Amplify Desmos Math CALIFORNIA

Grade 5

Math Language Development Resources

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Contents (continued)

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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

base

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.

Associative Property of Multiplication

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

Vocabulary Cards, Unit 1 · Lesson 5

base (of a prism)

One of the opposite identical faces in a prism.

Vocabulary Cards, Unit 1 · Lesson 5

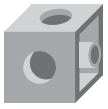
cubic units

Any three-dimensional measure of volume that represents a number of cubes that have a defined side length.

Vocabulary Cards, Unit 1 · Lesson 7

unit cube

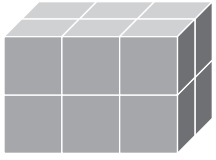
A cube, whose sides are 1 unit long, used to measure volume.



Vocabulary Cards, Unit 1 · Lesson 7

volume

The amount of space a three-dimensional figure takes up.



12 unit cubes

Vocabulary Cards, Unit 1 · Lesson 2

Name _____ Date _____

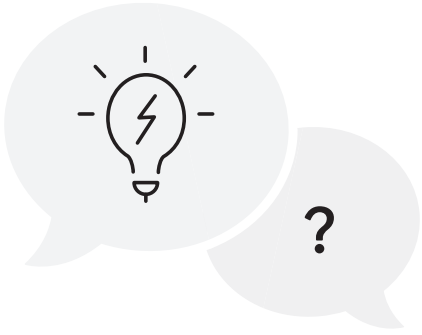
Ways to be a Mathematician
Formas de ser matemático/ matemática

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.

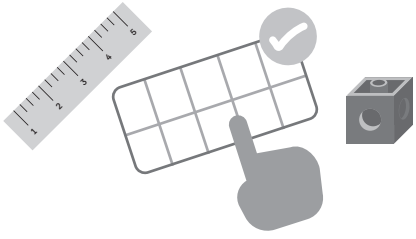
2 I can explain why my thinking makes sense and ask questions to understand the thinking of others.

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 . . .

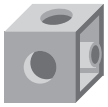
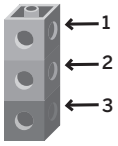
I also chose _____ because . . .

In the Activity, I . . .

Name _____ Date _____

Comparing Volume

Use with Problem 4.

_____ can be measured by counting the number of _____ needed to build the figure.		
 unit cube A cube, whose sides are 1 unit long, used to measure volume.	 3 unit cubes This figure is built using ____ unit cubes	 volume The volume of this figure is ____ unit cubes

Word bank						
English	compare	figure	greater	larger	lesser	smaller
Español	comparar	figura	mayor que	más grande	menor que	mas pequeño

I built my figure using _____ unit cubes.

The volume of my partner's figure is _____ unit cubes.

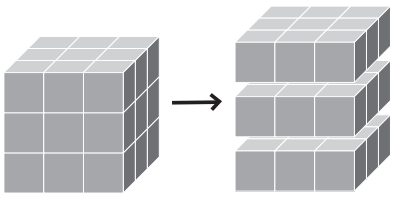
I know **my** figure has a greater volume because . . .

I know **your** figure has a greater volume because . . .

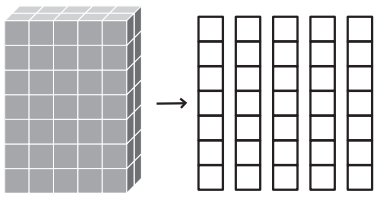
Name _____ Date _____

Building Prisms

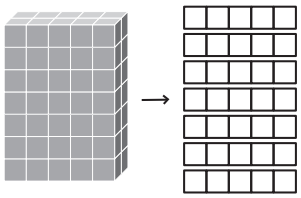
Use with Problems 2–3.



layer



column



row

Word bank				
English	identical	rectangular prism	unit cube	volume
Español	idéntico	prisma rectangular	cubo unitario	volumen

The rectangular prism has _____ identical layers.

The rectangular prism has _____ rows.

The rectangular prism has _____ columns.

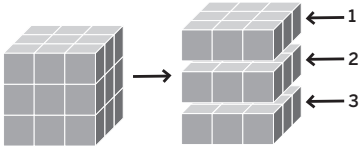
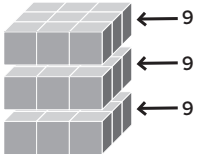
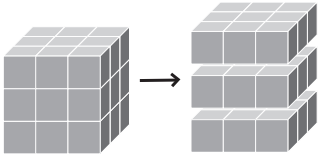
The volume of the rectangular prism is _____ unit cubes.

Both of our rectangular prisms . . .

Name _____ Date _____

Where Are the Layers?

Use with Problems 3–4.

_____ can be measured by multiplying the equal groups of _____.		
layer	unit cubes	volume
		 3 layers × 9 unit cubes
This figure has ____ equal layers.	Each layer has ____ unit cubes.	This figure has a volume of ____unit cubes.

Word bank					
English	composed	face	multiply	rectangular prism	represent
Español	compuesto	cara	multiplicar	prisma rectangular	representar

The description explains the volume because . . .

I can use the description to calculate the volume by . . .

Problems 3 and 4 are **similar** because . . .

Problems 3 and 4 are **different** because . . .

Name _____ Date _____

Writing Expressions

Use with Activity 2.

Definition

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

Characteristics

- Involves 3 or more factors
- Grouping symbols can be moved without changing the product.

Associative Property of Multiplication
Propiedad asociativa de la multiplicación

Example

$2 \times 3 \times 5 = 2 \times (3 \times 5)$
$6 \times 5 = 2 \times 15$
$30 = 30$

Non-Example

Applies when using **only** multiplication.
$2 \times 3 \times 5 \neq (2 + 3) \times 5$
$15 \div 3 \times 2 \neq 15 \div 2 \times 3$

Word bank								
English	area	base	face	height	layer	length	volume	width
Español	área	base	cara	altura	capa	longitud	volumen	ancho

2, 3, and 6 represent the _____, _____, and _____.

There are _____ unit cubes in 1 layer.

The base can also be represented with the expression _____.

6×8 and $(3 \times 2) \times 8$ are related because . . .

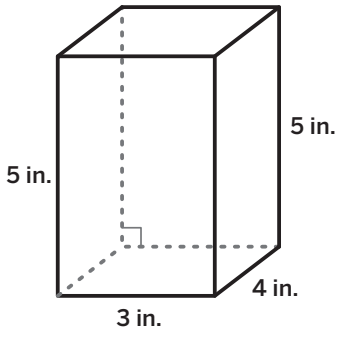
Two expressions with different numbers still have the same volume because . . .

Name _____ Date _____

Generalizing How to Determine the Volume of a Prism

Use with Problems 3–4.

Formula used to solve for the _____ of a rectangular prism



$V = \_\_ \times \_\_ \times \_\_$

$V = \_\_ \times \_\_$

Word bank	
English	**Español**
area	área
base	base
height	altura
layer	capa
length	longitud
rectangular prism	prisma rectangular
volume	volumen
width	ancho

I used the formula _____ because . . .

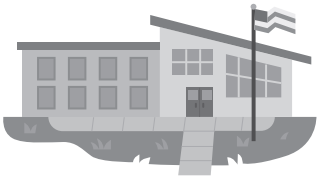
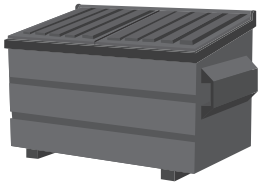
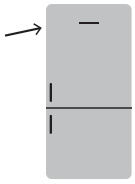
The base area and number of layers can help me find the volume because . . .

_____ can be used to determine the volume of a rectangular prism.

Name _____ Date _____

What Are the Units?

Use with Problems 2–3.

Objects		
 classroom	 dumpster	 freezer
 juice box	 lunch box	 moving truck

To measure the volume of the _____, I would . . .
(object)

Changing _____ to _____ would . . .

If you measure using a **smaller** unit then . . .

If you measure using a **larger** unit then . . .

If the units of measure change, the volume . . .

The volume will _____ if different units of measurement are used.

Name _____ Date _____

What Are the Units? (continued)

cubic units
unidades cúbicas

Definition

Any three-dimensional measure of volume that represents a number of cubes that have a defined side length.

Characteristics

Used to measure volume of solid objects like cubes, spheres, cylinders, and rectangular prisms

Example

cubic inches

cubic feet

cubic centimeters

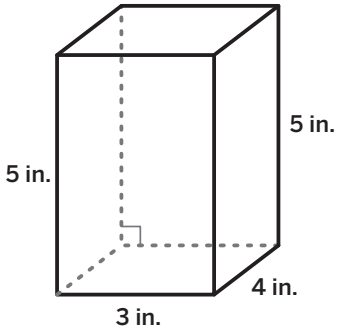
Non-Example

Name _____ Date _____

Filling Shipping Containers

Use with Problems 1–3.

Volume



V = ___ × ___ × ___

V = ___ × ___

Word bank	
English	**Español**
area	área
base	base
compare	comparar
container	recipiente
half	medio
layer	capa
long	largo
tall	alto
volume	volumen
wide	ancho

To solve for the volume, I used the formula _____.

The container that holds more garbage is _____ because . . .

It _____ be able to hold the 10 crates in the shipping container because . . .
(will/will not)

The container _____ more than half full because . . .
(is/ is not)

Name _____ Date _____

Putting it Together

Use with Problem 5.

Word bank					
English	cubic unit	formula	height	length	width
Español	unidad cúbica	fórmula	altura	longitud	ancho

Definition

The amount of space a three-dimensional figure takes up.

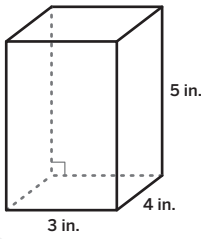
Characteristics

$V = \ell \times w \times h$

$V = B \times h$

cubic units

volume
volumen



area = length × width

square units

Example

Non-Example

The figure has a volume of _____.

To find the volume, I . . .

Our figures are similar because . . .

I know the volume is _____ because . . .

Name _____ Date _____

Seeing Prisms

Use with Activity 1.

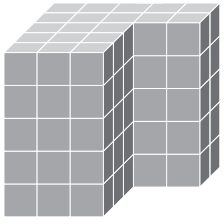
Definition

Break apart.

Characteristics

Drawing lines or creating sections

decompose
descomponer



compose or put together

Example

Non-Example

Word bank					
English	cubic unit	figure	rectangular prism	strategy	volume
Español	unidad cúbica	figura	prisma rectangular	estrategia	volumen

I decomposed the figure and created _____ rectangular prisms.

The _____ rectangular prism has a volume of _____.

To solve for the volume of the figure I . . .

Mia's and Clare's strategies are _____ because . . .
(similar/different)

Name _____ Date _____

Recycled Products

Use with Problems 1 and 2.

Definition

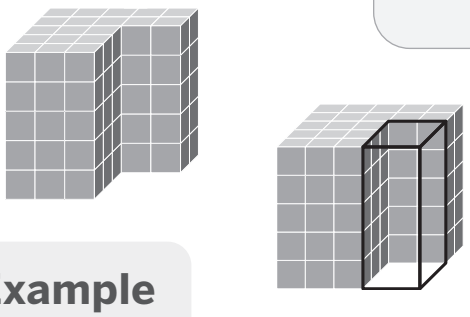
A plan or method used to solve a problem.

Characteristics

If solving for volume, compose or decompose figure into smaller rectangular prisms

strategy
estrategia

Example



Non-Example

guessing or not using formulas

Strategy _____ solved for the volume by . . .

This strategy is similar to . . .

This strategy is different than when I . . .

Strategies _____ and _____ are similar/different because . . .

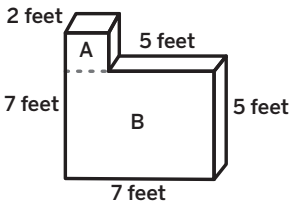
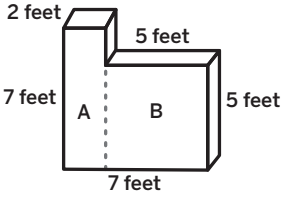
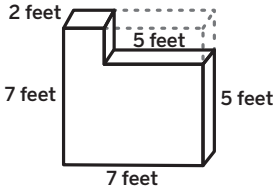
Strategy _____ is different from _____ because . . .

Word bank	
English	**Español**
cubic unit	unidad cúbica
equation	ecuación
expression	expresión
figure	figura
rectangular prism	prisma rectangular
volume	volumen

Name _____ Date _____

The Climbing Wall

Use with Problem 3.

Strategy A	Strategy B	Strategy C
		

My group used Strategy _____.

Our work _____ is because . . .
(similar/different)

The equation or expression used to solve for the volume is _____.

The expression represents the strategy because . . .

Our equation is _____ because . . .
(similar/different)

Word bank	
English	**Español**
add	sumar
compose	componer
decompose	descomponer
dimension	dimensión
edge	arista
figure	figura
length	longitud
prism	prisma
subtract	restar
unlabeled	sin título
volume	volumen

Name _____ Date _____

My Challenge

Use with Activity 1.

Definition

A mathematical sentence that represents finding the volume of a figure.

Characteristics

- can show a formula
- can show decomposed parts of composite figures

expression to represent volume
expresión para representar volumen

Example

- $\ell \times w \times h$
- $B \times h$
- $(\ell \times w \times h) + (\ell \times w \times h)$
- $(\ell \times w \times h) - (\ell \times w \times h)$

Non-Example

$A = \ell \times w$
$\mathcal{L} + w + h$

Word bank						
English	compose	decompose	expression	factor	figure	prism
Español	componer	descomponer	expresión	factor	figura	prisma

The expression represents _____ because . . .

The expression represents decomposing the figure into 2 prisms by . . .

The expression represents composing the figure into _____ by . . .

The factors in this expression represent . . .

The factor _____ represents _____ because . . .

Name _____ Date _____

Determining Volume With Clues

Use with Problems 1–2.

volume
volumen

Definition

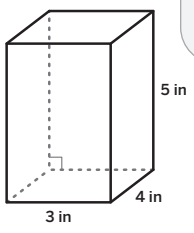
The amount of space a three-dimensional figure takes up

Characteristics

$V = \ell \times w \times h$
$V = B \times h$
cubic units

area = length × width
square units

Example



Non-Example

Word bank						
English	clue	dimension	formula	missing	same	volume
Español	clave	dimensión	fórmula	desaparecido	mismo	volumen

The figure has a volume of _____ because . . .

This side has a dimension of _____ because . . .

I can use clue _____ to help me figure out the dimensions of _____ because . . .

I know _____ has a dimension of _____ because . . .

I can find the volume of Prism D by. . .

I know Prism D has a volume of _____ because I used the formula _____.

The dimension _____ on Prism D is the same as _____.

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.

equivalent expressions

Two expressions that have the same value.

$$5 \div 3 = 5 \times \frac{1}{3}$$

Vocabulary Cards, Unit 2 · Lesson 7

part-of-a-whole situation

A problem involving a comparison of a part to a whole.

Vocabulary Cards, Unit 2 · Lesson 6

equivalent expressions

Two expressions that have the same value.

$$5 \div 3 = 5 \times \frac{1}{3}$$

Vocabulary Cards, Unit 2 · Lesson 7

part-of-a-whole situation

A problem involving a comparison of a part to a whole.

