Introduction to Basic Math Skills

Our math curriculum

T.W. math skills and Singapore Math is a curriculum developed for K through beginning 2nd grade.

Our curriculum is grounded in basic math concepts. There are 70 topics. Each is built on a spiraling strategy. New standard based concepts are first introduced, then reinforced and reviewed.

Primary Objective

Tutors may find the beginning five to ten topics too easy for your learners. Please do not skip through. It is a good time to review. We are moving our learners to rely on their visual input instead of their language. This new learning experience will enhance their future success in math. (this will be further explained in the future.) Our primary Objective is to develop thinking skills.

Each topic integrates into another, building on concepts in a continuous process (spiraling strategy). Each topic includes a lesson with instruction / explanation for the tutors, followed by a practice page / pages for the learners. Answer keys, solutions and sometimes more in depth instructions will be posted on YouTube. It is strongly recommended that students complete their printout pages with or without tutor assistance first before watching our video.

Singapore Math

The Singapore model drawing here is taken from Char Forsten's "Singapore Math" (2010). According to Ms. Forsten, Singapore Math is special because it includes the learner's prior knowledge. It involved fewer, slower, but deeper concepts. It spirals to the next level of complexity. Children learn the inverse relationships of numbers, compose and decompose them. It is highly coherent and logical.

At the core is model drawing. It is a form of organized approach to learn how to read and translate word problems into models.

"Singapore Math" is developed by the Curriculum Planning and Development Institute of Singapore and approved by Singapore's Ministry of Education. Let's move on and start Topic 1.

Contents

Topic 1 Number Sense

Number sense is making sense of numerical situations.

whole numbers are:

0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

write

0

1

2

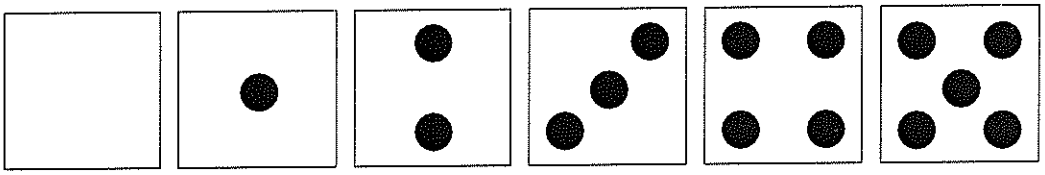
3

4

5

We use numbers to tell "How much" and "How many".

