

Dear Parents:

As you may know, the State of Utah has recently adopted the new Utah Core State Standards for Mathematics K-12. GO MATH is the math series we are using to implement these standards. This program gives the children many strategies to use in order to come up with the correct answer. As we are learning, I model all of the strategies to help the children find different ways to solve each problem. The goal is to be comfortable with all of the strategies in order to use the most efficient method to solve a variety of problems.

This page lists the various strategies we are teaching for this unit, Addition Concepts. Hopefully these examples will help you to understand what your student will be asked to do on their homework assignments.

If you have any questions, please feel free to call or email.

Your child will learn to read the "+" symbol as "and," "plus" or "add." The "=" symbol is read as "the same as," and "equals."

## 1. Use pictures to add to.

4 and 2 more birds 6 birds.

## 2. Model adding to.

1 ball and 3 more balls

$1 + 3 = 4$

## 3. Model putting together.

Use ○ to add two groups. Put the groups together to find how many.

There are 3 brown cats. ○ ○ ○

There is 1 white cat. ○

How many cats are there?  $3 + 1 = 4$

4 cats

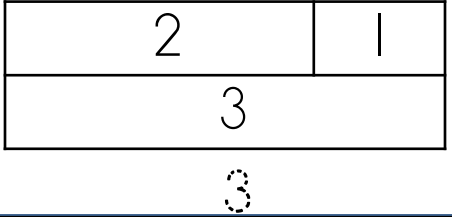
### 4. Model addition.

Wayne had 2 . Then he got 1 more .  
How many  does he have now?


What do I need to find?  
the number of crayons  
Wayne has now.

What information do I need to use?  
Wayne has 2  
He gets 1

What do I need to find?  
 $2 + 1 = \underline{\quad}$



### 5. Add zero.

Use  to show each number. Add.  
Write the sum.



$4 + 0 = \underline{\quad}$



$0 + 3 = \underline{\quad}$

When you add zero to a number, the sum is that number.

### 6. Add in any order.

Write an addition sentence.  
Change the order of the addends. The sum is still the same.  
Turn the cube train around.



$4 + 3 = \underline{7}$   
sum

$3 + 4 = \underline{7}$   
sum

### 7. Put numbers together. Numbers to 10.

You can use  to model ways to make 7.



$5 + \underline{2} = 7$



$4 + \underline{3} = 7$

### 8. Addition to 10.

You can use  to help you add.



$\underline{5}$

$\underline{8}$

Dear Parents:

Here are the strategies for mastering the unit "Subtraction Concepts." Hopefully these examples will help you to understand what your student will be asked to do on their homework assignments.

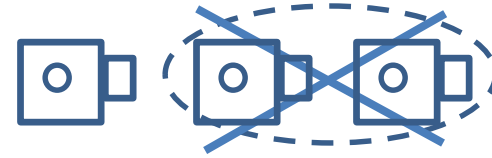
If you have any questions, please feel free to call or email.

Your child will learn to read the "-" symbol as "take away," or "minus." The "=" symbol is read as "the same as," and "equals."

## 2. Model Taking From.

Circle the part you take from the group. Then cross it out.

3 balls      2 balls roll away          ball now



$$3 - 2 = \underline{\quad}$$

## 3. Model Taking Apart.

You can use ○ to subtract.  
Jesse has 7 trucks. 5 are red.  
The rest are blue.

How many trucks are blue?



  2   trucks are blue.

$$\underline{7} - \underline{5} = \underline{2}$$

## 4. Model Subtraction.

There were 8 bugs on a leaf. 6 bugs flew away. How many bugs are on the leaf now?

What do I need to find?

how many crayons  
are on the leaf now.

What information do I need to use?

  8   bugs on a leaf  
  6   bugs flew away

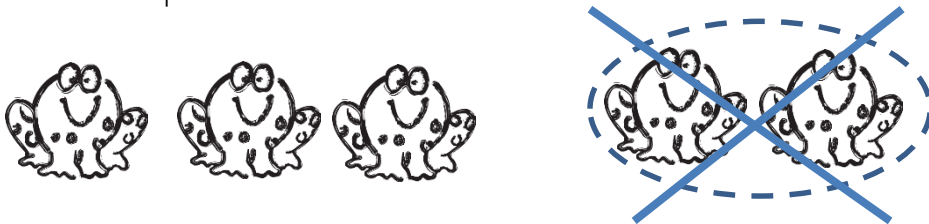
What do I need to find?

$$8 - 6 = \underline{\quad}$$

<u>  6  </u>	<u>  2  </u>
<u>  8  </u>	

## 1. Use Pictures to Show Taking From.

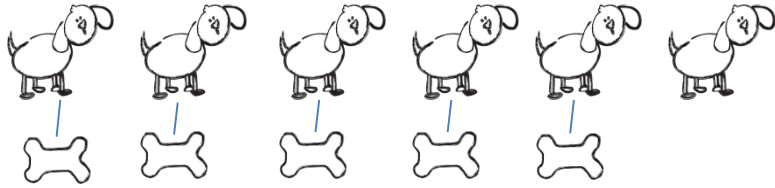
Use the picture.



5 frogs      2 hop away        3   frogs now

## 5. Use pictures and subtraction to compare.

You can subtract to compare groups.



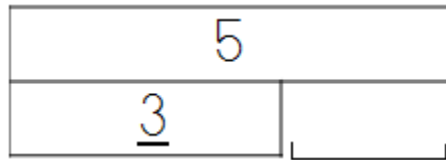
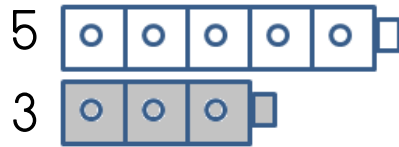
$$6 - 5 = \underline{\quad}$$

There is 1 **more** than there are .

There is 1 **fewer** than there are .

## 6. Subtract to compare.

You can use to show the bar model.



2

Joseph has 5 books.  
Mark has 3 books.  
How many more books does Joseph have than Mark?

2 more balloons

$$\underline{5} - \underline{3} = \underline{2}$$

## 7. Subtract all or zero.

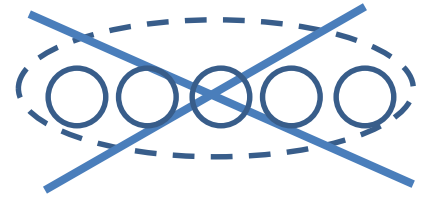
When you subtract zero from a number, the difference is the number.



No are crossed out.

$$5 - 0 = \underline{5}$$

When you subtract a number from itself, the difference is zero.