Vocabulary Cards, Unit 2 · Lesson 6

equivalent expressions

Two expressions that have the same value.

$$5 \div 3 = 5 \times \frac{1}{3}$$

Vocabulary Cards, Unit 2 · Lesson 7

part-of-a-whole situation

A problem involving a comparison of a part to a whole.

Vocabulary Cards, Unit 2 · Lesson 6

equivalent expressions

Two expressions that have the same value.

$$5 \div 3 = 5 \times \frac{1}{3}$$

Vocabulary Cards, Unit 2 · Lesson 7

part-of-a-whole situation

A problem involving a comparison of a part to a whole.

Vocabulary Cards, Unit 2 · Lesson 6

Name _____ Date _____

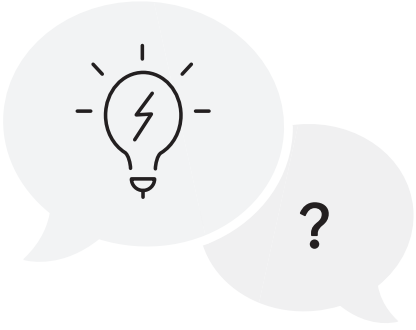
Ways to be a Mathematician
Formas de ser matemático/ matemática

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.

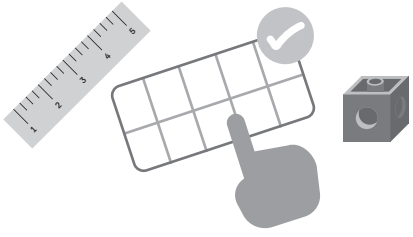
2 I can explain why my thinking makes sense and ask questions to understand the thinking of others.

Puedo explicar por qué mi forma de pensar tiene sentido y hacer preguntas para comprender la forma de pensar 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 _____

Card Sort: Writing Division Expressions

Use with Problem 5.

Word bank						
English	dividend	divisor	people	quotient	split	whole
Español	dividendo	divisor	personas	cociente	dividir	entero

$\frac{\text{numerator}}{\text{denominator}}$ $\frac{12}{4}$	dividend ÷ divisor = quotient $12 \div 4 = 3$

The diagram shows . . .

The number of parts in the diagram represents . . .

The _____ represents . . .
(dividend/divisor/quotient)

The sandwiches are represented by . . .

The number of people are represented by . . .

Name _____ Date _____

Taking a Break

Use with Problem 2.

Parts of a division expression	Parts of a fraction
$6 \div 3$ dividend divisor	$\frac{6}{3}$ numerator / denominator

The dividend represents _____.

The divisor represents _____.

The numerator represents _____.

The denominator represents _____.

The pattern I noticed was . . .

_____ and _____ are related because . . .

Word bank	
English	**Español**
backyard	patio trasero
expression	expresión
group	grupo
guest	invitado
kitchen	cocina
quotient	cociente
share	compartir
split	dividir
whole	entero

Name _____ Date _____

Writing Story Problems

Use with Problems 1 and 2.

Division		
$2 \div 5 = \frac{2}{5}$		
_____ **2** the number being divided; represents the total	_____ **5** the number of equal-sized groups; the size of each group	_____ $\frac{2}{5}$ the answer to a division problem; represents the number of equal-sized groups or the size of each group
Fraction		
_____ **2** the top part of a fraction; how many equal parts are being described	$\frac{2}{5}$	_____ **5** the bottom part of a fraction; how many equal parts the whole was partitioned into

_____ shared _____. How much _____ does each _____ have?
(divisor) *(dividend)*

_____ were shared with _____. How many _____ does each _____ have?
(dividend) *(divisor)*

Name _____ Date _____

Writing Story Problems (continued)

Use with Problem 3.

Word bank						
English	different	equal-sharing	question	similar	split	story problem
Español	diferente	reparto equitativo	pregunta	similar	dividir	problema de la historia

Our story problems are similar because . . .

The dividend and numerator are the same because they represent _____.

The divisor and denominator are the same because they represent _____.

Both division story problems are solving for the _____.

Our story problems are different because . . .

The dividend in my story is _____ and yours is _____.

The divisor in my story is _____ and yours is _____.

In my story I am solving for _____ and you are solving for _____.

Name _____ Date _____

Generalizing the Relationship

Use with Problems 1–8.

$a \div b = \frac{a}{b}$	
$a \div b$ dividend divisor division expression	$\frac{a}{b}$ $\frac{\text{numerator}}{\text{denominator}}$ fraction

A dividend and a _____ are related because . . .
(denominator/numerator)

A divisor and a _____ are related because . . .
(denominator/numerator)

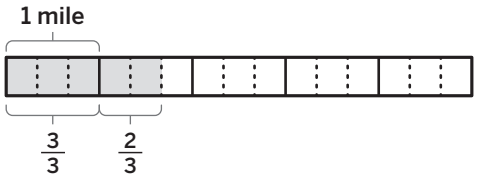
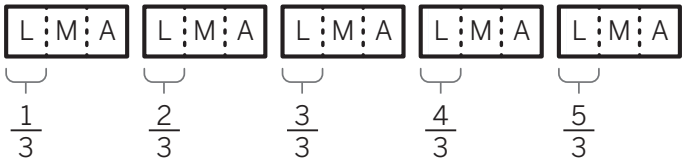
Division and fractions are related because . . .

Word bank				
English	equal groups	share	split	whole
Español	grupos iguales	compartir	dividir	entero

Name _____ Date _____

How Far Did He Run?

Use with Problems 3–5.

Diagrams	Expressions
	$5 \div 3$ distance people
	$\frac{1}{3} \times 5$ unit fraction whole

Word bank				
English	distance	people	unit fraction	whole
Español	distancia	personas	fracción unitaria	todo

I represented the miles by . . .

I represented $\frac{1}{4}$ by . . .

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

I wrote the expression _____.

You wrote the expression _____.

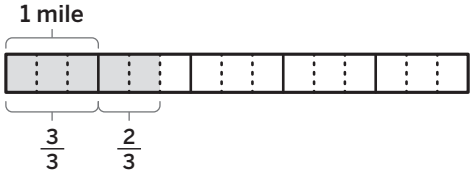
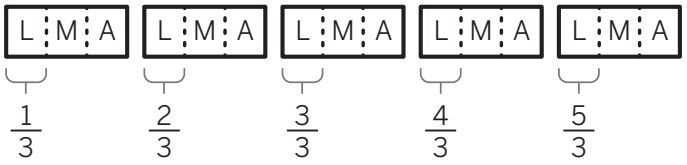
Another expression we could write is _____.

My work is _____ because . . .
(similar/different)

Name _____ Date _____

Match It

Use with Activity 1.

Diagrams	Expressions
	$5 \div 3$
	$\frac{1}{3} \times 5$ unit fraction whole

I see _____ groups/parts shaded.

I see _____ in the expression.

This diagram matches the expression _____ because . . .

This matches this diagram _____ because . . .

The division/multiplication in the expression matches . . .

Word bank	
English	**Español**
equivalent	equivalente
fraction	fracción
group	grupo
part	parte
split	dividir
unit fraction	fracción unitaria
whole	entero

Both the multiplication and division expressions match the diagram because . . .

Name _____ Date _____

Representing a Diagram With Expressions

Use with Problems 5–7.

	Expressions
$\frac{\text{numerator}}{\text{denominator}}$ $\frac{8}{3}$	There are _____ shaded parts. Each part represents _____ of the whole. The total is _____.
$4 \times \frac{2}{3}$ whole non-unit fraction	There are _____ groups of _____ shaded parts. The shaded part is _____ of the whole.
$4 \times 2 \times \frac{1}{3}$ factor factor unit fraction	There are _____ groups of _____ shaded parts. Each part is _____ of the whole.

There are _____ groups of _____ shaded parts, and each part is _____ of the whole.

The factor _____ represents _____.

Name _____ Date _____

Representing a Diagram With Expressions (continued)

Use with Problem 8.

Word bank	
English	**Español**
denominator	denominador
factor	factor
non-unit fraction	fracción no unitaria
numerator	numerador
unit fraction	fracción unitaria
whole	entero

Both of our explanations . . .

_____ explanation . . .
(My/Your)

My answer for Problem 6 was related to Problem 7 because . . .

Another equivalent expression that could represent the diagram is . . .

I know because the expressions _____ and _____ are equivalent because . . .

Name _____ Date _____

Determining the Area of Rectangles

Use with Activity 1.

_____ I, because . . .
(First/Then/Next)

The area is _____ square units.

_____ is equivalent to _____.

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

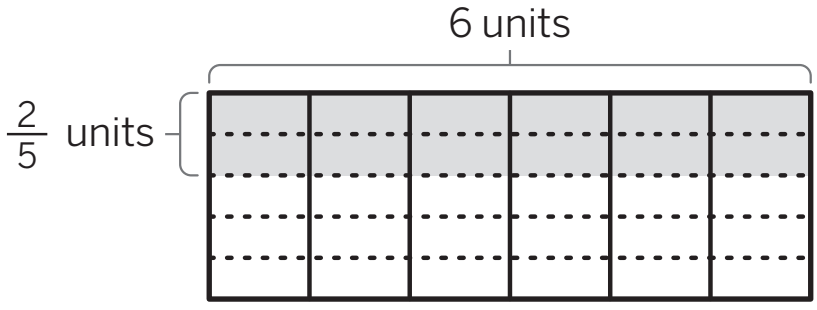
The area is equivalent because . . .

Word bank	
English	**Español**
area	área
compose	componer
expression	expresión
group	grupo
rearrange	reorganizar
shaded	sombreado
square unit	unidad cuadrada
strategy	estrategia
unit fraction	fracción unitaria

Name _____ Date _____

Determining the Area With Non-Unit Fractions

Use with Problems 1–3.

Diagram		
		
Expressions		
$\frac{2}{5} + \frac{2}{5} + \frac{2}{5} + \frac{2}{5} + \frac{2}{5} + \frac{2}{5}$ repeated addition	$12 \times \frac{1}{5}$ or $2 \times 6 \times \frac{1}{5}$ groups of unit fractions	$6 \times \frac{2}{5}$ groups of non-unit fractions
Area		
$\frac{12}{5}$ or $2\frac{2}{5}$ square units		

The _____ are the _____ because . . .
(diagrams/expressions/area) *(same/different)*

The expressions represent . . .

The _____ represents the area.

The expressions are equivalent because they are _____.

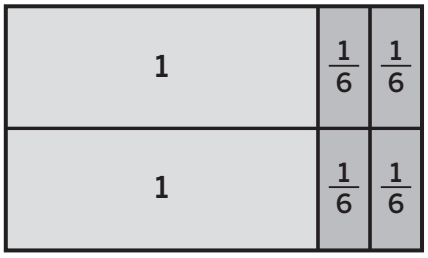
Name _____ Date _____

Tiling and Expressions for Area

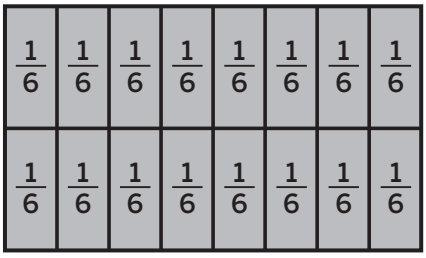
Use with Activity 1.

Use the following example to help describe the area of the rectangle using a multiplication in square units.

fewest number of tiles



most number of tiles



$2 \times 1\frac{2}{6}$ = $16 \times \frac{1}{6}$

Word bank					
English	area	expression	least	most	row
Español	área	expresión	menos	más	fila

I can fit _____ **unit tiles** and _____ **fractional tiles** in each row.

There are _____ rows.

So, the equation is _____ × _____ = _____ square units.

An equivalent expression to find the area is _____.

Name _____ Date _____

What's the Next Step?

Use with Problem 2.

area
área

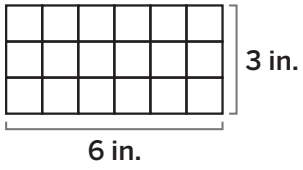
Definition

the amount of space inside a shape

Characteristics

- square units
- shapes
- multiplication

Example



Non-Example

- volume
- perimeter
- length

Word bank					
English	half	expression	shaded	strategy	unshaded
Español	mitad	expresión	sombreado	estrategia	no sombreado

The strategy I used was . . .

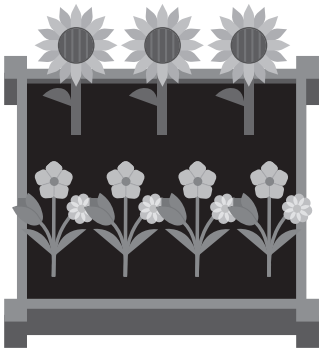
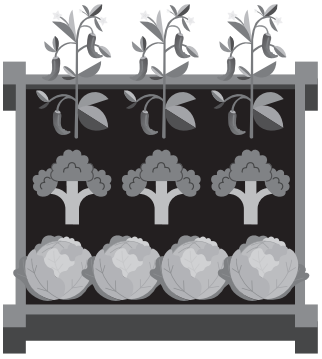
Our strategies are similar and different because . . .

I prefer . . .

Name _____ Date _____

Comparing Expressions

Use with Problems 1–2.

Gardens	
 flower garden	 vegetable garden

Word bank					
English	area	diagram	Distributive Property	expression	mixed number
Español	área	diagrama	Propiedad distributiva	expresión	número mixto

The _____ of the garden is _____ yards.
(length/width)

The _____ expression shows the area because . . .
(first/second/third)

The expressions _____ show the same area because . . .
(do/do not)

Name _____ Date _____

Sage and Aunt Ida's Chili

Use with Problem 2.

Ingredients			
 beans	 bell pepper	 carrot	 diced tomatoes
 green chile	 onion	 tomato paste	 vegetables

The amounts I calculated are reasonable because . . .

I checked my work by . . .

I used _____ to determine whether the amounts are reasonable.
(strategy)

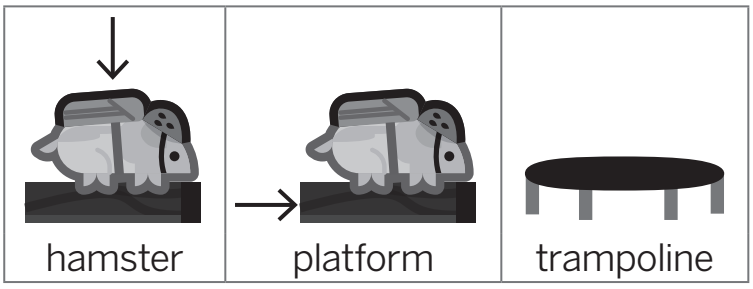
For _____, _____ is close to _____.
(ingredient) *(number)* *(number)*

Word bank							
English	Distributive Property	estimate	fraction	guest	mixed number	pot	reasonable
Español	Propiedad distributiva	estimar	fracción	invitado	número mixto	olla	razonable

Name _____ Date _____

Estimating Products

Use with Activity 1.



Word bank	
English	**Español**
estimate	estimar
fraction	fracción
product	producto
reasonable	razonable
whole number	número entero

The hamster will land between _____ and _____ because . . .

_____ is more than _____ and less than _____.
(fraction or mixed number) *(whole number)* *(whole number)*

_____ × _____ = _____ and _____ × _____ = _____

_____ is close to _____, so . . .

_____ is about _____, so . . .

I can use the whole number(s) _____ to help me.