We can show how many in many ways



0 1 2 3 4 5

write

6

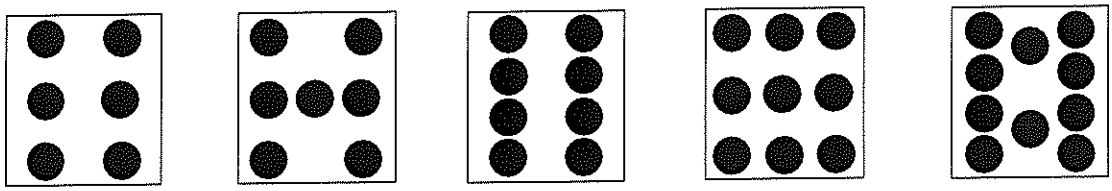
7

8

9

10

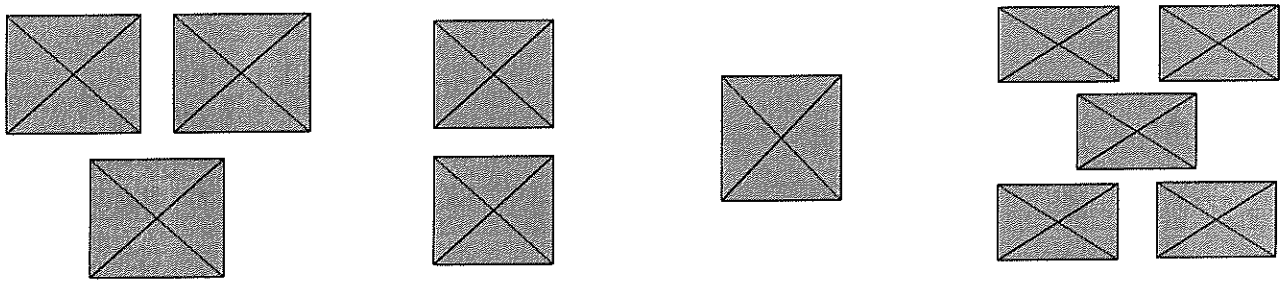
Name: **Date:**



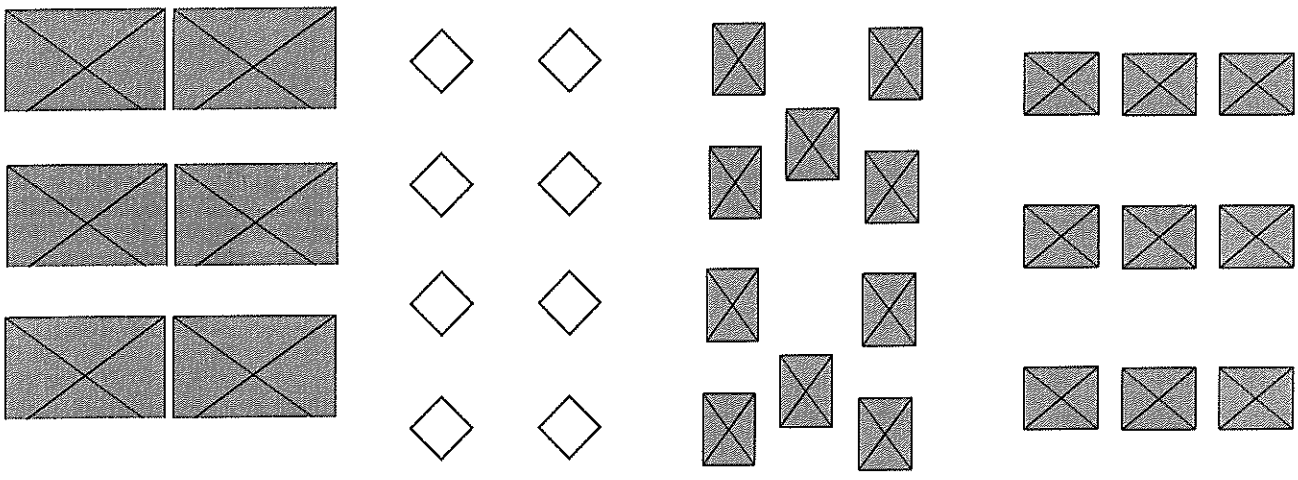
6 7 8 9 10

We can make equal groups with numbers and objects (things).
Equal means the same number in each group.

Count the objects.
Write the equal number



_____ _____ _____ _____



_____ _____ _____ _____

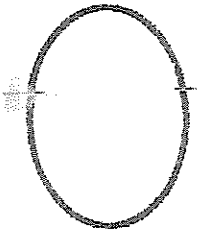
Name: **Date:** P2

Topic 2 Geometric Shapes

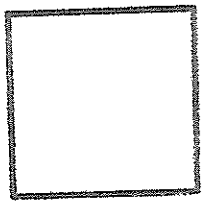
Geometry, the study of shapes, helps us see the real world.

Plane shape has sides and corners. This is a straight line: _____

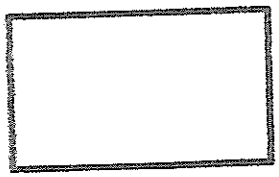
Circle–round, no corner



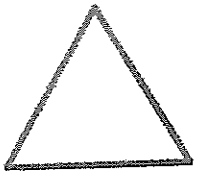
Oval – round, no corner



Square– 4 equal sides
4 corners



Rectangle– 4 sides
opposite sides equal
4 corners



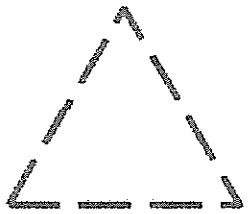
Triangle– 3 sides
3 corners

Name: Date: P3

Trace the triangle.