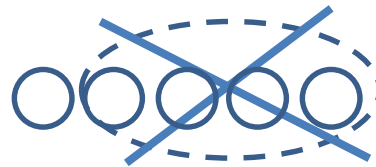
All are crossed out.

$$5 - 5 = \underline{0}$$

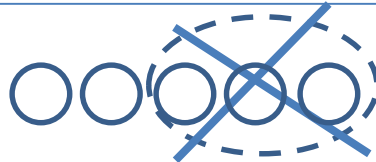
## 8. Take apart numbers.

You can use to take apart 5.

Circle the part you take away.  
Then cross it out.



$$5 - 4 = \underline{1}$$



$$5 - 3 = \underline{2}$$

Dear Parents:

Here are the strategies for mastering the unit "Addition Strategies." Hopefully these examples will help you to understand what your student will be asked to do on their homework assignments.

If you have any questions, please feel free to call or email.

### 1. Add in any order.

You can change the order of the addends. The sum is the same.

$$\begin{array}{r} 5 \\ + 3 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 3 \\ + 5 \\ \hline 8 \end{array}$$

### 2. Count on.

You can count on to find  $5 + 3$ . Start with the greater addend. Then count on. Write the sum.

$$\begin{array}{r} 5 \\ 6 \quad 7 \quad 8 \\ 5 + 3 = \underline{\quad} \end{array}$$

To add 3,  
count on 3

### 3. Add doubles.

The addends are the same in a doubles fact.

$$\underline{3} + \underline{3} = 6$$

### 4. Use doubles to add. (Doubles +1)

Use a doubles fact to solve  $3 + 2$ . Break apart 3 into  $1 + 2$ .

$$1 + 2 + 2 = 5$$

THINK:  
 $2 + 2 = 4$   
1 more than 4 is 5.

$$1 + 4 = 5$$

So,  $3 + 2 = \underline{5}$

### 5. Use doubles +1 and doubles -1.

You can use doubles plus one facts and doubles minus one to add.

Use doubles fact  $3 + 3 = 6$

Doubles plus one

$$3 + 4 = \underline{\quad}$$

Doubles minus one

$$3 + 2 = \underline{\quad}$$

## 6. Practice the strategies.

You can use different addition strategies to find sums.

Count on.

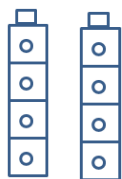


4

5    6    7

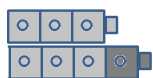
$$4 + 3 = \underline{7}$$

Doubles.



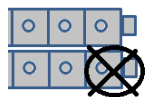
$$4 + 4 = \underline{8}$$

Doubles Plus 1.



$$3 + 4 = \underline{7}$$

Doubles Minus 1.



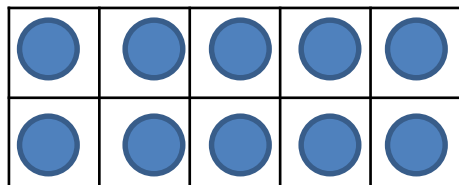
$$3 + 2 = \underline{5}$$

## 7. Add ten more.

You can use counters and a ten frame to add a number to 10.

Find  $10 + 3$ .

10



$$\begin{array}{r} 10 \\ + 3 \\ \hline 13 \end{array}$$

3

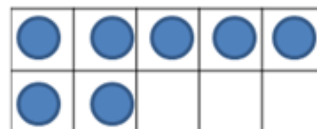


## 8. Make ten to add.

Use ○.

Make a ten. Add.

7



5



10

+ 2

12



Find  $10 + 2 = \underline{12}$ .

## 9. Use make ten to add.

What is  $9 + 6$ ? Make a 10 to add.

Use ○ and a ten frame. Show the addends.

Make a ten. Add.

9



6



10



5

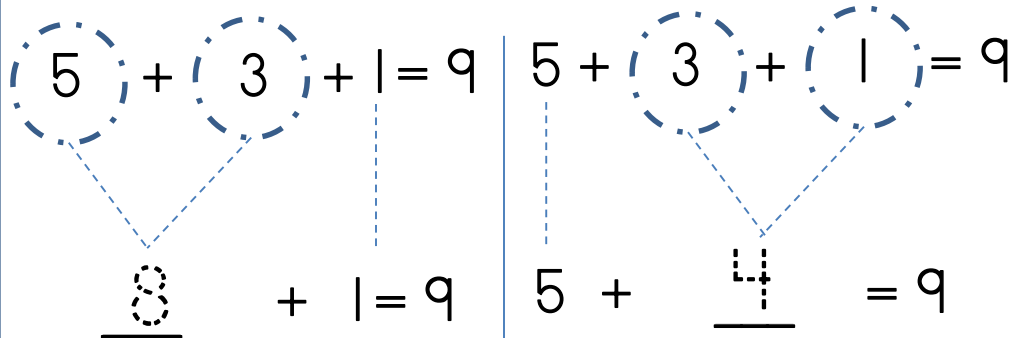


Show the greater addend in the ten frame.

Find  $9 + 6 = \underline{15}$ .

### 10. Add 3 numbers.

$$5 + 3 + 1 = 9$$



### 12. Problem solving: use addition strategies.

Toby has 8 balls. Ricco has 4 balls. Megan has 2 balls. How many balls do they have?

Unlock the Problem

What do I need to find?

how many they have

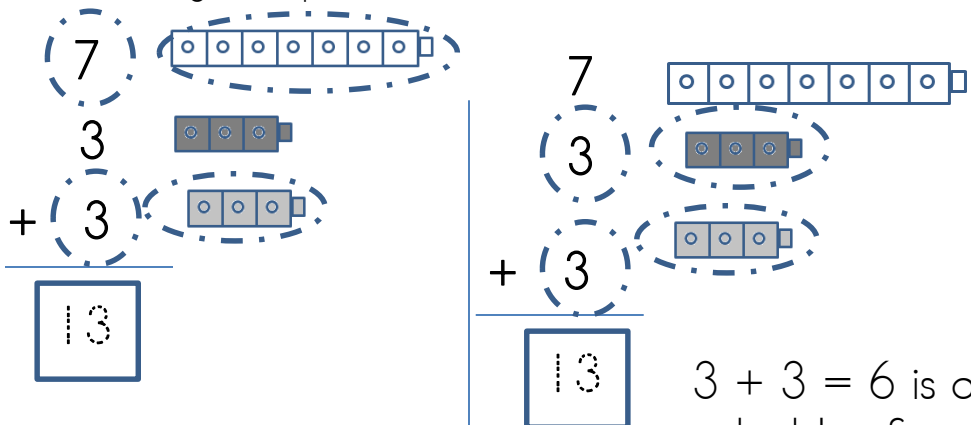
balls

What information do I need to use?

Toby has 8 balls.  
 Ricco has 4 balls.  
 Megan has 2 balls.