Name _____ Date _____

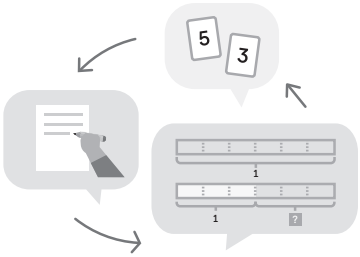
Ways to be a Mathematician
Formas de ser matemático/ matemática

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.

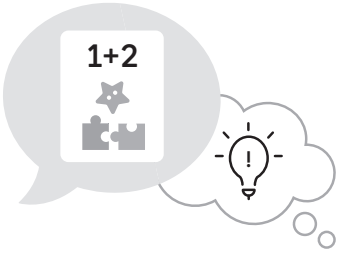
2 I can use numbers, words, and diagrams to make sense of math ideas and situations.

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



3 I can 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 . . .

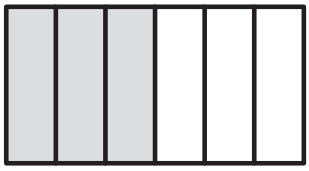
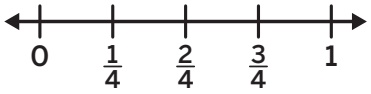
I also chose _____ because . . .

In the Activity, I . . .

Name _____ Date _____

Shay's First Day

Use with Problem 5.

Types of Diagrams		
 area model	 tape diagram	 number line

I showed _____ by making
(fraction)

a _____.
(type of diagram)

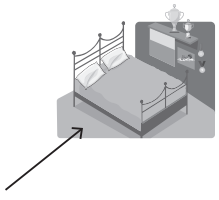
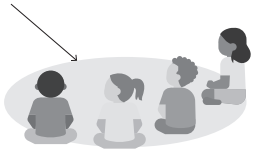
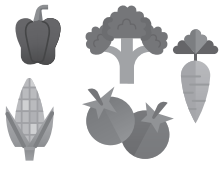
My partner showed _____ by making
(fraction)

a _____.
(type of diagram)

Our diagrams are _____
(similar/different)

because . . .

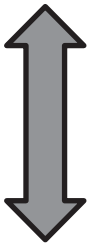
Word bank	
English	**Español**
different	diferente
non-unit fraction	fracción no unitaria
similar	similar
unit fraction	fracción unitatia
whole	entero

 animal food	 dog	 floor	 rug	 vegetables

Name _____ Date _____

Card Sort: Matching Representations

Use with Problems 3–4.

$\frac{1}{2} \times \frac{1}{6} = \frac{1}{12}$		
equation	horizontal	vertical

The equation _____ × _____ = _____ matches Card _____ because . . .

The _____ factor represents the equipartitioning of the _____ side.
(first/second) *(horizontal/vertical)*

The product represents the _____.

Word bank						
English	equipartition	factor	partition	product	shaded	side
Español	equipartición	factor	partición	partición	sombreado	lado

Name _____ Date _____

Preparing the Puppy Food

Use with Problem 4.

Multiplying a unit fraction and a non-unit fraction	
 diagram	non-unit fraction $\frac{5}{6} \times \frac{1}{2} = \frac{5}{12}$ unit fraction product expression

To create my diagram, I _____ because . . .

The product is _____.

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

My diagrams for each ingredient are _____ because . . .
(similar/different)

Ingredients		
 brown rice	 ground beef	 sweet potato

Name _____ Date _____

Outdoor Play Spaces

Use with Activity 1.

Word bank							
English	area	mixed number	non-unit fraction	playpen	shelter	strategy	turf
Español	área	número mixto	fracción no unitaria	corralito	refugio	estrategia	césped

Shay determined the area by . . .

KT determined the area by . . .

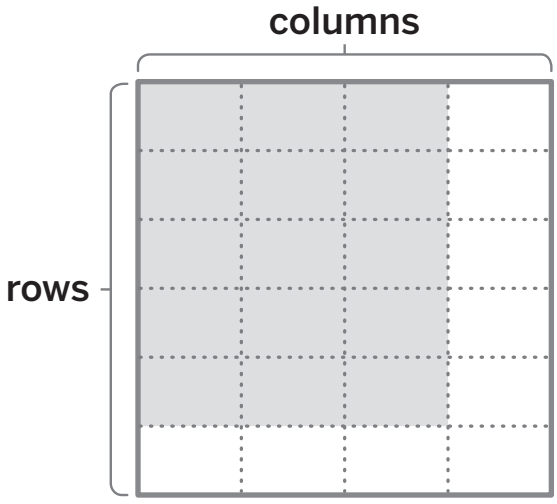
Their strategies are _____ because . . .
(similar/different)

Shay and KT both . . .

Name _____ Date _____

Equations and Expressions

Use with Problem 3.



Word bank				
English	area	equation	expression	product
Español	área	ecuación	expresión	producto

Our assigned diagram was _____.
(A/B/C/D)

Our equation matches the diagram because . . .

_____ represents _____ in the diagram.
(fraction)

The product is _____.
(fraction)

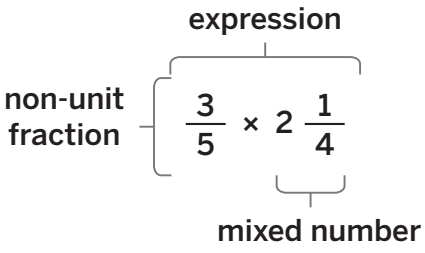
The product represents _____ in the diagram.

The expression in Problem 2 is _____ the one we wrote because . . .
(similar to/different from)

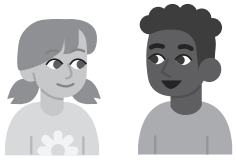
Name _____ Date _____

Estimating and Evaluating

Use with Problem 9.



comparing



pair

sharing

To multiply fractions, you . . .

My strategy _____ with mixed numbers because . . .
(works/does not work)

You can use the Distributive Property as a strategy by . . .

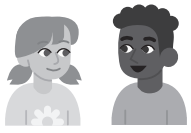
I prefer to _____ as my strategy because . . .

Word bank					
English	algorithm	determine	estimate	non-unit fraction	strategy
Español	algoritmo	determinar	estimar	fracción no unitaria	estrategia

Name _____ Date _____

Multiplying Fractions

Use with Problem 5.

$\frac{12}{9}$ denominator	$\frac{12}{9} = 1\frac{3}{9}$ equivalent	$\frac{12}{9} \times 2\frac{2}{5}$ factor	$\frac{12}{9}$ fraction
$1\frac{3}{9}$ mixed number	$\frac{12}{9}$ numerator	 pair	$1\frac{3}{9} \times \frac{5}{3} = \frac{12}{9} \times \frac{5}{3} = \frac{60}{27}$ product

The missing factor is _____ because . . .

To determine the numerator, I . . .

To determine the denominator, I . . .

Word bank	
English	**Español**
consensus	consenso
multiplying	multiplicando
value	valor

I _____ with the other pair because . . .
(agree/disagree)

The size of the missing factor makes sense because . . .

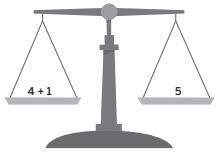
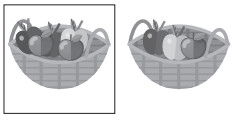
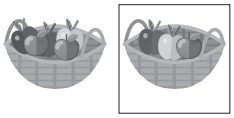
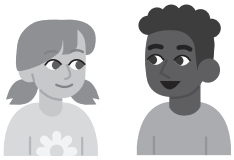
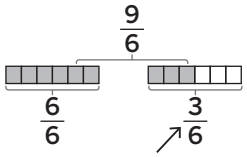
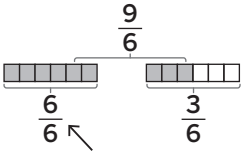
The missing factor must be _____ than 1 because . . .
(greater/less)

Name _____ Date _____

Broken Calculator

Use with Problem 3.

Word bank				
English	determine	display	justify	multiply
Español	determinar	mostrar	justificar	multiplicar

 calculator	 equal	$\frac{3}{5} \times 2\frac{1}{12}$ expression	$\frac{3}{5} \times 2\frac{1}{12}$ factor	 greater
 less	 pair	 part	$\frac{3}{5} \times 2\frac{1}{12} = \frac{75}{60}$ product	 whole

Expression _____ will appear on the calculator because . . .

Expression _____ will not appear on the calculator because . . .

I notice that the factors _____ appear on the calculator because . . .
(will/will not)

I _____with the other pair because . . .
(agree/disagree)

When a factor is _____, the product will always be _____.

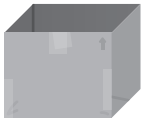
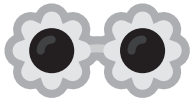
Name _____ Date _____

Boxes of Accessories

Use with Activity 1.

Comparing		
 smaller	 same	 bigger

Word bank	
English	**Español**
discuss	conversar
evaluate	evaluar
explain	explicar
multiply	multiplicar

Objects					
 box	 hat	 sunglasses	 bear	 dog	 tiger
			stuffed animals		

The _____ will be _____ after going through the Re-size-inator
(object) *(bigger/smaller/the same)*
because . . .

$\frac{14}{15}$ is _____ than _____, so $\frac{10}{9}$ will be . . .
(greater/less)

When a factor is _____, the product will be . . .

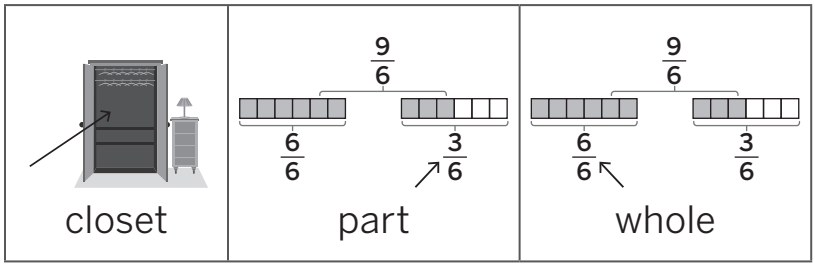
The product will be _____ than $\frac{10}{9}$ because . . .

The fraction size would have to be _____ to make the product _____.
(larger/the same)

Name _____ Date _____

Feeding the Kittens

Use with Problem 3.



Word bank	
English	**Español**
diagram	diagrama
different	diferente
estimate	estimar
multiply	multiplicar
remaining	restante
similar	similar

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

Each of our diagrams represents the situation by . . .

We used similar diagrams when . . .

We used the diagrams to help us _____ unit fractions.
(add/subtract/multiply)

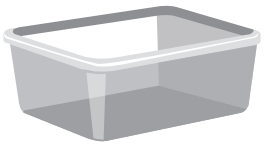
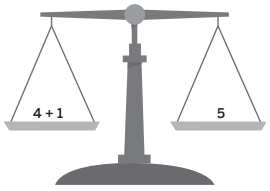
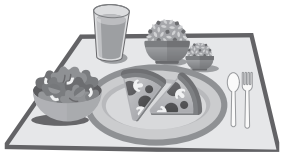
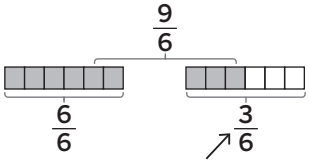
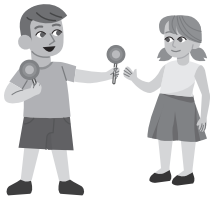
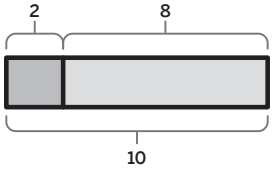
The diagrams were different because . . .

It makes sense they are the same because . . .

Name _____ Date _____

How Many Servings?

Use with Problem 3.

 container	 cup	 equal	 meal
 part	 share	 split	 tape diagram

A whole divided by a unit fraction

equation

$$2 \div \frac{1}{3} = 6$$

dividend divisor quotient

Word bank	
English	**Español**
amount	cantidad
compare	comparar
serving	ración
value	valor

The **dividend**, _____ *(value)*, represents _____ because . . .

The **divisor**, _____ *(value)*, represents _____ because . . .

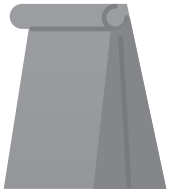
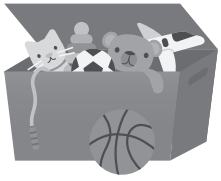
The **quotient**, _____ *(value)*, represents _____ because . . .

I notice that the quotient is _____ compared to the dividend.

Name _____ Date _____

Card Sort: Division Story Problems

Use with Problems 1–2.

 bag	 cat	 dog	 granola
 puppy food	 rope	 toy	 walk

I know the expression _____ represents Card _____ because . . .

The **dividend** on Card _____ is _____ because . . .

The **divisor** on Card _____ is _____ because . . .

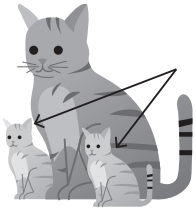
I matched these cards because . . .

Word bank					
English	**Español**	**English**	**Español**	**English**	**Español**
dividend	dividendo	hour	hora	task	tarea
divisor	divisor	mile	milla	track	pista
equal	igual	product	producto	unit fraction	fracción unitaria
expression	expresión	quotient	cociente	volunteer	voluntario

Name _____ Date _____

Relating Multiplication and Division

Use with Problems 3–7.

 bottle	 flyer	 kittens

I used the equation _____ because . . .
(equation)

My **multiplication** equation is _____.
(equation)

My **division** equation is _____.
(equation)

Word bank	
English	**Español**
dividend	dividendo
divisor	divisor
equation	ecuación
factor	factor
medicine	medicamento
milliliter	mililitro
product	producto
quotient	cociente
stack	pila
unit fraction	fracción unitaria

I know that both of my equations represent the **whole stack of flyers** because . . .

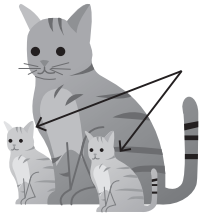
I know that both of my equations represent **how many kittens** can receive a full bottle because . . .

Name _____ Date _____

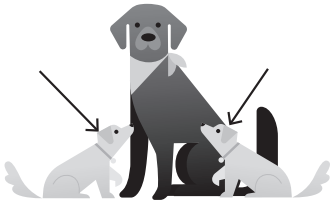
Creating Story Problems

Use with Problems 1–4.


cat


kittens


people


puppies

I chose _____ and _____ for my story problem.
(expression) *(expression)*

I chose _____ for my story problem.
(person or animal)

I chose _____ for my story problem.
(verb)

I wrote the equation _____ because . . .
(equation)

I used _____ because . . .
(multiplication/division)

I _____ that the equation represents the story problem because . . .
(agree/disagree)

Word bank	
English	**Español**
clean	limpio
dividend	dividendo
division	división
divisor	divisor
drink	beber
eat	comer
equation	ecuación
expression	expresión
factor	factor
feed	alimentar
make	hacer
multiplication	multiplicación
play	jugar
product	producto
quotient	cociente
volunteer	voluntario

Name _____ Date _____

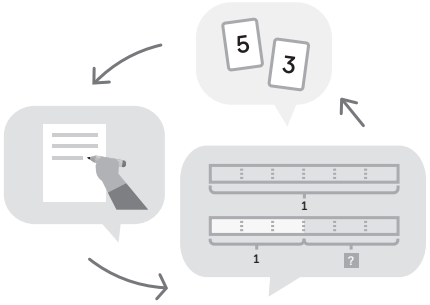
Ways to be a Mathematician
Formas de ser matemático/ matemática

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.