How many sides? _____

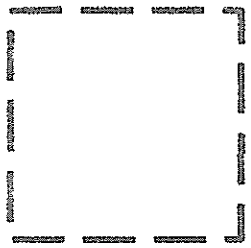
How many corners? _____



Trace the square.

How many sides? _____

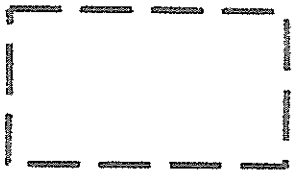
How many corners? _____



Trace the rectangle.

How many sides? _____

How many corners? _____



Trace the circle.

The line is _____

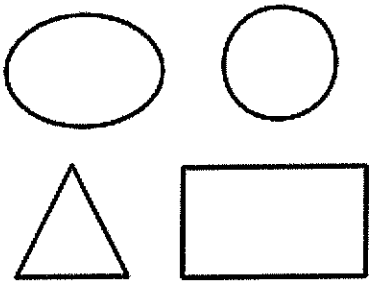
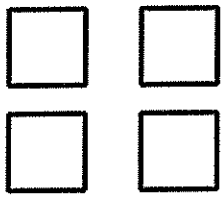
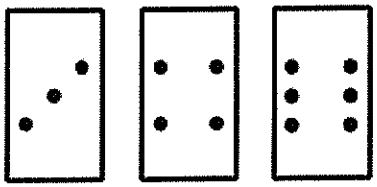
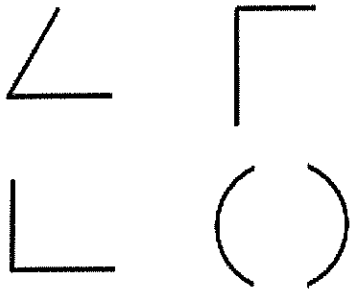
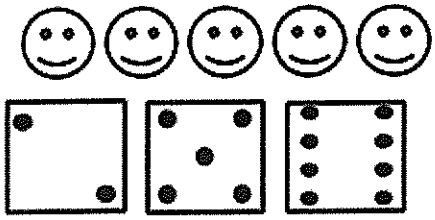
Trace the oval.

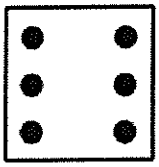
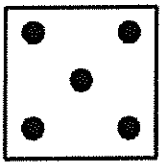
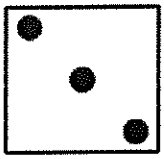
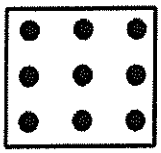
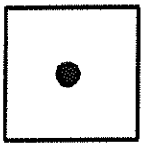
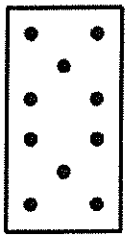
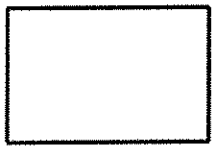
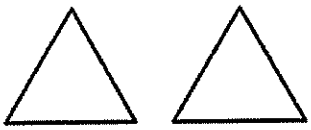
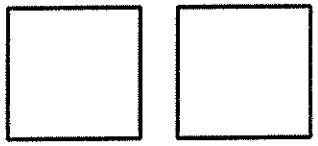
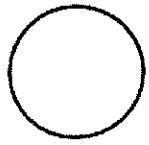
The line is _____

Position Words

Left	Right	Outside	Inside	Above / Below

Name: Date: P4

Color the circle. 	Write the missing number. ___ , 3 , 4 , 5	How many?  ___
Write the numbers.  ___ ___ ___	Complete the shapes. 	Write the missing numbers. 7, ___ , 9, ___
Circle the equal number of stars.  2 4 5 6	Write the missing numbers. 2, ___ , 4, ___	Write a 5 above the triangle. 
Circle the equal number of smiling faces. 	Write the missing numbers. ___ , 1, 2, ___	Write the missing numbers. 6, ___ , 8, ___
1 2 3 4 5 6 7 8 9 10		
Name:		**Date:**

Draw a circle.	Draw a triangle.	Draw a square.
How many dots?  ____	How many dots?  ____	How many dots?  ____
How many dots?  ____	How many dots?  ____	How many dots?  ____
Draw the dot patterns.  4	Draw the dot patterns.  6	Draw the dot patterns.  8
Put an X on the right triangle. 	Put an X on the left square. 	Put a number 10 above the circle. 
11 12 13 14 15 16		

Topic 3
More Than and Less Than

More than means greater than.
Less than means lesser or smaller.