### 11. Use strategies to add 3 numbers.

What strategies help you add 3 numbers?  $3 + 3 + 7 = 13$



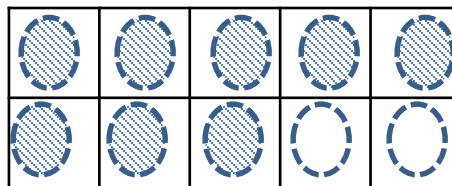
$3 + 7$  make 10

$$10 + 3 = 13$$



$$6 + 7 = 13$$

Show how to solve the problem.



$$8 + 4 + 2 =$$

Dear Parents:

Here are the strategies for mastering the unit "Subtraction Strategies." Hopefully these examples will help you to understand what your student will be asked to do on their homework assignments.

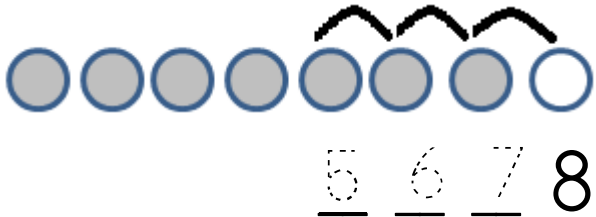
If you have any questions, please feel free to call or email.

### 1. Count back.

Count back to subtract.

Use 8 ●. Count back 3.

This shows counting back from 8 to 3.



$$9 - 3 = \underline{5}$$

### 2. Think addition to subtract.

What is  $5 - 3$ ?

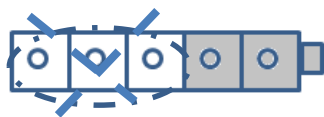
Think

$$3 + \underline{2} = 5$$



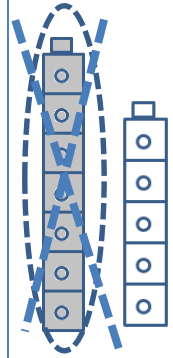
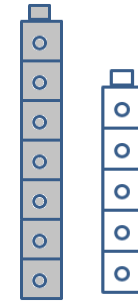
So

$$5 - 3 = \underline{2}$$



### 3. Use think addition to subtract.

Think



$$12 - 7 = \underline{\quad}$$

$$7 + \underline{5} = 12$$

$$12 - 7 = \underline{5}$$

### 4. Use ten to subtract.

Find  $14 - 7$ .

Start with 7 cubes.



Make a 10.



Add cubes to make 14.



Count what you added.

You added 7.

So,  $14 - 7 = \underline{7}$



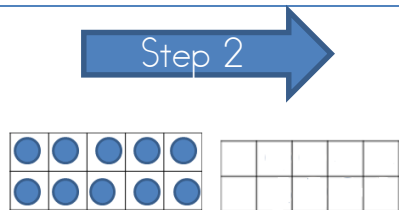
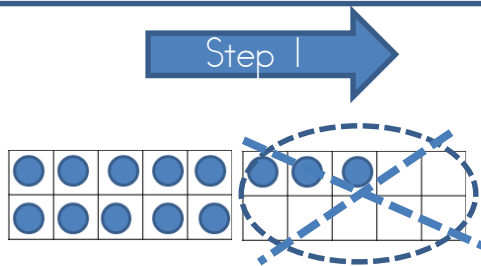
## 5. Break apart to subtract.

Find  $13 - 5$ ?Start with 13.  
Make a ten.Take 3 from 13.

$$\begin{array}{r} 13 \\ - 3 \\ \hline 10 \end{array}$$

Then take 2 more.

$$\begin{array}{r} 10 \\ - 2 \\ \hline 8 \end{array}$$

So,  $13 - 5 = 8$ .6. Problem Solving:  
Use subtraction strategies.

Emma had 15 treats. She gives some of them away. She has 7 left. How many treats did she give away?

Unlock the Problem

What do I need to find?

How many treats  
Emma gave away.

What information do I need to use?

Emma had 15 treats.  
Emma has 7 treats left.

Show how to solve the problem.

Emma gave away 8 treats.

Dear Parents:

Here are the strategies for mastering the unit "Addition and Subtraction Relationships." Hopefully these examples will help you to understand what your student will be asked to do on their homework assignments.

If you have any questions, please feel free to call or email.

### 1. Problem Solving: add or subtract.

There are 12 frogs in the pond. Some frogs hop away. There are 8 frogs still in the pond. How many frogs hopped away?

Unlock the Problem

What do I need to find? How many <b>frogs</b> hop away.	What information do I need to use? <u>12</u> frogs in the pond. <u>8</u> frogs still in the pond.
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Show how to solve the problem. 8 frogs still in the pond.

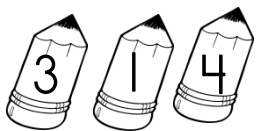
<u>4</u>	8
12	

4 hop away

12 frogs

### 2. Record related facts. (Fact Family)

Use the numbers to write four related facts.



$3 + 1 = 4$        $4 - 1 = 3$

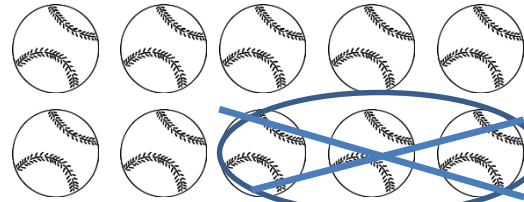


$1 + 3 = 4$        $4 - 3 = 1$

THINK  
Each number is in all four facts.

### 3. Identify related facts.

If you know an addition fact, you will also know the related subtraction fact.



Both facts use 2, 3 and 5. They are related facts.

$2 + 3 = 5$   
 $5 - 3 = 2$

### 4. Use addition to check subtraction.

You can use addition to check subtraction.

You start with 6.  
Take apart to subtract.

$6 - 2 = 4$

Add to check.  
You end with 6.

THINK  
Put the 4 and 2 back together.

$4 + 2 = 6$

### 5. Finding missing numbers. (addends)

Add or subtract to find the missing numbers.



$7 + 4 = 11$



$11 - 7 = 4$

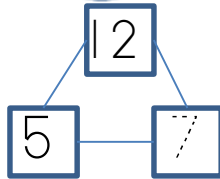
THINK  
I start with 7. I keep adding cubes until there are 11. The missing number is 4. A related fact is  $11 - 7 = 4$ .

### 6. Use related facts.

Find  $12 - 5$ .  
Use counters to help you.



THINK  
Start with 5. How many do I add to make 12?



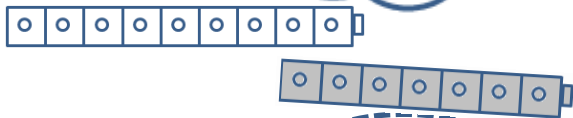
$$5 + \underline{7} = 12$$

$$12 - 5 = \underline{7}$$

### 7. Choose an operation.

Mike has 16 apples. He gives away 7 apples. How many apples are left?