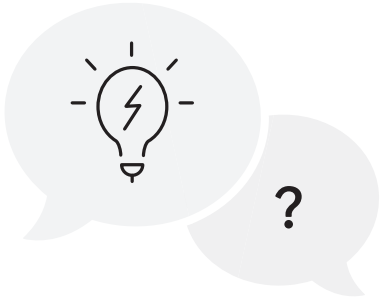
2 I can use numbers, words, and diagrams to make sense of math ideas and situations.

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



3 I can 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.



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 . . .

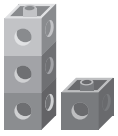
I also chose _____ because . . .

In the Activity, I . . .

Name _____ Date _____

Andrea's Wonderings, Part 1

Use with Problem 3.

 bathroom	 classroom	 connecting cubes	 hamster

Definition

a guess you make about a value based on what you know

Characteristics

- about
- reasonable
- near

estimate
estimar

Example

39 × 19 is **about**

40 × 20 = 800

Non-Example

using multiplication to solve for an **exact answer**

300 + 270 + 90 + 81 = 741

	30	9
10	300	90
9	270	81

Word bank					
English	factor	partial product	reasonable	strategy	round
Español	factor	producto parcial	razonable	estrategia	redondear

My estimate _____ reasonable because . . .
(is/is not)

To solve, I used the strategy. . .

My answer and my estimation were similar because . . .

Estimating before solving helps me know my answer is reasonable because . . .

Name _____ Date _____

Partial Products Everywhere

Use with Problems 1–4.

 bucket	 button	 confetti	cotton balls	 pipe cleaners

I wrote the equation _____ because . . .

My estimate _____ reasonable because . . .
(is/is not)

We solved it using the _____ strategy.

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

We decomposed the factors

by _____, but they . . .

A different strategy using partial products is . . .

Word bank	
English	**Español**
compare	comparar
decompose	descomponer
Distributive Property	Propiedad distributiva
estimate	estimación
factor	factor
partial products	producto parcial
product	producto
reasonable	razonable
strategy	estrategia

Name _____ Date _____

Partial Products Everywhere (continued)

Definition

The result of multiplying the parts of 2 numbers separately and when added together equals the total product.

Characteristics

decomposing large multiplication problem into smaller parts

partial product
producto parcial

Example

23 × 45 =
20 × 40 = 800
20 × 5 = 100
3 × 40 = 120
3 × 5 = 15
800 + 100 + 120 + 15 = **1,035**

Non-Example

standard algorithm

Name _____ Date _____

Trying an Algorithm

Use with Activity 2.

Algorithm

$$\begin{array}{rr} 5{,}342 & \\ \times \quad 4 & \text{factors} \\ \hline 20{,}000 & \\ 1{,}200 & \\ 160 & \text{partial products} \\ + \quad 8 & \\ \hline 21{,}368 & \leftarrow \text{product} \end{array}$$

Word bank

English	Español
add	sumar
decompose	descomponer
multiply	multiplicar
place value	valor posicional
strategy	estrategia

The strategies are **similar** because . . .

The strategies are **different** because . . .

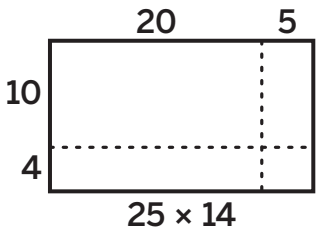
It _____ make sense that all **partial products** are the same because . . .
(does/does not)

It _____ make sense that the **final product** is the same because . . .
(does/does not)

Name _____ Date _____

Comparing Methods

Use with Activities 1 and 2.

Multiplication strategies	
	$\begin{array}{r} 2\ 5 \\ \times\ 1\ 4 \\ \hline \end{array}$
area diagram	algorithm

Word bank	
English	**Español**
estimate	estimación
factor	factor
justify	justificar
partial product	producto parcial
product	producto
reasonable	razonable

My product _____ reasonable because . . .
(is/is not)

The partial products are _____ because . . .
(similar/different)

There are _____ partial products in _____ because . . .

There are _____ partial products in the standard algorithm because . . .
(more/less)

	0, 1, 2, 3, 4, 5, 6, 7, 8, 9		

Hundreds	Tens	Ones
1	2	9

compare | digit | method | place value

Name _____ Date _____

Wondering About 1

Use with Problem 6.

Algorithm

$$\begin{array}{r} 213 \\ \times\ \ 25 \\ \hline \text{composed unit} \rightarrow\ \textcircled{1}\ \ \ \\ 1065 \\ +4260 \\ \hline 5325 \end{array}$$

} partial products

Word bank	
English	**Español**
factor	factor
hundred	centena
one	unidad
ten	decena
unit	unidad

Both expressions include a composed unit because . . .

In Problem 4, _____ is the value of the composed unit because . . .

In Problem 5, _____ is the value of the composed unit because . . .

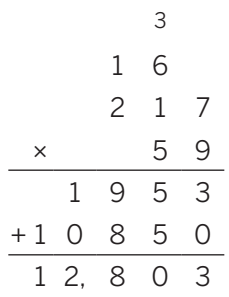
The composed unit is in a different place in both problems because . . .

In the standard algorithm, the composed units determine the final product by . . .

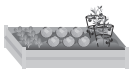
Name _____ Date _____

Lots of Units

Use with Problems 3 and 6.

Estimation	Algorithm
217 × 59 = 200 × 60 = 12,000	


clay


garden


square tiles


walkway

Word bank	
English	**Español**
composed unit	unidad compuesta
digit	dígito
evaluate	evaluar
factor	factor
partial product	producto parcial
product	producto
value	valor

Problem 3:

_____ is the product of _____ and _____.

The value of the composed unit is _____ because . . .

I used the composed units by . . .

Problem 6:

I used the digits _____ because . . .

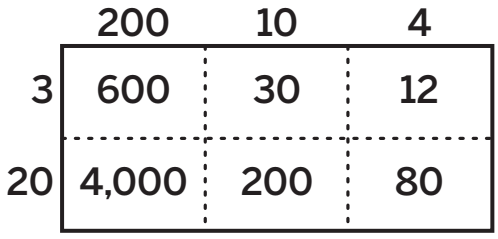
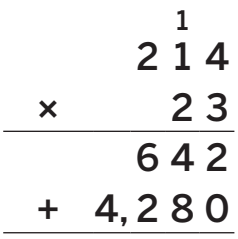
The value of the composted unit is . . .

I recorded the composed unit _____ by . . .

Name _____ Date _____

Andrea's Standard Algorithm

Use with Problem 2.

Gil's area diagram	Andrea's standard algorithm
	

The partial products are related because . . .

Their work _____ result in the same product because . . .
(does/does not)

The unit of 1 above 214 comes from _____ and represents . . .

_____ is the same unit represented in Gil's area model.

Word bank						
English	digit	equal	evaluate	factor	partial product	unit
Español	dígito	igual	evaluar	factor	producto parcial	unidad

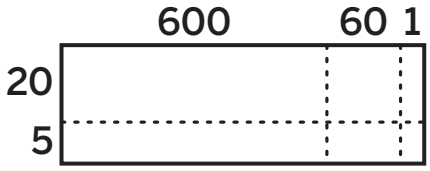
Name _____ Date _____

Which Way?

Use with Problem 7.

Multiplication methods
661 × 25

area diagram



friendly numbers

660 × 25 = 16,500

1 × 25 = 25

16,500 + 25 =

partial products

600 × 25 = 15,000

60 × 25 = 1,500

1 × 25 = 25

15,000 + 1,500 + 25 =

standard algorithm

$$\begin{array}{r} 661 \\ \times\ \ 25 \\ \hline \end{array}$$

Our work is similar because . . .

Our work is different because . . .

I chose _____ to solve problem _____ because . . .

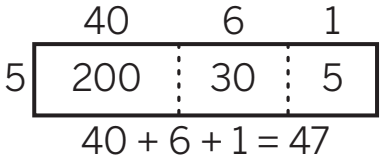
Word bank						
English	composed unit	digit	efficient	factor	partner	strategy
Español	unidad compuesta	dígito	eficiente	factor	compañero	estrategia

Name _____ Date _____

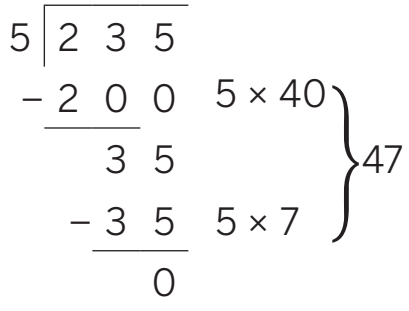
Towers of Guitars and Cans

Use with Problem 3.

235 ÷ 5 = 47		
235 is the _____ the number that represents the total number of objects being divided	**5 is the** _____ the number of equal-sized groups or the size of each group	**47 is the** _____ the result obtained by dividing one quantity by another



area model

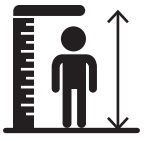


partial quotients

The _____ represents . . .
(divisor/quotient)

In Problem _____, I showed my work by . . .

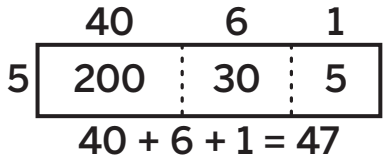
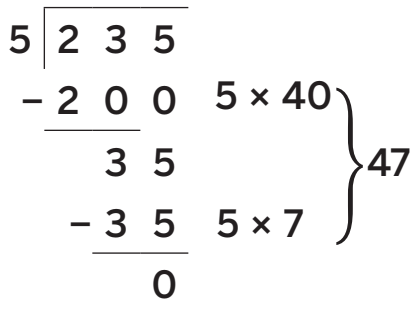
My work is _____ because . . .
(similar/different)

					
can	guitar	height	money	recycling	Willis Tower

Name _____ Date _____

Thinking About Thinking

Use with Problem 6.

Division strategies	
	
_____	_____

I used _____ with the divisor because . . .

My first partial quotient was _____ because . . .

Our partial quotients are _____ because . . .
(similar/different)

Different partial quotients get the same result in the final quotient because . . .

Word bank	
English	**Español**
compare	comparar
dividend	dividendo
divisor	divisor
expression	expresión
product	producto
quotient	cociente
strategy	estrategia

Name _____ Date _____

Comparing Partial Quotients

Use with Problems 3 and 5.

partial quotient
cociente parcial

Definition

parts of the answer to a division problem. When added together, the sum is the total quotient

Characteristics

- repeated subtraction of multiples of the divisor
- helps break down complex division problems into simpler steps

Example

$$
\begin{array}{r|l}
5 & 235 \\
-\,200 & 5 \times 40 \\
\hline
35 & \\
-\,35 & 5 \times 7 \\
\hline
0 &
\end{array}
\quad \Big\} 47
$$

Non-Example

- area model
- standard algorithm

Problem 3:

I think Expression _____ will have a greater quotient because . . .

Problem 5:

I chose _____ as my first partial quotient because. . .

Then, I chose _____ because . . .

We have the same final quotient because . . .

Our work is _____ because . . .
(similar/different)

Word bank	
English	**Español**
dividend	dividendo
divisor	divisor
evaluate	evaluar
expression	expresión
multiply	multiplicar
quotient	cociente
strategy	estrategia
subtract	sustraer

Name _____ Date _____

Coffee Spill

Use with Activity 2.

partial quotient
cociente parcial

Definition

Parts of the answer to a division problem. When added together, the sum is the total quotient.

Characteristics

- repeated subtraction of multiples of the divisor
- helps break down complex division problems into simpler steps

Example

$$
\begin{array}{r|l}
5 & 235 \\
-\,200 & 5 \times 40 \\
\hline
35 & \\
-\,35 & 5 \times 7 \\
\hline
0 &
\end{array}
\quad \Big\} 47
$$

Non-Example

- area model
- standard algorithm

Word bank						
English	efficient	place value	problem	quotient	strategy	subtract
Español	eficiente	valor posicional	problema	cociente	strategia	restar

In the _____ strategy, I notice Mr. Hernandez uses partial quotients by . . .
(first/second)

To be more efficient, he could . . .

He could change his strategy to have fewer partial quotients by . . .

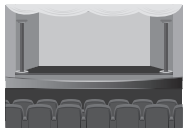
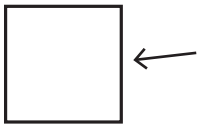
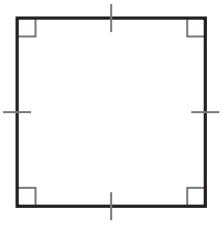
He could use place value to help choose partial quotients by . . .

The same problem can be solved using different partial quotients because . . .

Name _____ Date _____

Missing Side Lengths for Area

Use with Problem 2.

 audience	 auditorium	 concert
 gymnasium	 side	 square

Word bank	
English	**Español**
agree	estar de acuerdo
disagree	estar en desacuerdo
organize	organizar
shape	figura
space	espacio
strategy	estrategia

They should choose the _____ for the concert because . . .
(auditorium/gymnasium)

The _____ is closer to a square because . . .
(auditorium/gymnasium)

My strategy for finding a missing side from an area is . . .

The auditorium has a length of 27 and a width of _____.

The gymnasium has a length of 36 and a width of _____.

I _____ with you because . . .
(agree/disagree)

Name _____ Date _____

Missing Side Lengths for Area (continued)

area
área

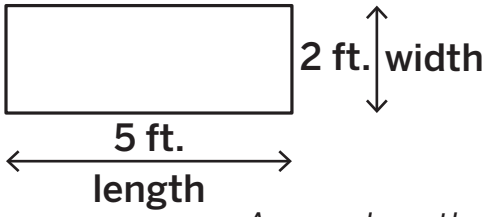
Definition

a measurement of the space inside a two-dimensional shape

Characteristics

- measured in square units
- Area = Length × Width
  (for rectangles and squares)

Example



Area = length × width

2ft × 5ft = 10 square feet

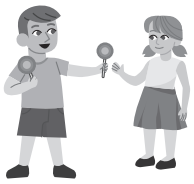
Non-Example

- perimeter
- volume

Name _____ Date _____

Celery Stalk Remainders

Use with Activity 1.

			$\frac{12}{5} = 2\frac{2}{5}$	$4\overline{)22}$ quotient 5, -20, remainder 2	
celery stalk	equal	family	mixed number	remainder	share

In *(Problem/Screen)* _____, I notice . . .

There are _____ celery stalks and they are being shared equally by . . .

It makes sense to divide the remainder and have a mixed number when . . .

Word bank	
English	**Español**
divide	dividir
dividend	dividendo
divisor	divisor
quotient	cociente

Each family will get _____ celery stalks because . . .

A quotient remainder makes sense when . . .

In a mixed number, the remainder will be represented as a _____.

Name _____ Date _____

Hide and Seek

Use with Problem 2.

