristics
a polygon or shape with 4 sides and 4 vertices	• shape • 4 sides • 4 corners

quadrilateral
cuadrilátero

Example	Non-Example

The attributes of a quadrilateral are . . .

The attributes of a square are . . .

The attributes of a rectangle are . . .

The attributes of a rhombus are . . .

All 4 categories have _____.
Both a square and a rhombus . . .
Both a square and a rectangle . . .

Word bank	
English	**Español**
attribute	atributo
corner	esquina
length	longitud
rectangle	rectángulo
rhombus	rombo
side	lado
square	cuadrado

Name _____ Date _____

Same But Different

Use with Problems 1 and 2.

Definition	Characteristics
a shape with 3 sides and 3 corners	• 3 sides • 3 corners
triangle **triángulo**	
Example	**Non-Example**

All triangles must have _____.

Some triangles can have . . .

Word bank	
English	**Español**
attribute	atributo
different	diferente
same	mismo

Name _____ Date _____

Measuring Perimeter

Use with Problems 4–8.

perimeter
perímetro

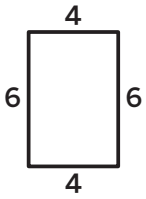
Definition

the distance around a shape

Characteristics

- units
- sum of sides

Example



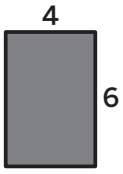
$4 + 6 + 4 + 6 = 20$

perimeter = 20

Non-Example

$4 \times 6 = 24$

area = 24



Word bank					
English	around	length	shape	two-dimensional	unit
Español	alrededor	longitud	figura	bidimensional	unidad

Perimeter measures . . .

To find the perimeter of a shape, I . . .

I can find the length of each side by . . .

Name _____ Date _____

All Kinds of Shapes

Use with Problem 4.

perimeter
perímetro

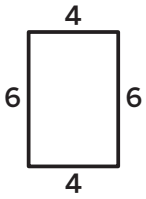
Definition

the distance around a shape

Characteristics

- units
- sum of sides

Example



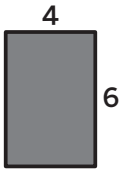
$4 + 6 + 4 + 6 = 20$

perimeter = 20

Non-Example

$4 \times 6 = 24$

area = 24



Word bank					
English	around	length	shape	similar	two-dimensional
Español	alrededor	longitud	figura	semejante	bidimensional

Perimeter measures _____.

To find the perimeter of a shape, I can . . .

The shapes are **similar** because . . .

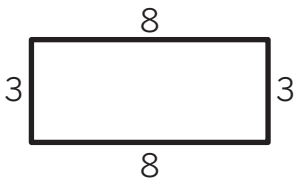
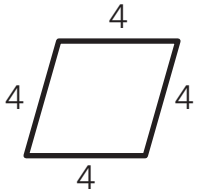
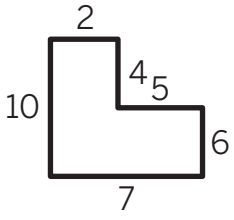
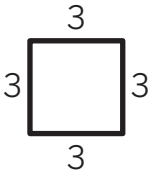
The shapes are **different** because . . .

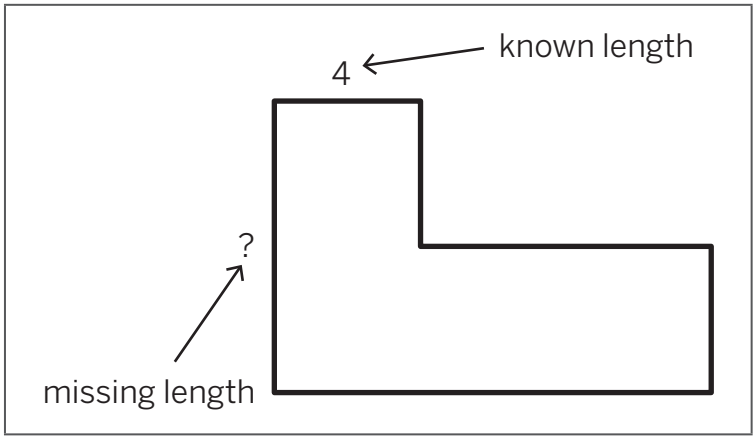
Two different shapes _____ have the same perimeter because . . .
(can/cannot)

Name _____ Date _____

Something Is Missing

Use with Problems 5–7.

 rectangle	 rhombus	 polygon	 square



Word bank	
English	**Español**
know	conocer
length	longitud
missing	faltante
perimeter	perímetro
shape	figura

I will find the missing lengths by . . .

I know that rectangles have . . .