THINK  
Mike gives some away. So, I subtract. Circle subtract.



add      subtract

9 apples

$$16 - 7 = \underline{9}$$

### 8. Ways to make numbers to 20.

These are some ways to make the number 12.



$$6 + 6 = 12$$



$$2 + 4 + 6 = 12$$



$$12 - 0 = 12$$

### 9. Equal and not equal.

An equal sign means both sides are the same.

$$3 + 3 = 6 - 0$$

$$3 + 2 = 5 - 2$$

THINK  
 $3 + 3 = 6$  and  $6 - 0 = 6$ .  
Is 6 the same as 6?  
yes  
It is true.

THINK  
 $3 + 2 = 5$  and  $5 - 2 = 3$ .  
Is 5 the same as 3?  
no  
It is false.

### 10. Basic facts to 20.

If you know an addition fact, you will also know the related subtraction fact.

What is  $12 - 3$ ?

THINK  
I can count back.

THINK  
I can use related facts.

Start at 12.

Count 11, 10, 9

$$3 + 9 = 12$$

$$12 - 3 = \underline{9}$$

So,  $12 - 3 = \underline{9}$

Dear Parents:

Here are the strategies for mastering the unit "Count and Model Numbers." Hopefully these examples will help you to understand what your student will be asked to do on their homework assignments.

If you have any questions, please feel free to call or email.

### 1. Count by ones to 120.

Count forward. Write the numbers.

I find 107 on the chart. 108 comes next.


107, 108, 109, 110

### 2. Count by tens to 120.

Use the Counting Chart. Count forward by tens. Start on 3.

13, 23, 33, 43, 53,  
63, 73, 83, 93,  
103, 113

### 3. Understand ten and ones.

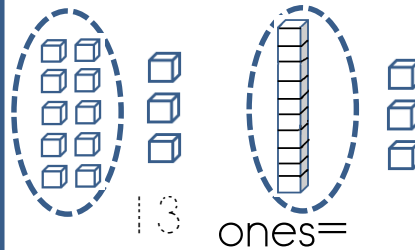
You can use  to show ten and some ones. You can write ten and ones in different ways.



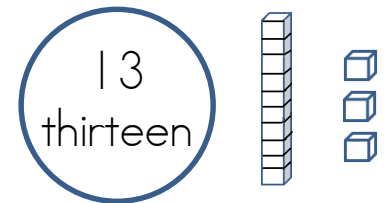
$$\begin{array}{r} \text{1 ten} \quad \text{3 ones} \\ \underline{10} \quad + \quad \underline{3} \\ 13 \end{array}$$

### 4. Make ten and ones.

You can make 1 ten with 10 .



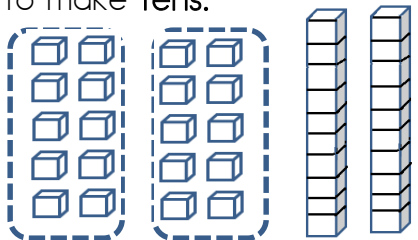
1 ten 3 ones



1 ten 3 ones

### 5. Tens.

You can put ones together to make tens.



20 ones = 2 tens

Draw to show 2 tens.



2 tens = 20

### 6. Tens and ones to 50.

You can use tens and ones to show a number.

There are 3 tens.  
There are 2 ones.  
This shows 32.

Tens	Ones

3 tens 2 ones = 32

### 7. Tens and ones to 100.

If you know the tens and ones, you can write the numbers.

There are 8 tens.  
There are 7 ones.  
This shows 87.

Tens	Ones

8 tens 7 ones = 87

### 8. Show the numbers in different ways.

How can you show the number 43 two different ways?

Unlock the Problem

What do I need to find?

two different ways to show a number.

What information do I need to use?

The number is 43.

Show how to solve the problem.

THINK: You can trade 1 ten for 10 ones

1<sup>st</sup> Way

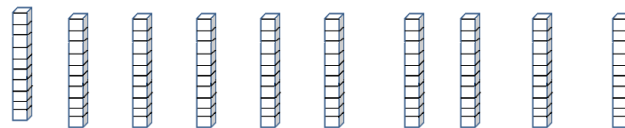
2<sup>nd</sup> Way

Tens	Ones

Tens	Ones

### 9. Model, read, and write numbers from 100 to 120.

What is 10 tens and 3 more?

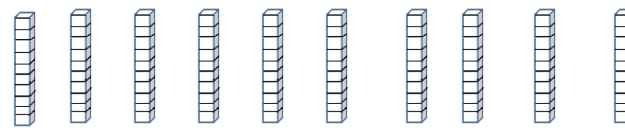


Count by tens. Then count by ones.

10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 101, 102, 103,

10 tens and 3 more = 103

What is the number?



Count by tens. Then count by ones.

10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 111, 112

The number is 112

### 3. Use symbols to compare.

You can use symbols to compare numbers.



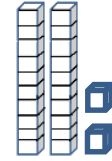
$$12 < 14$$

This symbol means  
is less than.



$$14 = 14$$

This symbol means  
is equal to.



$$22 > 14$$

This symbol means  
is greater than.

### 4. Compare numbers.

Jean has the number cards shown. She gives away the cards with numbers less than 5 and greater than 8. Which cards does Jean have now?



Unlock the Problem

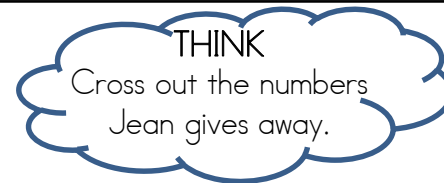
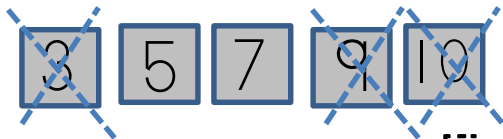
What do I need to find?

The number cards that Jean has now.

What information do I need to use?

Number cards  $< 5$   
and  $> 8$

Show how to solve the problem.



Jean has the number cards 5 and 7.

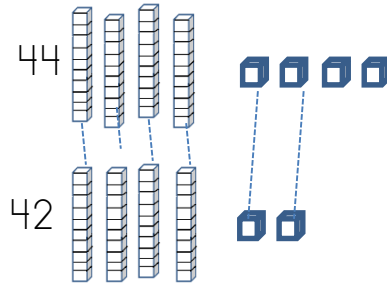
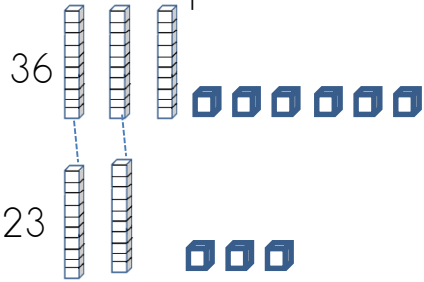
Dear Parents:

Here are the strategies for mastering the unit "Compare Numbers." Hopefully these examples will help you to understand what your student will be asked to do on their homework assignments.