Division methods
235 ÷ 5

estimation

235 ÷ 5 is about
250 ÷ 5 = 50

area diagram

	40	6	1
5	200	30	5

40 + 6 + 1 = 47

partial products

5 ⟌ 2 3 5		
− 2 0 0	5 × 40	} 47
3 5		
− 3 5	5 × 7	
0		

standard algorithm

```
    4 7
5 ⟌ 2 3 5
  − 2 0 0
      3 5
    − 3 5
        0
```

I found the mistake by . . .

First, I looked at _____ to check . . .

Then, I realized the mistake was . . .

The student made a mistake in the _____ when they . . .

My strategy for finding the mistake was to . . .

I could have found the mistake a different way by . . .

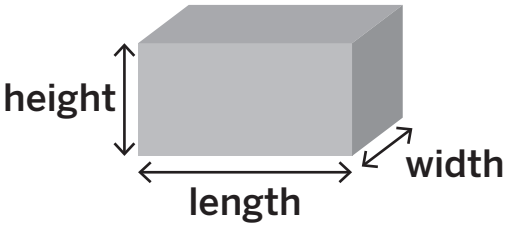
Word bank

English	Español
dividend	dividendo
divisor	divisor
mistake	error
place value	valor posicional
quotient	cociente
remainder	resto
strategy	estrategia

Name _____ Date _____

Multi-Step Equations, Part 1

Use with Problem 3.

Rectangular prism
 Volume = l × w × h Volume = B × h

$14 \div 2 \times (3 + 10) = 91$ equation	( ) parentheses

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

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

I used parentheses in my equation to show . . .

_____ in my equation represents . . .

I grouped my information first because . . .

Word bank						
English	cubic foot	different	grouped	represent	similar	strategy
Español	pie cúbico	diferente	agrupar	representar	similar	estrategia

Name _____ Date _____

Do Not Compute

Use with Problems 2–5.

Comparison statement	Comparison symbols		
5 > 2	< less than	> greater than	= equal to

_____ **is less than** _____ because . . .

_____ is **greater than** _____ because . . .

_____ is **equal to** _____ because . . .

I solved _____ first and then . . .

I used the _____ to compare because . . .

The _____ of the numbers in the parentheses is . . .

Word bank	
English	**Español**
compare	comparar
difference	diferencia
dividend	dividendo
divisor	divisor
expression	expresión
parentheses	paréntesis
product	producto
quotient	cociente
sum	suma
total	total

Name _____ Date _____

What Do Parentheses Have To Do With It?

Use with Problem 5.

$(2 \times 3) \times 5 = 2 \times (3 \times 5)$ Associative Property of Multiplication	$2 \times 3 \times 5 = 2 \times 5 \times 3$ Commutative Property of Multiplication

When I use the **Associative Property of Multiplication**, the products . . .

The **order** of the factors _____ change the product because . . .
(does/does not)

When I use the **Commutative Property of Multiplication**, the products . . .

The **grouping** of the factors _____ change the product because . . .
(does/does not)

Word bank						
English	composite number	expression	factor	parentheses	prime number	product
Español	número compuesto	expresión	factor	paréntesis	numero primo	producto

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.

thousandths

One of 1,000 equal parts. The place value of the digit in the third place to the right of the decimal.

0.015

fifteen thousandths

Vocabulary Cards, Unit 5 · Lesson 2

thousandths

One of 1,000 equal parts. The place value of the digit in the third place to the right of the decimal.

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Vocabulary Cards, Unit 5 · Lesson 2

Name _____ Date _____

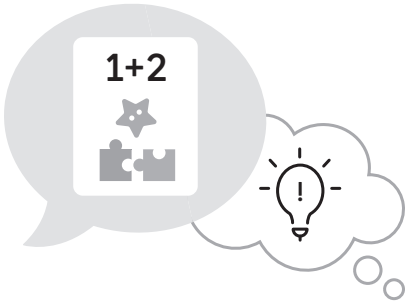
Ways to be a Mathematician
Formas de ser matemático/matemática

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.

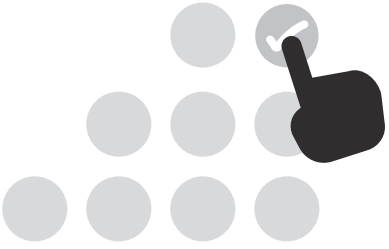
2 I can work carefully and try to be clear when I share my ideas.

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 ayudar a 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 _____

Name That Number

Use with Problem 2.

I represented the shaded portion by . . .

I used _____ to
(decimal notation/place value)
represent the shaded portion by . . .

I represented the total by using the expression(s) _____.

Another way to represent the shaded portion is by . . .

All of the ways are equivalent because . . .

Word bank	
English	**Español**
decompose	descomponer
digit	dígito
equivalent	equivalente
expression	expresión
portion	porción
represent	representar
tenth	décima

Definition

the base-ten place value unit equal to $\frac{1}{1{,}000}$

Characteristics

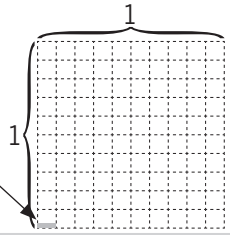
1 out of 1,000 equal-sized parts

$\frac{1}{1{,}000}$

thousandth
milésima

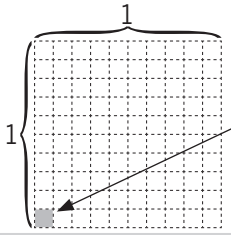
Example

one thousandth



Non-Example

one hundredth



Name _____ Date _____

Card Sort: How Many Ways?

Use with Problems 4–6.

Ways to represent numbers	
4 tenths + 2 hundredths + 7 thousandths $(4 \times 0.1) + (2 \times 0.01) + (7 \times 0.001)$ expanded form	427 thousandths word form

We sorted the cards by . . .

Card _____ represents the number because . . .
(does/does not)

The expression _____ represents the number in expanded form because . . .

We _____ with how the cards are sorted because . . .
(agree/disagree)

The expressions in Problem 5 are _____ because . . .
(similar/different)

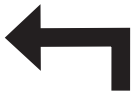
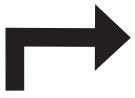
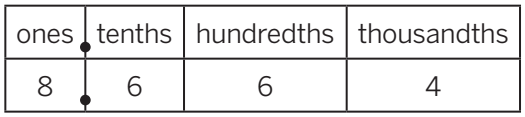
All the expression represent _____ because . . .

Word bank					
English	decompose	expression	fraction	represent	sort
Español	descomponer	expresión	fracción	representar	clasificar

Name _____ Date _____

Relationships Between Place Values

Use with Problem 6.

 left	 right	 place value

"10 times as much" means the value is _____.	"$\frac{1}{10}$ as much" means the value is _____.
Each place value is ten times greater than the value of the place to its _____.	Each place value is $\frac{1}{10}$ as much as the value of the place to its _____.

The 7 on the _____ (*left/right*) is in the _____ (*place value*) place and has a value of _____ (*number*).

The value of the 7 in the _____ (*place value*) place is 10 times as much as the value of the 7 in the _____ (*place value*) place.

The value of the 7 in the _____ (*place value*) place is $\frac{1}{10}$ as much as the value of the 7 in the _____ (*place value*) place.

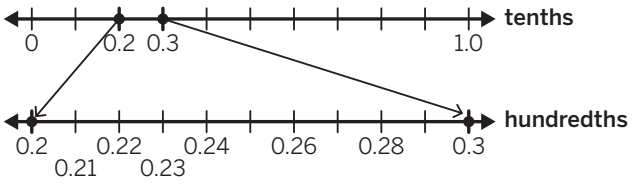
Word bank	
English	**Español**
decimal	decimal
digit	dígito
fraction	fracción
greater	mayor
multiplicative	multiplicativo
relationship	relación
represent	representar
smaller	menor

Name _____ Date _____

Bear Down

Use with Problem 8.

Locating values on a number line



I _____ with _____ because . . .
(agree/disagree) *(Clare/Diego)*

0.618 _____ be located between 0.6 and 0.7 because . . .
(could/could not)

0.618 would be located between 0.61 and 0.62 because . . .

I can locate 0.618 between 0.6 and 0.7 by . . .

0.618 is located on the _____ tick mark between 0.61 and 0.62.
(tick mark position)

Word bank							
English	eighth	greater	less	locate	place value	tenth	thousandth
Español	octavo	mayor	menor	localizar	valor posicional	décima	milésima

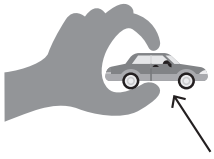
Name _____ Date _____

Collectible Miniatures

Use with Problems 4–5.

Comparing decimals
6.004 is **less than** 6.1 $6.004 < 6.1$
6.1 is **greater than** 6.004 $6.1 > 6.004$

Dog breeds	
	
Chihuahua	French bulldog

		
collectible	miniature	3D printer

Word bank	
English	**Español**
equivalent	equivalente
hundredth	centésima
number line	recta numérica
place value	valor posicional
pound	libra
ounce	onza
tenth	décima
thousandth	milésima

In Problem 4, we compared the weights by . . .

_____ > _____ because . . .

_____ < _____ because . . .

The strategy we used to compare the weights was _____.

Our strategy is _____ the other pair's strategy because . . .
(similar to/different from)

Name _____ Date _____

Rounding Decimals

Use with Problem 10.

Whole number and decimal place value chart

thousands	hundreds	tens	ones .	tenths	hundredths	thousandths

I rounded the number _____ to the _____ place value by . . .

To round to the nearest _____, I would think about . . .
(tenth/hundredth)

I could round this number without a number line by . . .

Rounding decimals is similar to rounding whole numbers because . . .

Round decimals is different than rounding whole numbers because . . .

Word bank

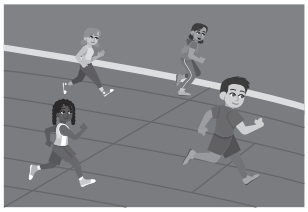
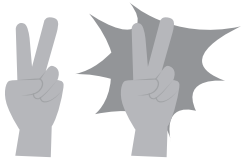
English	digit	number line	round	strategy
Español	dígito	recta numérica	redondear	estrategia

Name _____ Date _____

Round the Times

Use with Problems 2–3.

Whole number and decimal place value chart						
thousands	hundreds	tens	ones	tenths	hundredths	thousandths

 race	 time	 twice

Word bank						
English	digit	event	meter	nearest	number line	rounding
Español	dígito	evento	metro	más cercano	recta numérica	redondeo

Five possible exact finish times are _____, _____, _____, _____, and _____.

I rounded _____ to _____ because . . .

These numbers round to 36.60 because . . .

_____ does not round to 36.60 because . . .

I used the digit in the _____ place to help me round because . . .

My strategy to round these numbers was to . . .

More than one value can round to the same number because . . .

Name _____ Date _____

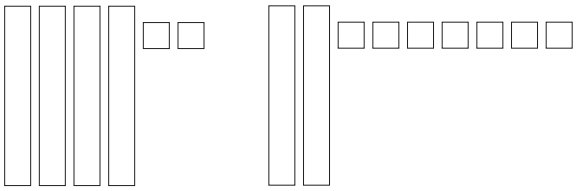
Adding and Subtracting Decimals

Use with Problem 5.

adding decimals
sumando decimales

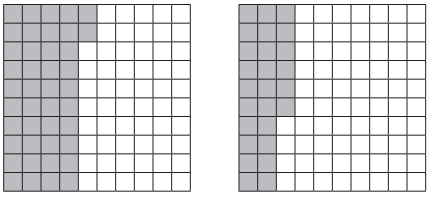
Base-ten blocks

0.42 + 0.27



Hundredths grid

0.42 + 0.27



Fractions

0.42 + 0.27

$\frac{42}{100} + \frac{27}{100}$

Expanded form

0.42 + 0.27

0.4 + 0.2 → 4 tenths + 2 tenths
0.02 + 0.07 → 2 hundreths + 7 hundredths

I used _____ to solve because . . .

Our work is _____ because . . .
(similar/different)

They used _____ as a strategy, while we used _____ as a strategy.

Adding and subtracting decimals is similar to whole numbers because . . .

Word bank	
English	**Español**
add	sumar
decimal	decimal
hundredth	centésima
subtract	restar
sum	suma
tenth	décima
value	valor

Name _____ Date _____

Calculating Sums

Use with Problems 4–6.

I expect the sum to be between _____ and _____ because . . .

The sum is closer to the whole number _____ because . . .

My estimation is _____ + _____ = _____.

My exact sum _____ reasonable because . . .
(is/is not)

My estimate was . . .

My sum is _____. I solved it by . . .

My sum is _____ than my estimate.
(greater/less)

Word bank	
English	**Español**
algorithm	algoritmo
between	entre
compose	componer
closer	más cerca
decimal	decimal
estimate	estimar
exact	exacto
greater	mayor
less	menor
reasonable	razonable
sum	suma
whole number	número entero

Name _____ Date _____

Dog Scarves

Use with Problems 1–3.

estimate
estimación

Definition

a guess you make about a value based on what you know

Characteristics

guess
reasonable
near

Example

2.8 + 4.9 is **about**

3 + 5

Non-Example

solving for an exact answer

dog

scarf

The blue scarf is about _____ longer than the green scarf because . . .

I estimated the difference to be _____ because . . .

The exact difference between the blue scarf and the green scarf is _____.

I solved it by . . .

My estimate _____ reasonable because . . .
(was/was not)

Word bank	
English	**Español**
algorithm	algoritmo
blue	azul
decimal	decimal
decompose	descomponer
exact	exacto
feet	pies
green	verde
long	largo
reasonable	razonable

Name _____ Date _____

Explain the Error

Use with Problems 1–2.

Andre correctly . . .

Andre's error was . . .

Andre can fix his error by . . .

The correct difference is . . .

I know this because . . .

Word bank	
English	**Español**
algorithm	algoritmo
compose	componer
correct	correcto
decimal	decimal
decompose	descomponer
difference	diferencia
error	error
fix	corregir
hundredth	centésima
place value	valor posicional
tenth	décima

Name _____ Date _____

Scarves for Market Day

Use with Problem 1.

Miguel _____ have enough yarn.
(will/will not)

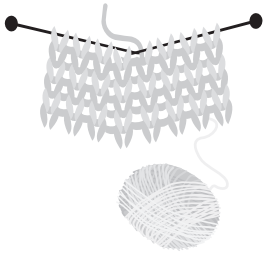
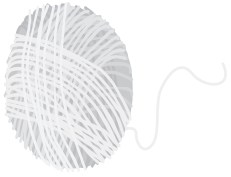
I know this because . . .

Miguel _____ have yarn left over.
(will/will not)

The amount of yarn Miguel _____ is
(needs/has left over)
_____ feet.

I know this because . . .

Word bank	
English	**Español**
animal	animal
biggest	más grande
different	diferente
feet	pies
longest	más largo
part	parte
reduce	reducir
relationship	relación
require	requerir
sum	suma
total	total

			
knitting	market	scarf	yarn

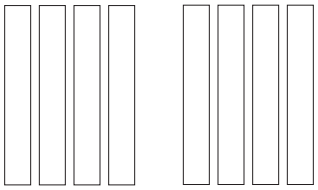
Name _____ Date _____

Multiplying Whole Numbers and Decimals

Use with Problem 6.