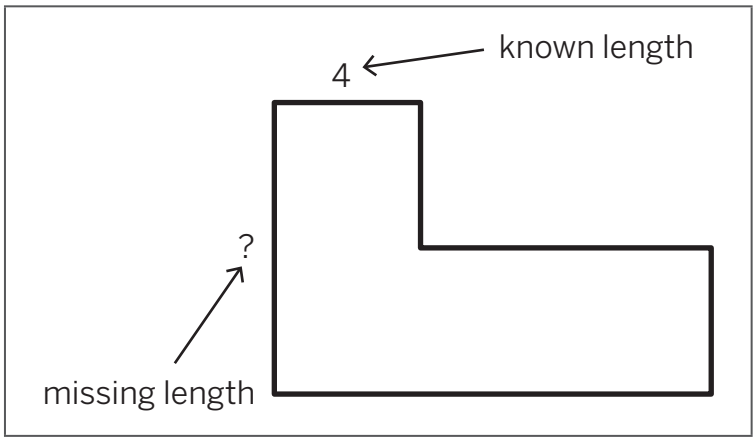
To find the perimeter of a shape, I need to know . . .

I can use what I know about the shape to help me find the perimeter by . . .

Name _____ Date _____

Missing Measurements

Use with Problems 1–4.



Word bank	
English	**Español**
add	sumar
divide	dividir
missing	faltante
multiply	multiplicar
perimeter	perímetro
subtract	restar

Perimeter measures . . .

To find the perimeter of a shape, I can . . .

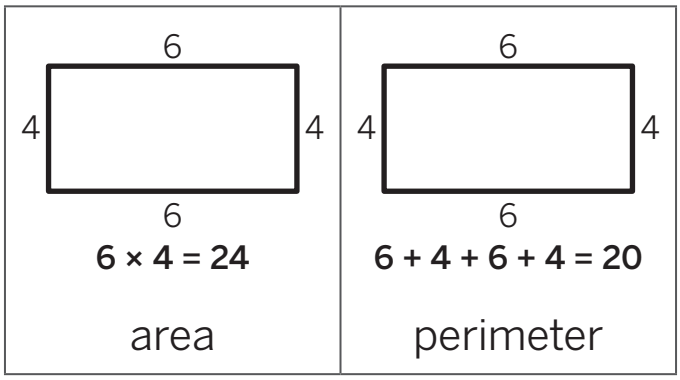
I can use what I know about _____ to find the missing length by . . .
(shape)

If I know the perimeter of the _____, I can find the missing length by . . .
(shape)

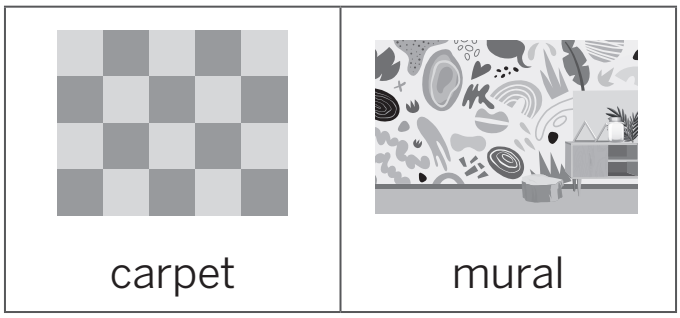
Name _____ Date _____

Info Gap: A Carpet and a Mural

Use with Problems 3–4.



Word bank	
English	**Español**
add	sumar
divide	dividir
multiply	multiplicar
subtract	sustraer



I can find the _____ of a rectangle by . . .
(area/perimeter)

I need to know _____ to find the _____ of a rectangle.
(area/perimeter)

The information I _____ is . . .
(know/need to know)

The perimeter of the carpet is _____.

To find the perimeter of the carpet, I . . .

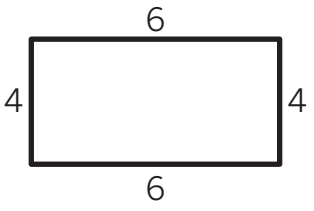
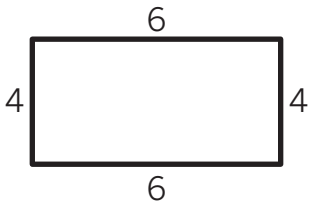
The area of the mural is _____.

To find the area of the mural, I . . .

Name _____ Date _____

A Perimeter of 16

Use with Problems 5–8.

 **6 × 4 = 24** area	 **6 + 4 + 6 + 4 = 20** perimeter

Word bank	
English	**Español**
conjecture	conjetura
information	información
know	conocer
length	longitud
missing	faltante

The side lengths of Rectangle _____ are _____ and _____.
(1/2/3)

The **perimeter** of Rectangle _____ is _____.
(1/2/3)

The **area** of Rectangle _____ is _____.
(1/2/3)

Our class conjecture is . . .