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### 1. Greater than.

You can compare numbers to find out which is greater.



$$\underline{36} \text{ is greater than } \underline{23}.$$

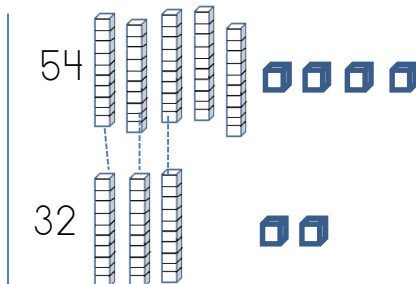
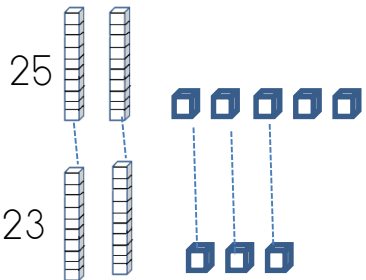
$$\underline{36} > \underline{23}$$

$$\underline{44} \text{ is greater than } \underline{42}.$$

$$\underline{44} > \underline{42}$$

### 2. Less than.

You can compare numbers to find out which is less.



$$\underline{23} \text{ is less than } \underline{25}.$$

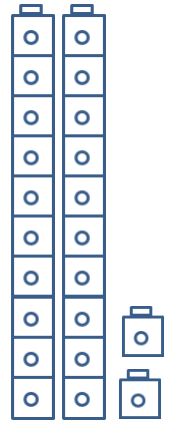
$$\underline{23} < \underline{25}$$

$$\underline{32} \text{ is less than } \underline{54}.$$

$$\underline{32} < \underline{54}$$

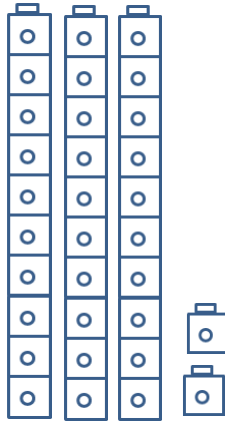
## 5. Ten less, ten more.

22 is 10 less than 32.

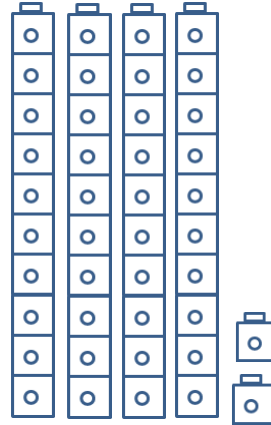


22

42 is 10 more than 32.



32



42

Dear Parents:


Here are the strategies for mastering the unit "Two-Digit Addition and Subtraction." Hopefully these examples will help you to understand what your student will be asked to do on their homework assignments.

If you have any questions, please feel free to call or email.

### 1. Add tens.

What is  $10 + 40$ ?



Use .  
Start with 1 ten.  
Add 4 more tens.  
Draw the tens.




1 ten + 4 tens = 5 tens

$10 + 40 = \underline{50}$

### 2. Subtract tens.

What is  $60 - 20$ ?



Use .  
Start with 6 tens.  
Take away 2 tens.  
Draw the tens.



6 tens + 2 tens = 4 tens

$60 - 20 = \underline{40}$

### 3. Use a hundred chart to add.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

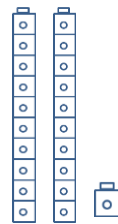
Start at 22. Move to the right to count on 3 ones. Count

23, 24, 25,  
 $22 + 3 = \underline{25}$

Start at 48. Move down to count on 3 tens. Count

58, 68, 78,  
 $48 + 30 = \underline{78}$

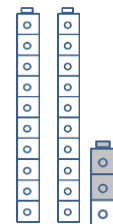
### 4. Use models to add.



21

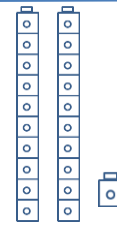


2

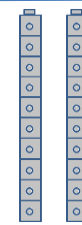


$21 + 2 = \underline{23}$

THINK.  
Draw 2 tens and 3 ones.

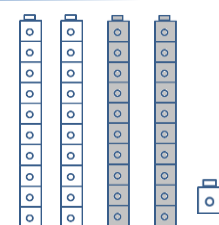


21



+

20



$21 + 20 = \underline{41}$

THINK.  
Draw 4 tens and 1 one.



## 5. Make Ten to Add.

What is  $16 + 7$ ?

Step 1

Use .

Show 16.

Use .

Show 7.

Step 2

Make a ten.

Step 1

Add.

$$20 + 3 = \underline{23}$$

$$\text{So, } 16 + 7 = \underline{23}$$

## 7. Problem Solving.

Melanie picks 17 apples.

Joshua picks 6 apples.

How many apples do they pick?

Unlock the Problem

What do I need to find?

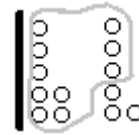
How many apples they picked in all.

What information do I need to use?

Melanie picked 17 apples.

Joshua picked 6 apples.

Show how to solve the problem.



Count on ones

Make a ten

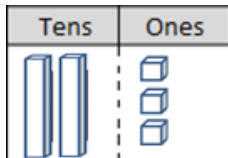
Add tens and ones

23 apples

## 6. Use Place Value to Add.

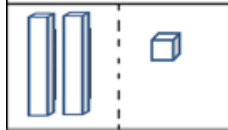
You can use tens and ones to help you add.

Show 23. →



Add 23 and 21.

Show 21. →



How many tens?

$$2 \text{ tens} + 2 \text{ tens} = \underline{4} \text{ tens}$$

How many ones?

$$3 \text{ ones} + 1 \text{ one} = \underline{4} \text{ ones}$$

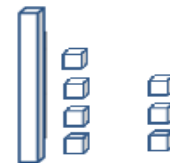
$$\begin{array}{r} \underline{4} \text{ tens} + \underline{4} \text{ ones} \\ 40 + 4 = 44 \end{array}$$

$$\begin{array}{r} 23 \\ + 21 \\ \hline 44 \end{array}$$

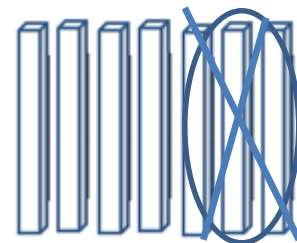
## 8. Practice addition and subtraction.

You can use models to add and subtract.

$$14 + 3 = \underline{17}$$



$$70 - 30 = \underline{40}$$



Dear Parents:

Here are the strategies for mastering the unit "Measurement." Hopefully these examples will help you to understand what your student will be asked to do on their homework assignments.