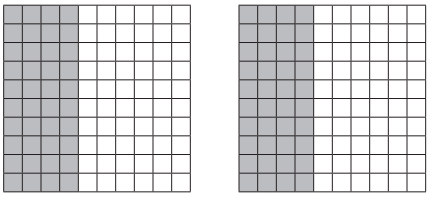
Base-ten blocks

2×0.4



Hundredths grid

2×0.4



multiplying whole numbers and decimals
multiplicar números enteros y decimales

2×0.4

$2 \times \frac{4}{10}$

Fractions

2×0.4

$0.4 + 0.4 \longrightarrow$ 4 tenths + 4 tenths

Addition

I determined the value of each expression by . . .

My strategy was _____ because . . .

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

Word bank	
English	**Español**
decimal	decimal
different	diferente
expression	expresión
hundredth	centésima
product	producto
represent	representar
tenth	décima
value	valor

Name _____ Date _____

Ads in Bobbi's Comic Book

Use with Problems 1–4.

Mr. Sawyer bought _____ square inches. I solved it by . . .

Ms. Baker paid Bobbi _____. I solved it by . . .

The area of the large advertisement is _____ square inches. I solved it by . . .

Our work is similar because . . .

Our work is different because . . .

		
bakery	comic book	smoothie

Word bank	
English	**Español**
advertisement	anuncio
area	área
cost	costo
decompose	descomponer
factor	factor
hundredth	centésima
inch	pulgada
large	grande
medium	medio
product	producto
small	pequeño
tenth	décima
total	total

Name _____ Date _____

Products of Tenths

Use with Problems 1–4.

The equation is _____. *(true/false)*

I know the equation is _____ because . . . *(true/false)*

The product is . . .

I multiplied _____ and _____.

Word bank	
English	**Español**
equation	ecuación
expression	expresión
false	falso
hundredth	centésima
multiply	multiplicar
tenth	décima
true	verdadero

Name _____ Date _____

Decimal Products

Use with Activity 2.

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

Priya placed the decimal point in the product by . . .

Priya's strategy _____ make sense. I know this because . . .
(does/does not)

The decimal point should be . . .

The value of the expression is . . .

The product is . . .

I solved it by . . .

The value of 4.5 × 8.1 is _____. I know this because . . .

Word bank					
English	decimal	expression	point	product	value
Español	decimal	expresión	punto	producto	valor

Name _____ Date _____

Why Does It Work?

Use with Problems 1–3.

Priya	Han
4 × 35 × 0.1	(4 × 35) ÷ 10

Priya's and Han's strategies are related because . . .

Priya's and Han's strategies are different because . . .

Multiplying by _____ and dividing by _____ is the same because . . .

Priya represented 3.5 by _____ and Han represented 3.5 by _____ .

Priya and Han will get _____ answers.

Jada's expression _____ work because . . .
(will/will not)

Jada _____ used Han's strategy accurately because...
(did/did not)

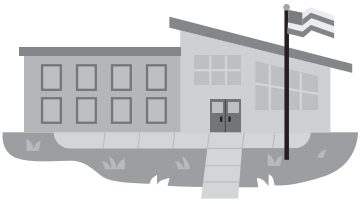
I solved 17.5 × 3.3 by . . .

Word bank	
English	**Español**
decimal	decimal
divide	dividir
expression	expresión
hundredth	centésima
multiply	multiplicar
represent	representar
tenth	décima
value	valor
strategy	estrategia

Name _____ Date _____

Bobbi the Brave

Use with Problems 1–2.

			
Caravalho Elementary	comic book	sewer monster	superhero

Word bank						
English	clue	information	ink	page	picture	story
Español	pista	información	tinta	página	imagen	cuento

To solve this problem, I need to . . .

The information this clue gives me is . . .

The information I still need is . . .

There are _____ square centimeters covered on page _____ because . . .

Bobbi _____ have enough ink to tell the story because . . .
(does/does not)

Area

Area = length × width
2 ft x 5 ft = 10 square feet

Name _____ Date _____

Equivalent Decimals

Use with Problems 5–8.

Decimal division equation 0.2 ÷ 4 = 0.05		
0.2 is the **dividend** the number that represents the total number of objects being divided	4 is the **divisor** the number of equal-sized groups or the size of each group	0.05 is the **quotient** the result obtained by dividing one quantity by another

Decimal division equation	Related division equation using whole numbers
0.2 ÷ 4 = 0.05	20 ÷ 4 = 5

I can change the dividend to write an expression with whole numbers by . . .

The length of each piece is _____ because . . .

When the decimal dividend cannot be divided evenly by the divisor, I can . . .

_____ is equivalent to _____ because . . .

The strategy I used to determine _____ ÷ _____ is . . .

Equivalent decimals and related whole numbers can help me by . . .

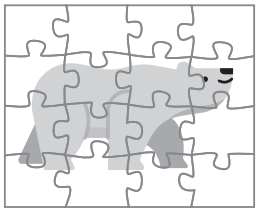
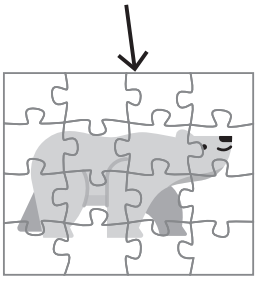
Word bank					
English	equivalent	expression	related	solve	strategy
Español	equivalente	expresión	relacionado	resolver	estrategia

Name _____ Date _____

How Many Puzzle Pieces?

Use with Problems 6–8.

$0.2 \div 4 = 0.05$ **division** _____		
0.2 is the _____ the number that represents the total number of objects being divided	4 is the _____ the number of equal-sized groups or the size of each group	0.05 is the _____ the result obtained by dividing one quantity by another

		
puzzle	puzzle piece	top edge

The _____ I will use in Problem _____ is . . .
(equation/strategy)

Problems 6 and 7 are _____ because . . .
(the same/different)

My answers for Problems 6 and 7 are related because . . .

This makes sense because . . .

Word bank	
English	**Español**
equivalent	equivalente
related	relacionado
represent	representar
solve	resolver
strategy	estrategia

Name _____ Date _____

Card Sort: In the Mix

Use with Problems 4–5.

division equation					comparison symbols	
0.2	÷	4	=	0.05	>	<
dividend		divisor		quotient	greater than	less than

Card _____ will have a quotient that is **greater than** the dividend because . . .

Card _____ will have a quotient that is **less than** the dividend because . . .

A quotient will be **greater** than the dividend if . . .

A quotient will be **less** than the dividend if . . .

Word bank	
English	**Español**
decimal	decimal
expression	expresión
fewer	menos
group	grupo
more	más
whole number	numero entero

When you divide a _____ by a _____, the quotient will be **less** than the dividend.

When you divide a _____ by a _____, the quotient will be **greater** than the dividend.

Name _____ Date _____

To Be or Not to Be a Decimal

Use with Problems 1–7.

Word bank					
English	equivalent	decimal	diagram	part	represent
Español	equivalente	decimal	diagrama	parte	representar

Use with Problems 1–2.

The diagram shows the value of _____ because . . .

The part of the diagram that represents _____ is . . .

Use with Problems 3–6.

The equivalent division equation using whole numbers is _____ because . . .

_____ ÷ _____ is the same as _____ ÷ _____ because . . .

I moved the decimal _____, so . . .

Use with Problems 7.

The strategy I used for Problem _____ was . . .

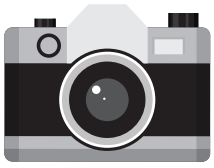
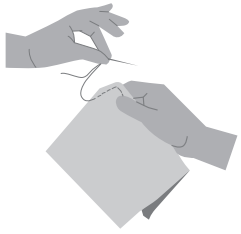
I used place value to help me by . . .

I _____ with you because . . .
(agree/disagree)

Name _____ Date _____

Studious Students

Use with Problem 1.

Study topics			
			
3D printing	comic book art	photography	sewing

$20 \times 0.5 = 10$ factor factor product	$0.2 \div 4 = 0.05$ divident divisor quotient
Multiply	Divide

_____ watching speed means . . .

If the watching speed is **less than 1**, the operation to solve for how long it took to watch the video will be _____ because . . .

If the watching speed is **greater than 1**, the operation to solve for how long it took to watch the video will be _____ because . . .

The time to watch the video was _____ than the video length because . . .
(longer/shorter)

Word bank				
English	length	speed	student	video
Español	longitud	velocidad	estudiante	video

Name _____ Date _____

Words With Multiple Meanings

Draw a picture or write in words to show 1 math meaning and another meaning of the term.

Math meaning

base

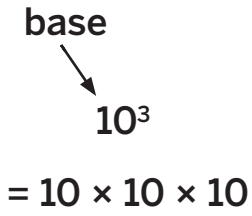
Another meaning

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.

base

The number that is raised to an exponent. It is the number repeatedly multiplied by itself.



Vocabulary Cards, Unit 6 · Lesson 2

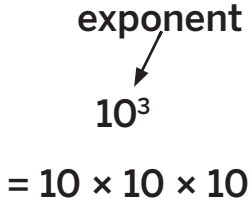
cup

A liquid volume unit in the U.S. Customary measurement system. 16 cups is equal to 1 gallon.

Vocabulary Cards, Unit 6 · Lesson 10

exponent

The number of times the base is multiplied by itself in a multiplication expression.



Vocabulary Cards, Unit 6 · Lesson 2

gallon

A liquid volume unit in the U.S. Customary measurement system.
1 gallon is equal to 4 quarts, 8 pints, or 16 cups.

Vocabulary Cards, Unit 6 · Lesson 10

mile

A length unit in the U.S. Customary measurement system. There are 5,280 feet in 1 mile.

Vocabulary Cards, Unit 6 · Lesson 9

milligram

A weight unit in the metric measurement system. There are 1,000 milligrams in a gram.

Vocabulary Cards, Unit 6 · Lesson 7

millimeter

A length unit in the metric measurement system. There are 1,000 millimeters in a meter.

Vocabulary Cards, Unit 6 · Lesson 6

pint

A liquid volume unit in the U.S. Customary measurement system. 8 pints is equal to 1 gallon.

Vocabulary Cards, Unit 6 · Lesson 10

Vocabulary Cards, Unit 6

power of 10

A number written with the base of 10 and raised to an exponent.

10^3

Vocabulary Cards, Unit 6 · Lesson 2

quart

A liquid volume unit in the U.S. Customary measurement system. 4 quarts is equal to 1 gallon.

Vocabulary Cards, Unit 6 · Lesson 10

ton

A weight unit in the customary measurement system. There are 2,000 pounds in 1 ton.

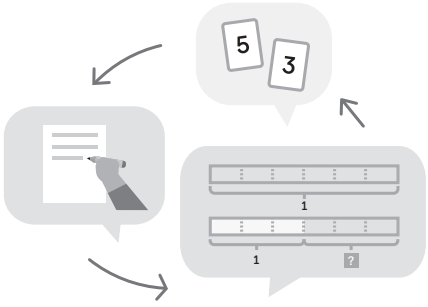
Vocabulary Cards, Unit 6 · Lesson 11

Name _____ Date _____

Ways to be a Mathematician
Formas de ser matemático/ matemática

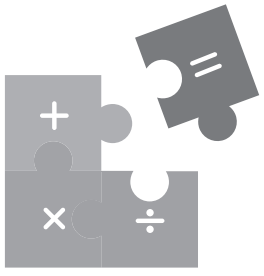
1 I can use numbers, words, and diagrams to make sense of math ideas and situations.

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



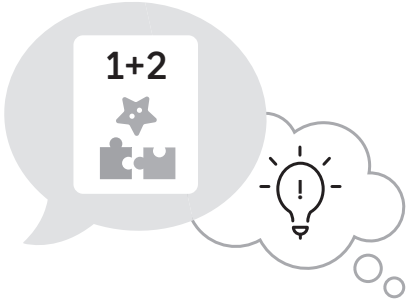
2 I can use math to help solve real-world problems.

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



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 . . .

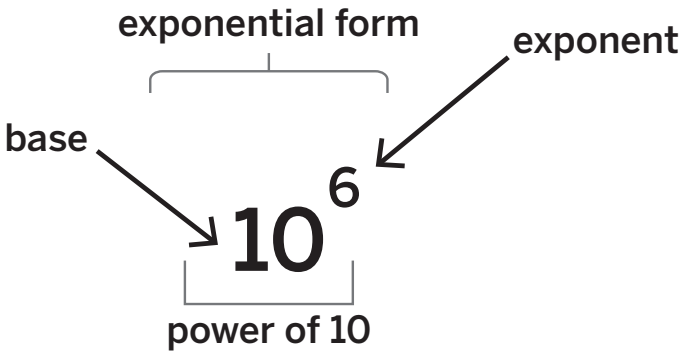
I also chose _____ because . . .

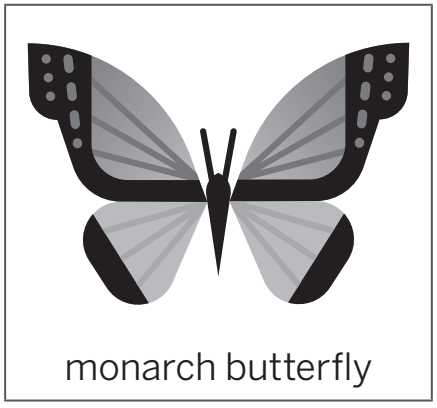
In the Activity, I . . .

Name _____ Date _____

Monarch Butterfly Facts

Use with Activity 2.




monarch butterfly

The representations of the powers of 10 are related because . . .

The exponent represents . . .

The multiplication expression represents . . .

The standard form represents . . .

_____ and _____ are similar because . . .

Word bank							
English	expression	factor	multiple	repeat	represent	value	zero
Español	expresión	factor	múltiplo	repetir	representar	valor	cero

Name _____ Date _____

Equivalent Expressions

Use with Problem 5.

Word bank			
English	**Español**	**English**	**Español**
base	base	factor	factor
compare	comparar	pattern	patrón
equivalent	equivalente	product	producto
exponent	exponente	standard form	forma estándar
expression	expresión	zero	cero

The pattern I notice is . . .

There are _____ zeros in the **factor** _____.

There are _____ zeros in the **product** _____.

The number of zeros in the product is _____ to the number of zeros in all of the factors because . . . *(equal / not equal)*

In Problem _____ the factors have _____ zeros, and the product has _____ zeros.

Name _____ Date _____

Dividing by Powers of 10

Use with Problem 10.

3,475.981							
thousands	hundreds	tens	ones	·	tenths	hundredths	thousandths
3	4	7	5	·	9	8	1

 decrease	 increase	 left	 right

The value of the expression _____ when you _____ by a power of 10.
(divide/multiply) *(increases/decreases)*

The digits shift _____ when you _____ by a power of 10.
(left/right) *(divide/multiply)*

When you divide by a power of 10, the decimal point . . .

When you divide by a power of 10, the place values of the digits shifts _____ because . . .
(left/right)

Word bank							
English	digit	dividend	exponent	power	product	quotient	shift
Español	dígito	dividendo	exponente	potencia	producto	cociente	cambiar

Name _____ Date _____

Pointing Out the Decimal Point

Use with Problem 5.