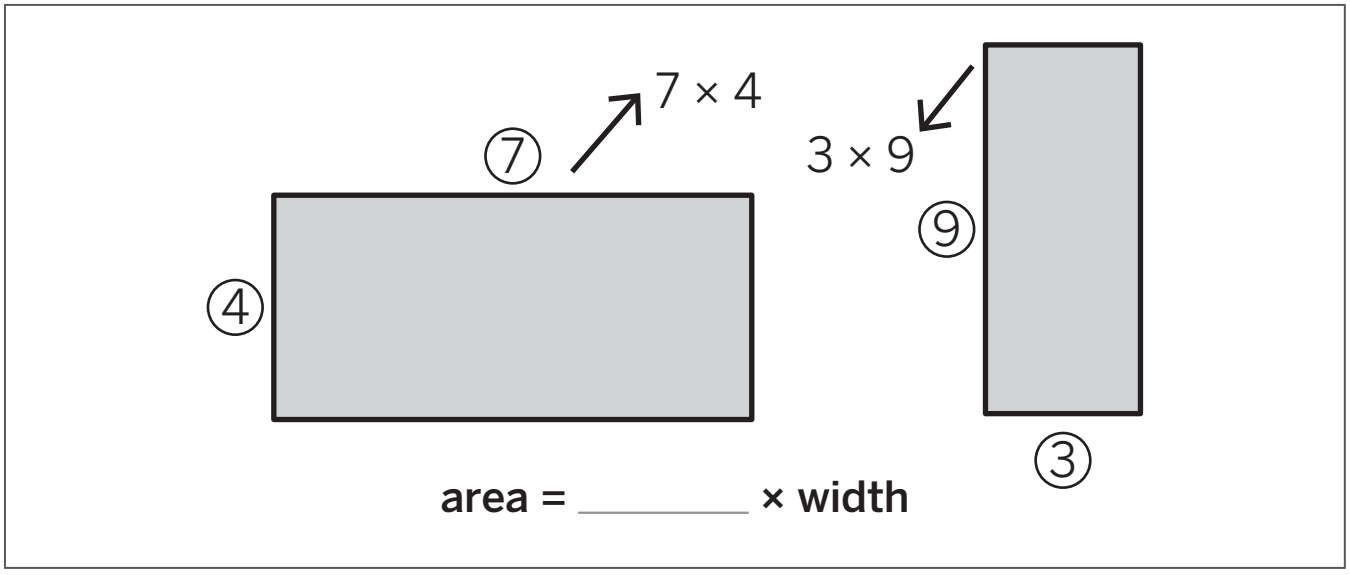
This conjecture is _____ because . . .
(true/not true)

Name _____ Date _____

All the Ways

Use with Activity 2.

Calculating the Area:



To calculate the area of a rectangle, you . . .

The multiplication expressions that have a product of _____ are . . .
(20/24)

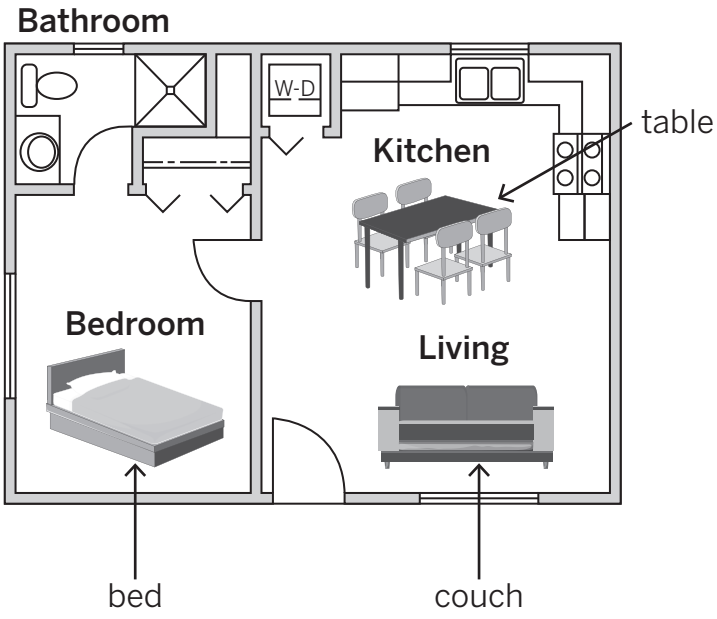
I noticed these patterns among the expressions . . .

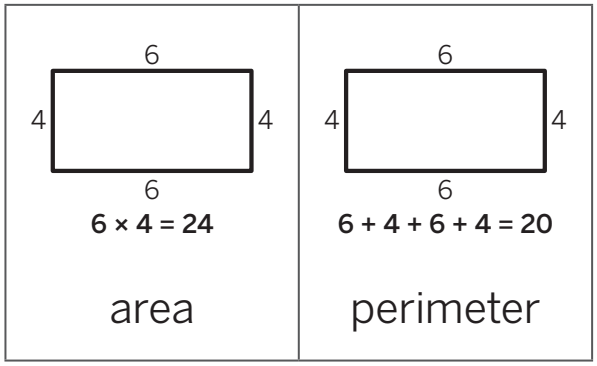
Word bank				
English	area	expression	rectangle	represent
Español	área	expresión	rectángulo	representar

Name _____ Date _____

Mini Mansion

Use with Problems 1–4.





To calculate the _____, you . . .
(area/perimeter)

A quadrilateral is . . .

To create the floor plan of my mini mansion, I . . .

I chose to place this _____ here because . . .
(room/item)