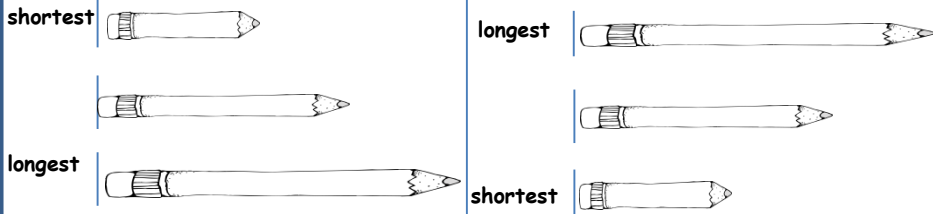
If you have any questions, please feel free to call or email.

### 1. Order length.

You can put objects in order by length.

These pencils are in order from **shortest** to **longest**.

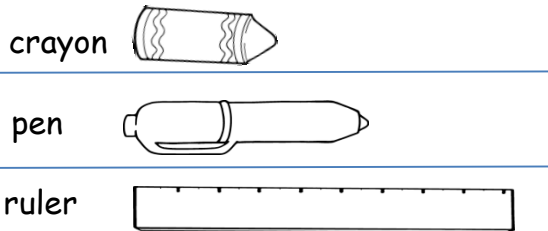
These pencils are in order from **longest** to **shortest**.



### 2. Indirect measurement.

Clue 1: A crayon is shorter than a pen.  
Clue 2: The pen is shorter than a ruler.

Is the crayon shorter or longer than the ruler?




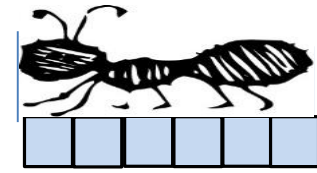
Draw clue 1.  
Draw clue 2.  
Then compare the crayon and the ruler.

So, the crayon is shorter than the ruler.

### 3. Use nonstandard units to measure length.

You can use  to measure length.

Line up the .



Count how many.

About 6 

### 4. Use a nonstandard measuring tool.

About how long is the ribbon?  
Count to measure.



10

Count on by ones.

About 15 



# 5. Measure and compare.



Unlock the Problem



What do I need to find first?  
Order the ribbons from shortest to longest

What information do I need to use?  
Measure the ribbons using paper clips.

Show how to solve the problem.

shortest  about 4 

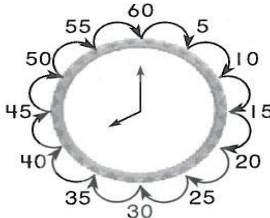

 about 6 

longest  about 8 

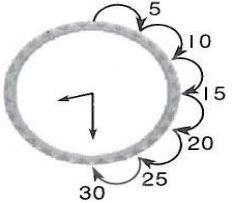
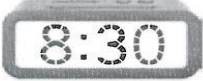
# 8. Tell time to the hour and half hour.

The short hand is the hour hand.  
It shows the hour.  
The long hand is the minute hand.  
It shows the minutes after the hour.

There are 60 minutes in one hour.

There are 30 minutes in a half hour.

# 6. Time to the hour.

Look at the hour hand.  
The hour hand points to the 8.  
It is 7:00.



# 9. Practice telling time to the hour and half hour. Draw the minute hand.

The hour hand points to 8.  
The minute hand points to 12.



8:00

The hour hand points between 8 and 9. The minute hand points to 6.



8:30

# 7. Time to the half hour.

The hour hand points halfway between the 9 and the 10.  
It is half past 9:00.



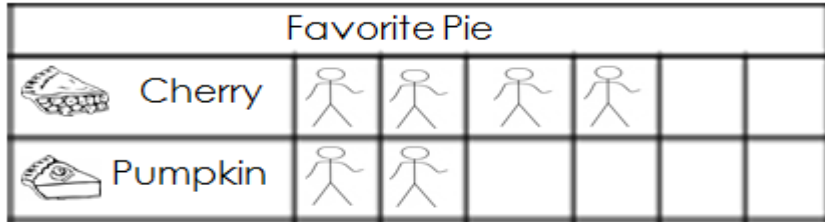
Dear Parents:

Here are the strategies for mastering the unit "Represent Data." Hopefully these examples will help you to understand what your student will be asked to do on their homework assignments.

If you have any questions, please feel free to call or email.

1. Read pictographs and answer questions.

A picture graph uses pictures to show how many. Count the  in each row.



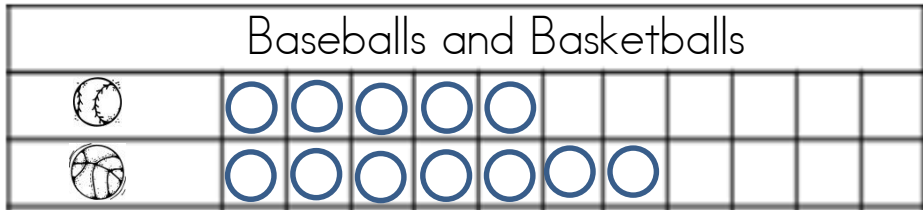
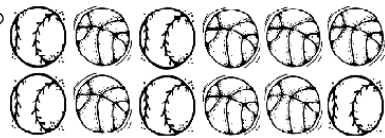
Each  stands for 1 child.

There are 4 children who chose .

There are 2 children who chose .

2. Make pictographs.


Are there more baseballs or basketballs? Complete the picture graph to find out.

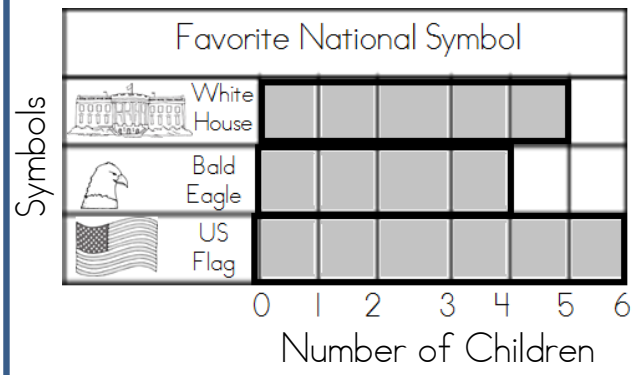


Each  stands for 1.

3. Read a bar graph and answer questions.

A bar graph uses a bar to show how many.

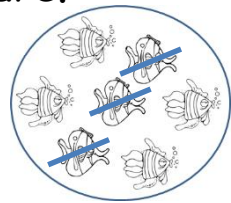
This graph shows 6 children chose .