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6 is 1 more than 5
5 is 1 less than 6

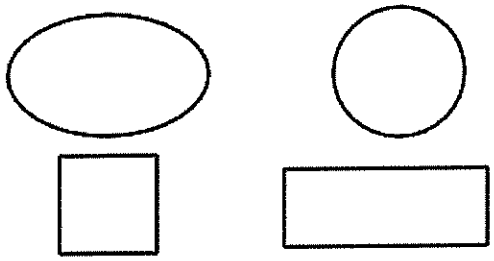
Least is the smallest number.
Greatest is a number with the Largest value.
Between is the number in the middle.

2	6	10
least	between	greatest

4	8	12
l _ _ _ _	be _ _ _ _ _	gr _ _ _ _ _ _ _
10	14	16
_ _ _ _ _	_ _ _ _ _ _ _	_ _ _ _ _ _ _ _ _

Name: Date: 7

Color the oval.



Write the missing numbers.

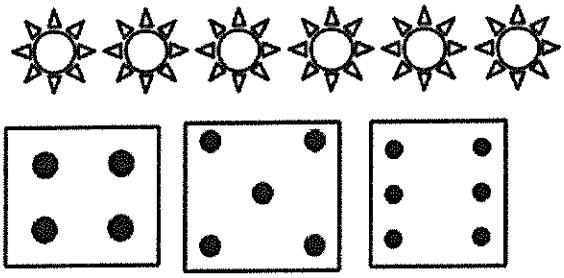
6, 7, ___ , ___ , ___

How many stars?

___

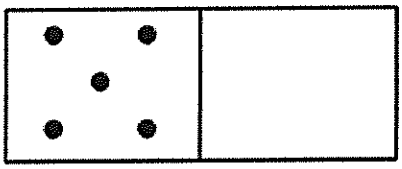
Draw a square.

Circle the equal pattern.



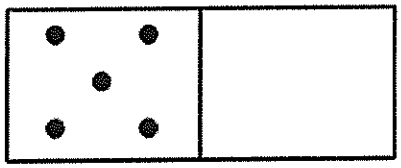
Add the dot to make 6.

6



Add 2 more to make 7.

7



Place the numbers.

10, 8, 6

___ ___ ___

Least Between Greatest

Write a number 8 on the right.
Write a number 9 on the left.

___ ___

Draw a circle on the left.
Draw an oval on the right

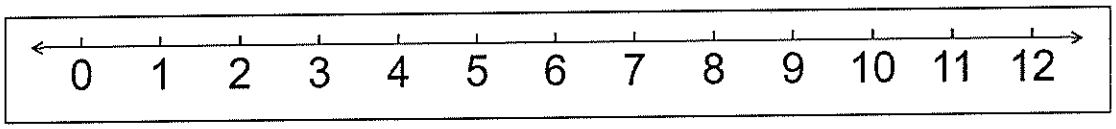
___ ___

9

10

Topic 4
Ordering Numbers to 12 With a Number Line

A number line shows numbers in order from least to greatest, (the most).
Order means how one thing follows another.



Before: 8 comes <u>before</u> 9
After: 6 comes <u>after</u> 5
Between: 2 is <u>between</u> 1 and 3

5 is _____ 6

2 is _____1

10 is _____ 12

11 is _____ 10

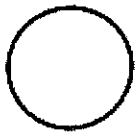
7 is _____6 and 8

8 is _____ 7 and 9

Order words: first, next, last

0	1	2
first	next	last
6	_____	_____
first	next	last
_____	_____	9
first	next	last

Write the number 8 inside the circle.



Write the number 10 outside the circle.