Place values							
thousands	hundreds	tens	ones	·	tenths	hundredths	thousandths

left	 pair	right

Word bank	
English	**Español**
decimal	decimal
digit	dígito
exponent	exponente
greater	mayor que
less	menor que
placement	ubicación
product	producto
quotient	cociente

The decimal is between the _____ place and the _____ place.
(place value) *(place value)*

In Problem _____, the _____ is **greater** than 238 because . . .
(product / quotient)

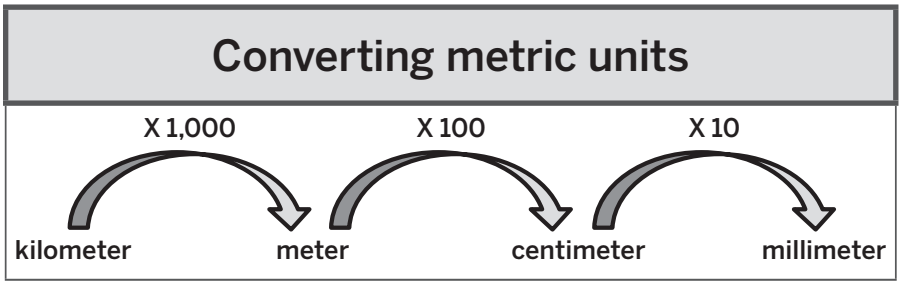
In Problem _____, the _____ is **less** than 238 because . . .
(product / quotient)

It makes sense that the decimal is between the _____ and _____ because . . .
(place value) *(place value)*

Name _____ Date _____

Kilometers to Millimeters

Use with Problem 2.

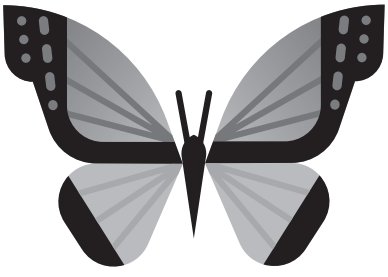


I used powers of 10 to help solve by . . .

First, I multiplied by _____ because . . .

I shifted digits _____ places _____ because . . .
(left/right)

Word bank	
English	**Español**
cluster	grupo
decimal	decimal
digit	dígito
distance	distancia
left	izquierda
multiply	multiplicar
place value	valor posicional
right	derecha
shift	cambiar



monarch butterfly

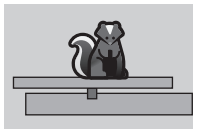
Name _____ Date _____

Weight and See

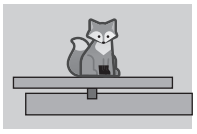
Use with Activity 1.

Converting metric units		
1 kilogram	=	1,000 grams
1 kilogram	=	1,000,000 millimeters
1 gram	=	1,000 milligram

Word bank	
English	**Español**
determine	determinar
divide	dividir
multiply	multiplicar
relationship	relación
weigh	peso



fox



skunk

I can convert grams to milligrams by . . .

I can convert milligrams to grams by . . .

The relationship between grams and milligrams is . . .

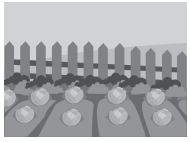
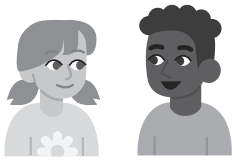
Converting between grams and milligrams is _____ converting
(similar to/different from)

between milligrams and grams because . . .

Name _____ Date _____

How Much Nectar?

Use with Problems 1–3.

 butterfly	 cooler	 hummingbird feeder	 garden
 partner	 nectar	 season	 volunteer

Converting metric units		
1 liter	=	1,000 milliliters

I solved the problem by . . .

My partner solved the problem by . . .

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

I converted my answer to milliliters by . . .

My partner converted their answer to milliliters by . . .

Word bank	
English	**Español**
add	sumar
capacity	capacidad
divide	dividir
multiply	multiplicar
strategy	estrategia
subtract	sustraer

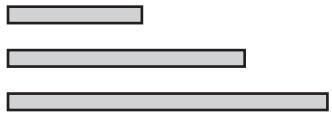
Name _____ Date _____

Card Sort: Customary Length

Use with Problems 1–3.

Shortest comparison

shortest →



Longest comparison

longest →

Word bank	
English	Español
arrange	arreglar
convert	convertir
divide	dividir
half	mitad
multiply	multiplicar
order	orden
sort	clasificar

Card _____ has the _____ measurement because . . .
(letter) *(longest/shortest)*

Card _____ shows _____ measurement than Card _____.
(letter) *(a longer/a shorter/an equal)* *(letter)*

I _____ with you because . . .
(agree/disagree)

Customary measurement units			
foot	inch	mile	yard
pie	pulgada	milla	yarda

Name _____ Date _____

Card Sort: Customary Length (continued)

Definition

A unit of length in the U.S. Customary measurement system, measuring 5,280 feet or 1,760 yards.

Characteristics

Used to measure long distances Longer than 1 kilometer

mile
milla

Example

"My house is 3 miles from school."

Non-Example

foot
yard
inch

Name _____ Date _____

Card Sort: Plant Sections

Use with Problem 1.

Customary volume units			
 cup	 pint	 quart	 gallon

 butterfly	 garden	 plant

Word bank	
English	**Español**
add	sumar
divide	dividir
equal	igual
letter	letra
multiply	multiplicar
partner	pareja
section	sección
sort	clasificar
total	total

I started with Clue _____ because . . .
(letter)

Clue _____ belongs in Section _____
(letter) *(number)*
because . . .

First/Then, I . . .

My strategy for sorting the clues was . . .

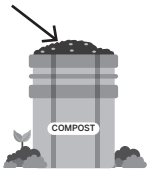
I _____ with you because . . .
(agree/disagree)

I can solve a multi-step problem when given a lot of information by . . .

Name _____ Date _____

Pounds of Compost

Use with Activity 1.



compost

In Strategy _____, I notice that . . .
(letter)

I can convert ounces and pounds by . . .

Strategy _____ can be used to solve the
(letter)
problem because . . .

Both strategies can be used to solve the problem because . . .

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

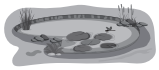
I would prefer to use Strategy _____
(letter)
because . . .

Word bank	
English	**Español**
club	club
convert	convertir
divide	dividir
garden	jardín
multiply	multiplicar
ounce	onza
package	paquete
pound	libra
produce	producir
strategy	estrategia
ton	tonelada
unit	unidad

Name _____ Date _____

Got Milkweed?

Use with Problem 2.

 butterfly	 habitat	 Milkweed seed	 orange	snowy	 volunteer

We solved the problem by . . .

Our work is _____ because . . .
(similar/different)

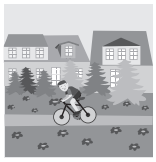
I notice that the diagrams with unlike denominators are . . .

Word bank	
English	**Español**
addition	suma
common	común
compare	comparar
convert	convertir
diagram	diagrama
equation	ecuación
equivalent	equivalente
fraction	fracción
multiply	multiplicar
pound	libra

Name _____ Date _____

Flights of the Butterflies

Use with Problems 1–3.

$7 = 7$	$5 > 2$	$4 < 8$
equal to	greater than	less than
		
afternoon	butterfly	morning

My answer will be _____ $\frac{8}{12}$.
(less than/greater than/equal to)

I know because . . .

I solved this problem by . . .

The relationship between both denominators is . .

_____ is a _____ of _____.
(number) *(factor/multiple)* *(number)*

I can use this relationship to help find a common denominator by . . .

Word bank							
English	difference	equivalent	estimate	flight	fraction	kilometer	travel
Español	diferencia	equivalente	estimar	vuelo	fracción	kilómetro	viajar

Name _____ Date _____

So Many Denominators

Use with Problem 8.

I found my common denominator by . . .

My group found their common denominator by . . .

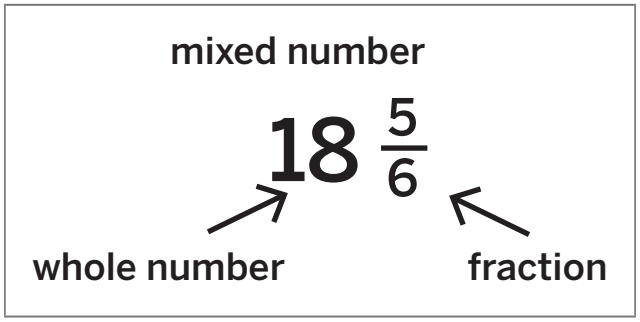
To determine a common denominator, I can . . .

Word bank	
English	**Español**
common	común
denominator	denominador
equivalent	equivalente
factor	factor
fraction	fracción
multiple	múltiplo
multiplication	multiplicación
numerator	numerador
unequal	desigual

Name _____ Date _____

Adding Mixed Numbers

Use with Problem 3.



My estimate to Problem 1 was . . .

I made this estimate by . . .

My answer to Problem 2 was . . .

I found this answer by . . .

The common denominator I found was _____.

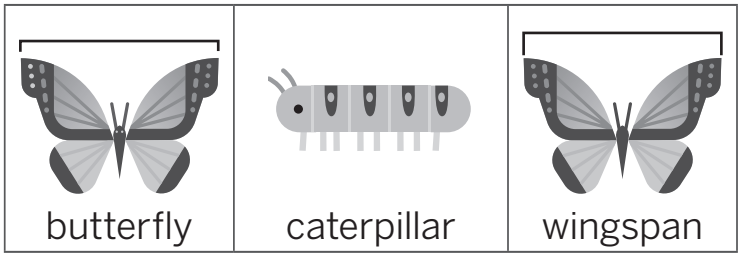
My answer in Problem 2 is reasonable because . . .

Word bank	
English	**Español**
addition	suma
common	común
denominator	denominador
determine	determinar
equivalent	equivalente
estimate	estimar
factor	factor
numerator	numerador
reasonable	razonable
sum	suma
unequal	desigual

Name _____ Date _____

Before and After the Metamorphosis

Use with Problem 3.



My answer to Problem _____, was reasonable because . . .
(number)

I solved Problem _____ by . . .
(number)

I used _____ strategy for each problem because . . .
(the same/a different)

My strategies were _____ because . . .
(similar/different)

Word bank	
English	**Español**
common	común
denominator	denominador
difference	diferencia
equivalent	equivalente
factor	factor
fraction	fracción
mixed number	numero mixto
numerator	numerador
strategy	estrategia
subtraction	resta

Name _____ Date _____

The Monarch Highway

Use with Problem 3.

 cooler	 cup	 gallon
 lemonade	 walnut	 water bottle

I solved Problem _____ by . . .
(number)

I created a common denominator by . . .

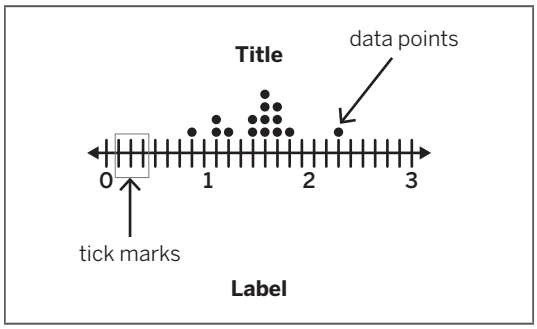
My strategy was _____ the
(similar to/different from)
other pair's strategy because . . .

Word bank	
English	**Español**
addition	suma
common	común
compare	comparar
denominator	denominador
equivalent	equivalente
factor	factor
fraction	fracción
mixed number	numero mixto
numerator	numerador
subtraction	resta
unequal	desigual

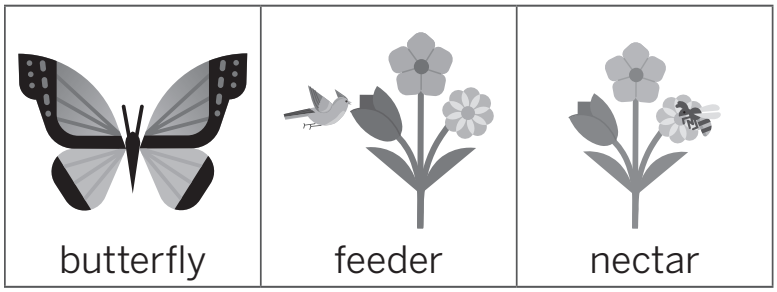
Name _____ Date _____

Representing Nectar Data

Use with Problem 2.



Word bank	
English	**Español**
batch	lote
capacity	capacidad
container	recipiente
data	dato
liter (L)	litro (l)
mixed number	número mixto
volume	volumen



I titled my line plot . . .

I labeled my line plot with . . .

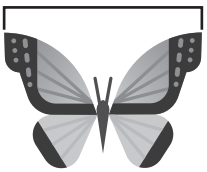
I made sure all of the data points fit on the line plot by . . .

My line plot is _____ to the other pair's line plot because . . .
(similar/different)

Name _____ Date _____

Making Combinations

Use with Activity 1.



butterfly wingspan

_____ **correct** because . . .
(Clare is/Priya is/both are)

_____ **incorrect** because . . .
(Clare is/Priya is/both are)

Word bank	
English	**Español**
data	dato
equivalent	equivalente
line plot	gráfica de puntos
mixed number	número mixto

I _____ create an equivalent mixed number to match _____
(can/cannot) *(Clare's/Priya's)*
answer because . . .

Name _____ Date _____

Words With Multiple Meanings

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

Math meaning

origin

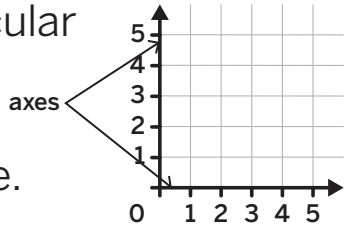
Another meaning

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.

axis (axes)

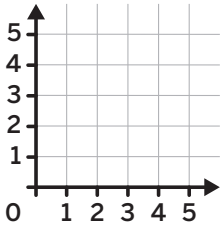
The 2 perpendicular number lines that form the coordinate plane.



Vocabulary Cards, Unit 7 · Lesson 6

coordinate plane

A two-dimensional plane formed by 2 perpendicular number lines.



Vocabulary Cards, Unit 7 · Lesson 6

coordinates

Two numbers in an ordered pair that describes an exact location on the coordinate plane.

(3, 5)

2 coordinates

Vocabulary Cards, Unit 7 · Lesson 6

kite

A quadrilateral with 2 pairs of equal-length adjacent sides which meet at a vertex.

Vocabulary Cards, Unit 7 · Lesson 3

ordered pair

The pair of coordinates giving the exact location of a point on the coordinate plane.

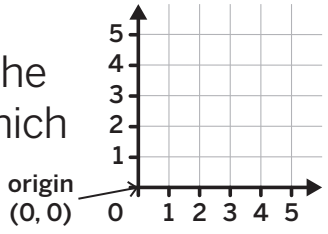
(3, 5)

ordered pair

Vocabulary Cards, Unit 7 · Lesson 6

origin

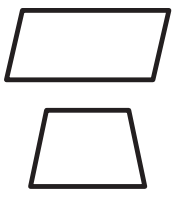
The point where the 2 axes intersect on the coordinate plane, which is located at (0, 0).



Vocabulary Cards, Unit 7 · Lesson 6

trapezoid

A quadrilateral with *at least* 1 pair of opposite sides that are parallel.



Vocabulary Cards, Unit 7 · Lesson 3

x-coordinate

The first number in an ordered pair giving the horizontal distance of a point from the origin.

(3, 5)

Vocabulary Cards, Unit 7 · Lesson 7

Vocabulary Cards, Unit 7

***y*-coordinate**

The second number in an ordered pair giving the vertical distance of a point from the origin.