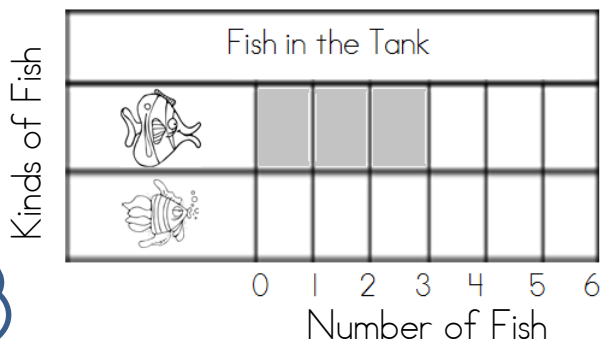
The longest bar shows the National Symbol that the most children chose.

4. Make a bar graph and answer questions.



Make a bar graph to show the fish in the picture.





Cross out each fish as you add it to the graph.



### 5. Read tally charts.

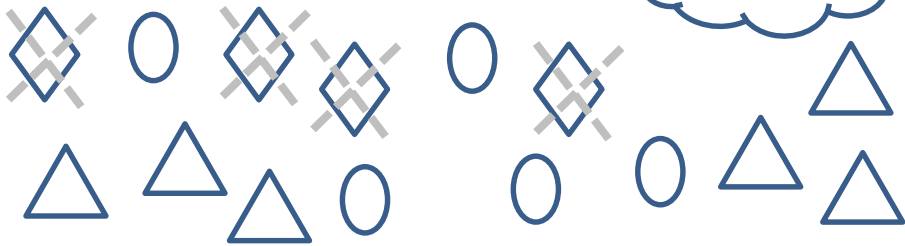
Some children named their favorite snack.  
 Each  stands for 1 child.  
 Each  stands for 5 children.

Our Favorite Snack		Total
 popcorn		3
 pretzels	<del>    </del>	8




More children like pretzels.

### 6. Make a tally chart and answer questions.

The picture shows shapes.  
 Make a tally chart to show how many there are of each shape.

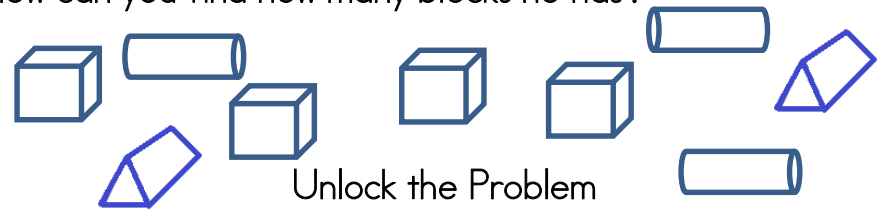


Cross them out as you count.

Shapes		Total
 rhombus		4
 triangles	<del>    </del>	6
 ovals		5

### 7. Problem Solving: Represent Data.

Enrique has these blocks to build a tower.  
 How can you find how many blocks he has?






Unlock the Problem

What do I need to find?

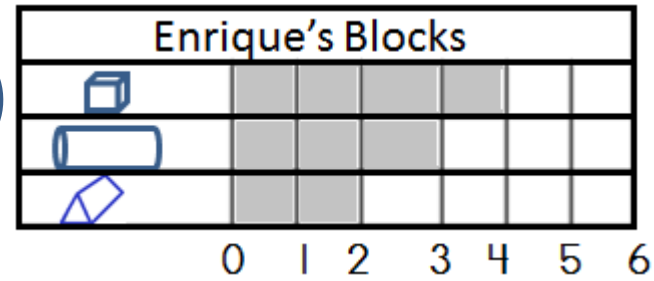
How many blocks  
 Enrique has.

What information do I need to use?

The number of ,  
, and  in  
 the picture.

Show how to solve the problem.

Color the first bar to show there are 4 cubes. Then do the other two shapes.



Use the graph. Write how many. Add to solve.

1.  $4$   +  $3$   +  $3$   =  $10$

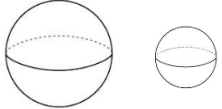
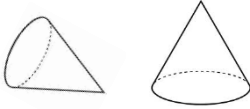


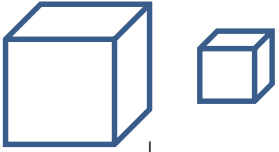
How many blocks does Enrique have? 10 blocks.

Dear Parents:

Here are the strategies for mastering the unit "Three-Dimensional Shapes." Hopefully these examples will help you to understand what your student will be asked to do on their homework assignments.

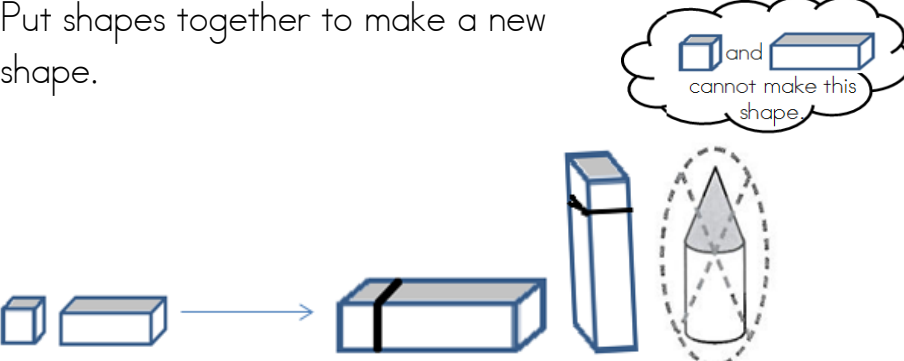
If you have any questions, please feel free to call or email.

### 1. Three-dimensional shapes.



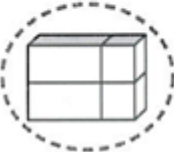

<p>curved surfaces</p>  <p>sphere</p>	<p>curved and flat surfaces</p>  <p>cone</p>	 <p>cylinder</p>
<p>flat surfaces</p>		
 <p>rectangular prism</p>	 <p>cube</p>	

### 2. Combine three-dimensional shapes.


Put shapes together to make a new shape.




### 3. Make new three-dimensional shapes.

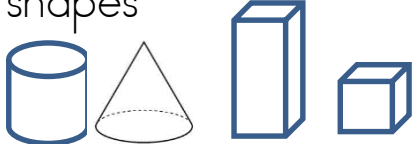
<p>Build a shape.</p> 	<p>Copy the shape.</p> 
<p>Combine them. Circle a new shape you can make.</p>	
	
<p>You cannot make this new shape. The first shapes did not stay the same.</p>	

### 4. Take apart three-dimensional shapes.

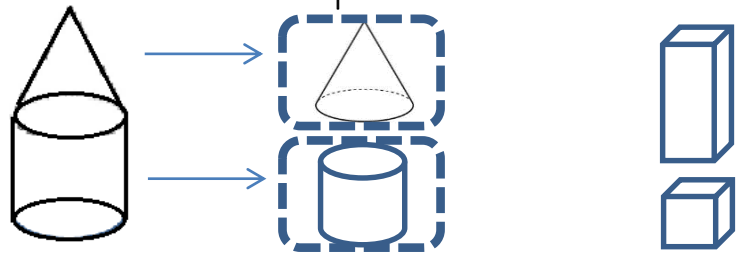
Pedro has . He built a tower. Which shapes did he use to build the tower?