Write the number 10 above the rectangle.

Write the number 11 before the rectangle.

Draw a shape with 4 equal sides.

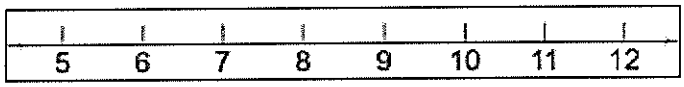
Draw a shape with equal opposite sides.

12 6 2

_____ _____ _____

greatest between least

Before / after

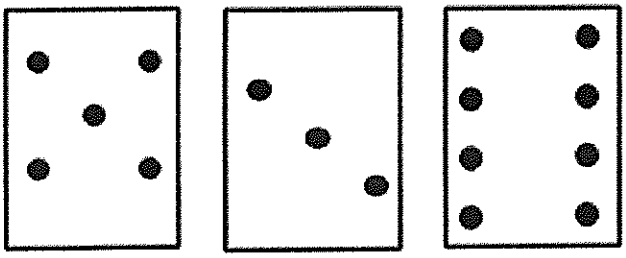


5 is _____ 9

7 is _____ 6

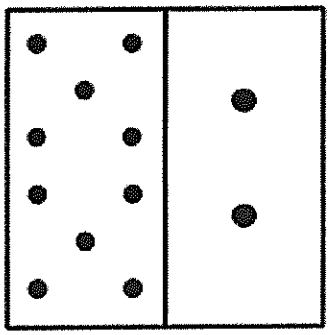
10 is _____ 8

Circle the most.



How many?

_____



Write 3 more times.

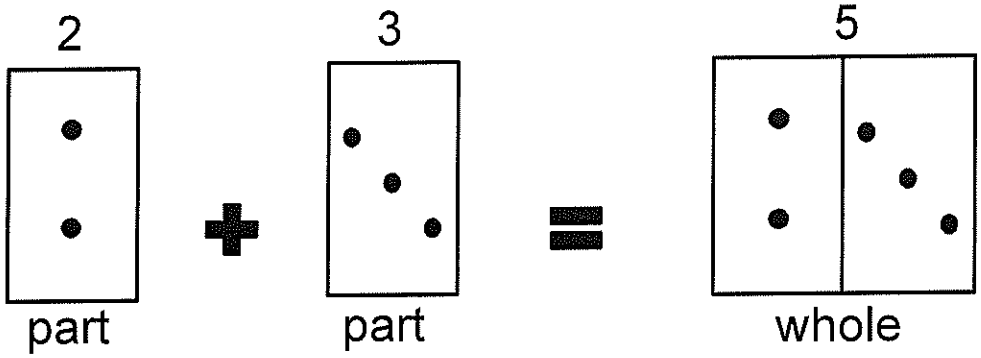
11 _____ _____ _____

Write 3 more times.

12 _____ _____ _____

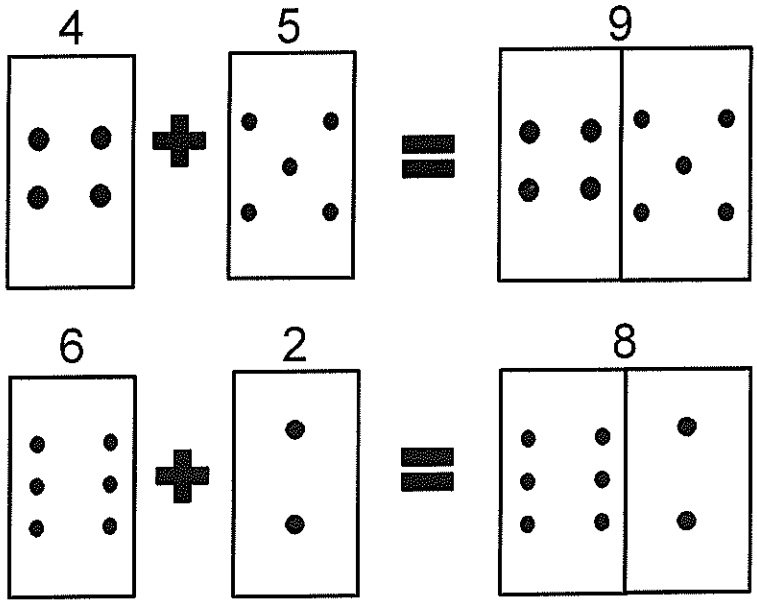
Topic 5
Understanding Addition

Addition means putting groups together.
When we add, we join or combine two groups.