(3, 5)

Vocabulary Cards, Unit 7 · Lesson 7

Name _____ Date _____

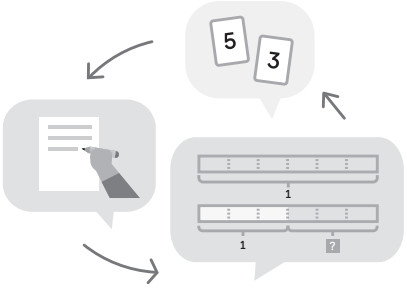
Ways to be a Mathematician
Formas de ser matemático/matemática

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.

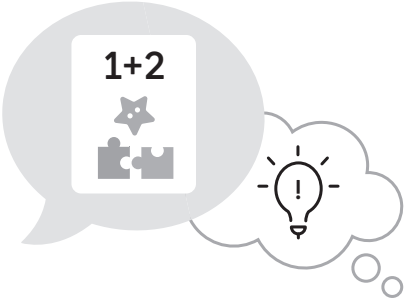
2 I can use numbers, words, and diagrams to make sense of math ideas and situations.

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 _____

Card Sort: Quadrilaterals

Use with Problem 2.

I sorted the cards by . . .

I sorted this way because . . .

Our categories are similar because . . .

We both made the category . . .

Our categories are different because . . .

They made the category _____

while we made the category _____.

Word bank	
English	**Español**
attribute	atributo
category	categoría
equal	igual
length	longitud
parallel	paralelo
parallelogram	paralelogramo
perpendicular	perpendicular
quadrilateral	cuadrilátero
right angle	ángulo recto

Name _____ Date _____

Card Sort: Quadrilaterals in the Constellations

Use with Problems 3–4.

I sorted the cards by . . .

I matched _____ Clue Card

to _____ constellation because . . .

The name of the quadrilateral that matched the constellation was . . .

The attributes the constellations have in common are . . .

I know this because . . .

Word bank	
English	**Español**
clue	pista
defining attribute	atributo definitorio
parallelogram	paralelogramo
quadrilateral	cuadrilátero

constellations

Quadrilateral Types			
			
rectangle	rhombus	square	trapezoid

Name _____ Date _____

Always, Sometimes, Never

Use with Problems 3–11.

For problem _____ we chose _____ because . . .

I agree because . . .

I disagree because . . .

It should be _____ because . . .

Why did you choose _____ for _____?

What attributes did you see that helped you choose _____ for _____?

Word bank	
English	**Español**
always	siempre
defining attribute	atributo definitorio
never	nunca
parallelogram	paralelogramo
quadrilateral	cuadrilátero
rectangle	rectángulo
rhombus	rombo
sometimes	a veces
square	cuadrado
trapezoid	trapecio
triangle	triángulo

Name _____ Date _____

Mystery Shape

Use with Activity 1.

The fewest number of questions

is _____. I know this because . . .

I would ask . . .

How many . . .

Is your mystery shape . . .

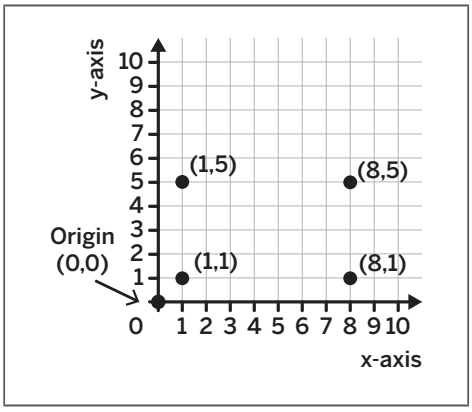
Does your mystery shape have . . .

Word bank	
English	**Español**
equal	igual
fewest	menos
mystery	misterio
parallelogram	paralelogramo
quadrilateral	cuadrilátero
rectangle	rectángulo
rhombus	rombo
right angle	ángulo recto
shape	figura
square	cuadrado
trapezoid	trapecio

Name _____ Date _____

Describing Location

Use with Problems 1–3.



Word bank	
English	**Español**
axis (axes)	eje (ejes)
coordinate grid	cuadrícula de coordenadas
horizontal	horizontal
intersecting lines	rectas que se intersectan
perpendicular line	recta perpendicular
vertical	vertical

The point is at . . .

The point is a little more than . . .

The point is a little less than . . .

The point is located between _____ and _____.

coordinate
coordenada

Definition

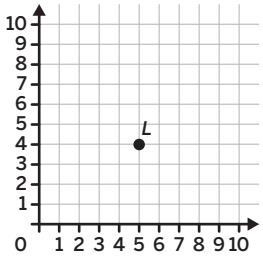
A pair of numbers that represent the distance from 0 in 2 directions, starting on the horizontal axis.

Characteristics

- Written with parentheses *(x, y)*
- *(x)* – move across
- *(y)* – move up and down

Example

The coordinate for point *L* is (5, 4).



Non-Example

5, 6, 7, 8, 9

43

Name _____ Date _____

Plotting Points

Use with Activity 1.

To hit the bullseye, the ordered pair is _____.

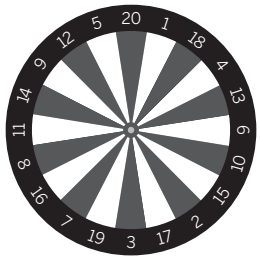
To get a score of 400, I . . .

To find the *x*-coordinate, I . . .

To find the *y*-coordinate, I . . .

I found the ordered pairs by . . .

dart



dart board

Word bank	
English	**Español**
axis (axes)	eje (ejes)
bullseye	blanco
coordinate	coordenada
coordinate grid	cuadrícula de coordenadas
origin	origen
point	punto
score	puntaje
x-axis	eje x
x-coordinate	coordenada x
y-axis	eje y
y-coordinate	coordenada y

Name _____ Date _____

Plotting Points (continued)

ordered pair
par ordenado

Definition

A pair of 2 numbers that correspond to points on the *x*- and *y*-axis, expressed as (*x*, *y*).

Characteristics

- Written as *(x, y)*
- *x* shows horizontal movement
- *y* shows vertical movement
- Finds points on a grid

Example

(5, 6)

(0, 0)

(7, 2)

(8, 3)

Non-Example

5

6 + 4 = 10

Name _____ Date _____

Plotting Points on Lines

Use with Activity 1.

To repair the satellite panel, the ordered pair for each hole in the grid is . . .

The *x*-axis and the *y*-axis have _____ points in common. I know this because . . .

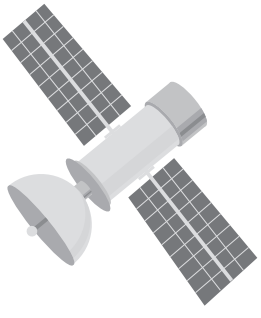
I can determine the ordered pairs of points by . . .

This makes sense because . . .

I can make the conclusion that . . .

The ordered pairs are . . .

Word bank	
English	**Español**
axes	ejes
coordinate grid	cuadrícula de coordenadas
hole	agujero
ordered pair	par ordenado
origin	origen
panel	panel
x-axis	eje x
x-coordinate	coordenada x
y-axis	eje y
y-coordinate	coordenada y

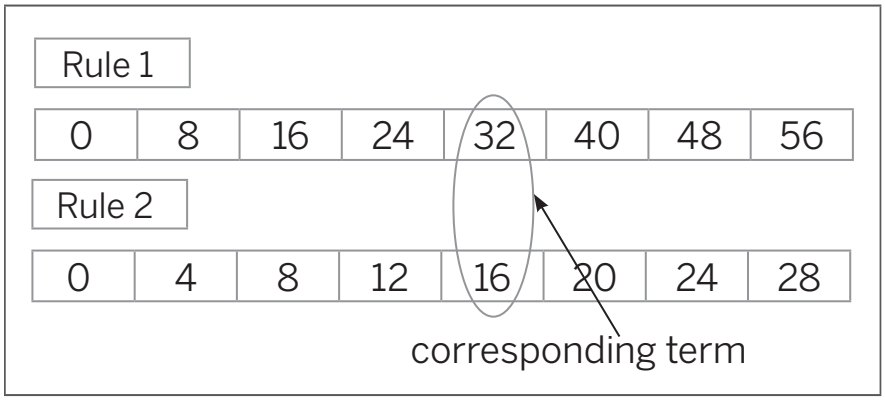


satellite

Name _____ Date _____

Comparing 2 Patterns

Use with Problems 1–2.



Word bank	
English	**Español**
add	sumar
compare	comparar
describe	describir
different	diferente
divide	dividir
multiply	multiplicar
relationship	relación

I notice that the numbers in _____ are . . .
(Rule 1/Rule 2)

To extend the pattern in _____ I . . .
(Rule 1/Rule 2)

I can describe the relationship between the numbers in Rule 1 and Rule 2 by . . .

If you _____ a number in Rule 1 by _____, you get a number in Rule 2.
(divide/multiply) *(number)*

The numbers in Rule 2 are _____ as much as the numbers in Rule 1.
(half/twice)

If you _____ a number in Rule 2 by _____, you get a number in Rule 1.
(divide/multiply) *(number)*

The numbers in Rule 1 are _____ as much as the numbers in Rule 2.
(half/twice)

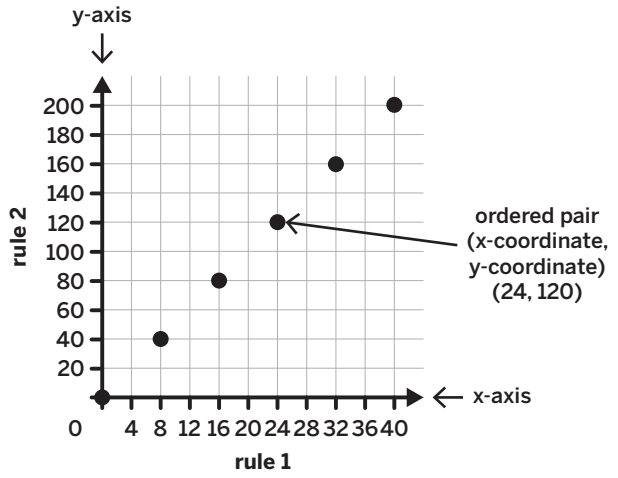
Name _____ Date _____

Patterns on the Coordinate Grid

Use with Problems 1–5.

	E	F	G	H	I	J
Rule 1	0	8	16	24	32	40
Rule 2	0	40	80	120	160	200

corresponding term



The ordered pair for point _____ is _____.
(letter) *(numbers)*

Our graph is _____ because . . .
(similar/different)

In Set A, each term in Rule 2 is _____ as much as the corresponding term in Rule 1.

In Set B, each term in Rule 2 is _____ times as much as the corresponding term in Rule 1.

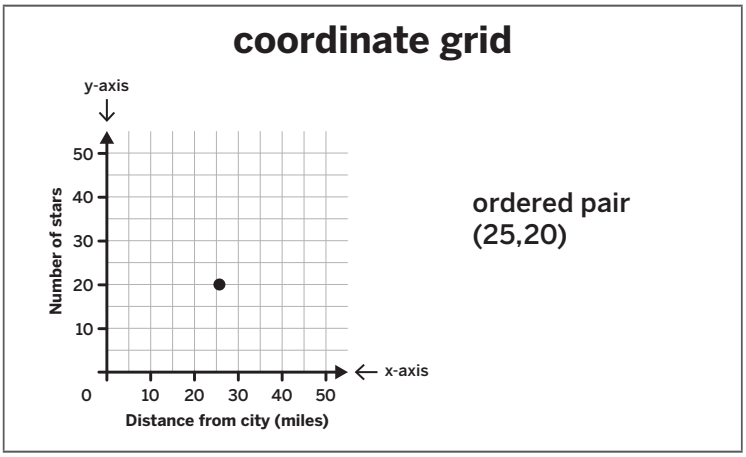
I think these graphs show a similar relationship because . . .

Word bank	
English	**Español**
add	sumar
different	diferente
divide	dividir
fourth	cuarto
graph	gráfico
multiply	multiplicar
plot	trazar
point	punto
relationship	relación
similar	semejante

Name _____ Date _____

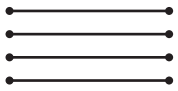
Mia, Mia, What Do You See?

Use with Screen 4.



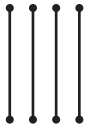
Word bank	
English	**Español**
distance	distancia
graph	gráfico
mile	milla
observe	observar
point	punto
represent	representar
situation	situación
value	valor


city


horizontal


star


telescope


vertical

The ordered pair is _____ because . . .
(number)

First, you will move on the _____- axis.
(letter)

The value on the vertical axis represents _____.
(context)

The point (15, 5) represents _____.
(context)

The value on the *x*-axis represents _____.
(context)

The value on the *y*-axis represents _____.
(context)

Name _____ Date _____

A Stone-y Night

Use with Problems 3–4.

area
área

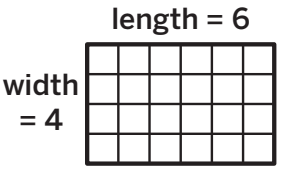
Definition

A measurement of the space inside a two-dimensional shape.

Characteristics

- Measured in square units
- Calculated based on the dimensions, like length and width

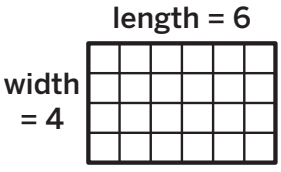
Example



$A = 6 \times 4$

Area = 24 square units

Non-Example

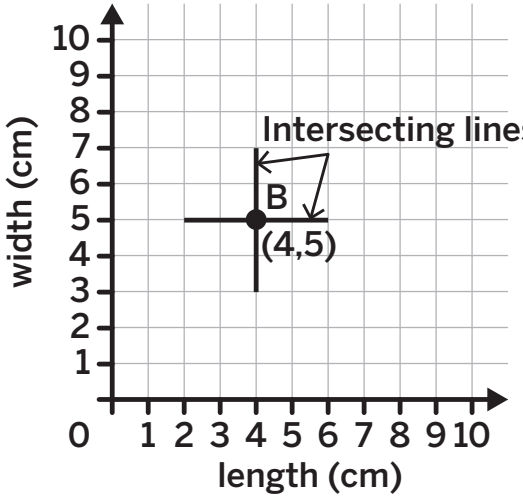


$P = (2 \times 6) + (2 \times 4)$

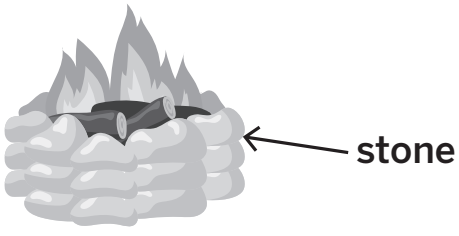
$P = 12 + 8$

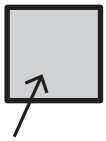
Perimeter = 20 units

Graph



coordinate (4,5)
Point **B**





Name _____ Date _____

A Stone-y Night (continued)

I _____ with the statement in Problem ____ because . . .
(agree/disagree)

I determined the **area** of the rectangle _____ by . . .
(letter)

I determined the **perimeter** of the rectangle _____ by . . .
(letter)

Word bank			
English	**Español**	**English**	**Español**
Apucha	Apucha (abuelo/a en quechua)	inch	pulgada
collect	recolectar	night	noche
family	familia	visit	visita