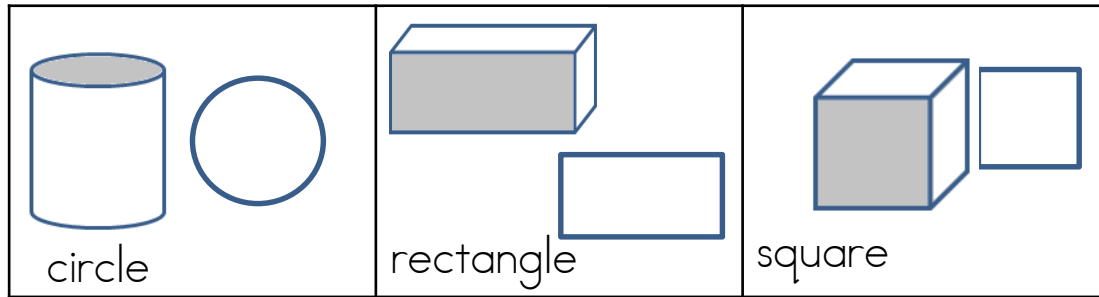
Unlock the Problem

<p>What do I need to find?</p> <p>Which <u>shapes</u></p> <p>Pedro used to build his tower.</p>	<p>What information do I need to use?</p> <p>Pedro has these shapes</p> 
---	--

Show how to solve the problem. Find the matching shapes.



## 5. Two-dimensional shapes on three-dimensional shapes.



Three-dimensional shapes are also referred to as "3-D Shapes" and "Solid Shapes."



rectangular prism



sphere



cone



cylinder



pyramid



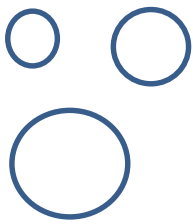
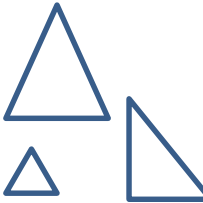
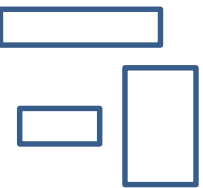
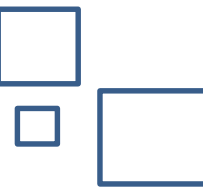
cube

Dear Parents:


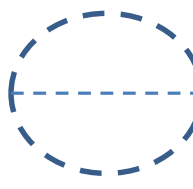

Here are the strategies for mastering the unit "Geometry." Hopefully these examples will help you to understand what your student will be asked to do on their homework assignments.

If you have any questions, please feel free to call or email.

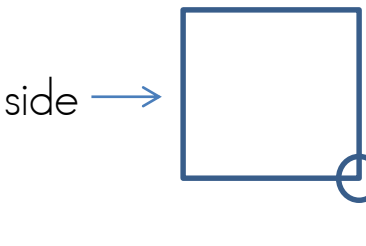
### 1. Sort two-dimensional shapes.

 <p>Circles are curved and closed</p>	 <p>Triangles have 3 sides and 3 vertices</p>	 <p>Rectangles have 4 sides and 4 vertices.</p>	 <p>A square is a special kind of rectangle</p>
---	--	--	--


### 4. Combine more shapes.

<p>2 Shapes</p> 	<p>Combine</p> 	<p>New Shape</p> 
--	--	--




### 2. Describe two-dimensional shapes.





This shape has 4 straight sides and 4 vertices.




### 5. Describe two-dimensional shapes.

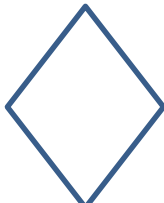
Juan wants to use  to make a . How many  does he need?


Unlock the Problem

What do I need to find?  
How Juan can make a  using 

What information do I need to use?  
Juan uses 

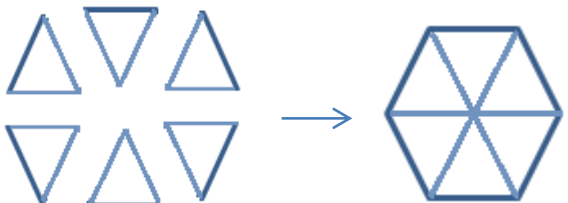
Show how to solve the problem.




2 make a .

### 3. Combine two-dimensional shapes.

You can put shapes together to make a new shape.

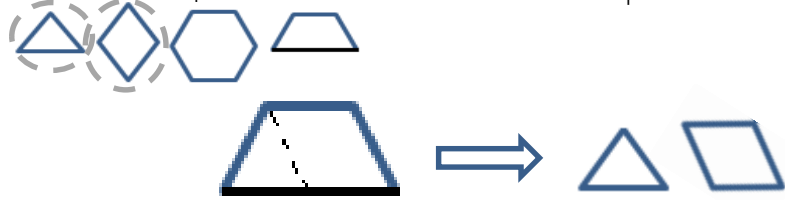


6 make a .





### 6. Decompose combined shapes into shapes.

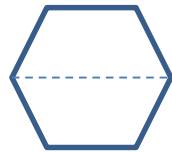
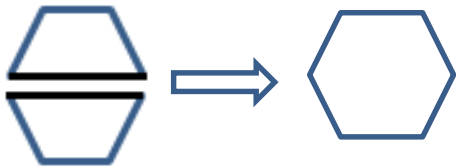
Which two pattern blocks make this shape?



### 7. Decompose plane shapes into parts.

Use 2  to find parts of a .

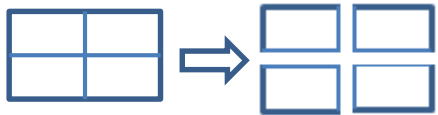
Draw a line to show the parts.



### 8. Equal or unequal parts.

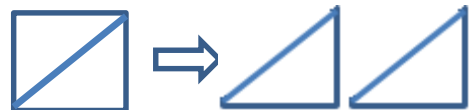
Equal Parts or Equal Shares

The parts are the same size.



Unequal Parts or Unequal Shares

The parts are not the same size.



### 9. Halves.

How can you show halves?



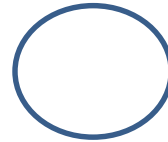
1 whole



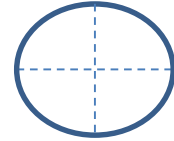
2 equal shares  
or  
2 halves

### 10. Fourths.

How can you show fourths?



1 whole



4 fourths  
or  
4 quarters  
or  
4 equal shares



hexagon



triangle



rhombus



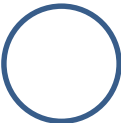
trapezoid



rectangle



square



circle