We look at the groups as a part, then joined groups as the whole.

Addition is part + part → whole



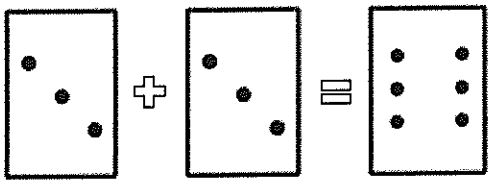
Addition Sentence

equal sign

10 + 2 = 12 ⇦ sum

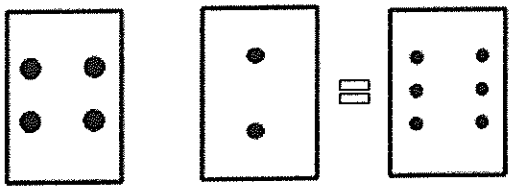
add or plus sign

Use the dots to add.



____ ____ = ____

Use the dots to add.



____ ____ = ____

Place the numbers.

12 14 13

_____ _____ _____

least between greatest

Place the numbers.

9 4 6

_____ _____ _____

first next last

Circle the number before 6.

4 5 6 7

Circle the number after 10.

8 9 10 11

Draw a circle. Write number 12 above it.

Draw a triangle. Write number 13 below it.

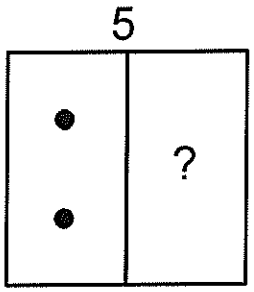
Write 3 more times.

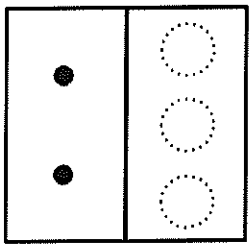
11 ____ ____ ____

Write 3 more times.

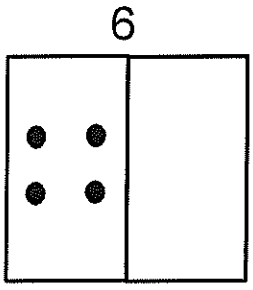
12 ____ ____ ____

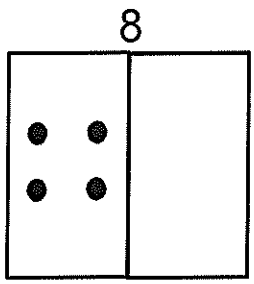
Addition means joining parts to make a whole.
Subtraction means separating parts from a whole. (ie. What is the missing part?)

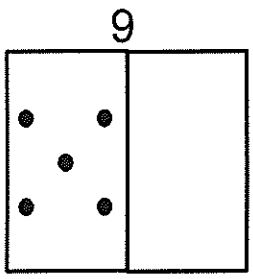


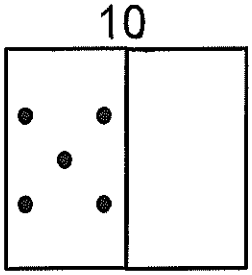


Draw the missing dot pattern.

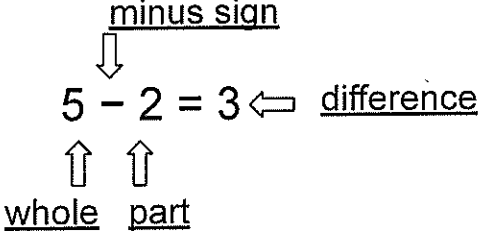








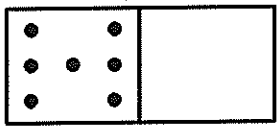
Subtraction Sentence:



Date: Day of the week:

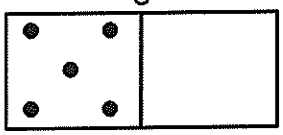
Use the dot patterns. Write the subtraction sentences:

10



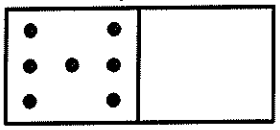
10 − ____ = ____

8



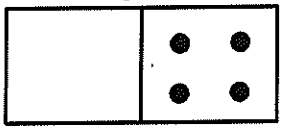
8 − ____ = ____

7



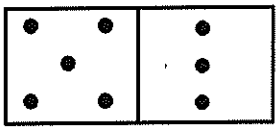
____ − ____ = ____

6

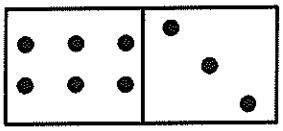


____ − ____ = ____

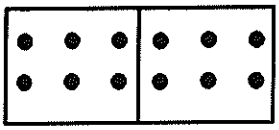
Use the dot patterns. Write the addition sentences:



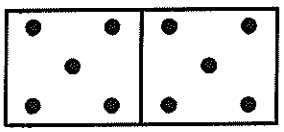
____ + ____ = ____



____ + ____ = ____



____ + ____ = ____



____ + ____ = ____

Draw a shape with 4 equal sides. It is a <u>square</u>.

Draw a shape with equal opposite sides. It is a <u>rectangle</u>.

Write 3 more times.

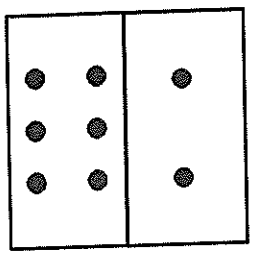
13 ____ ____ ____

Write 3 more times.

14 ____ ____ ____

Addiition and subtraction facts are related.
We call this an inverse relationship.
Every addition fact has a related subtraction face. (Fact family).

8 (whole)



(part) (part)

Fact Family

6 + 2 = 8
8 − 2 = 6

This fact family has the same three numbers.

8 6 2

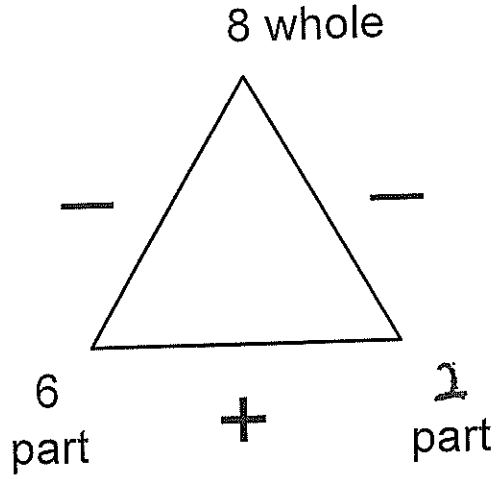
We can look at these facts in a triangle.

6 + 2 = 8

2 + 6 = 8

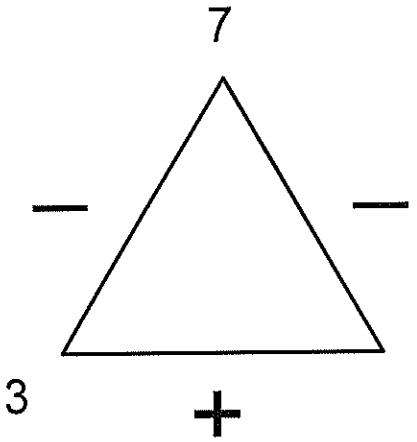
8 − 2 = 6

8 − 6 = 2



Date: Day of the week:

Try this related facts or fact family.



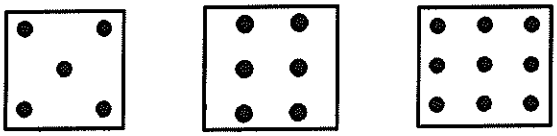
____ + ____ = ____

____ + ____ = ____

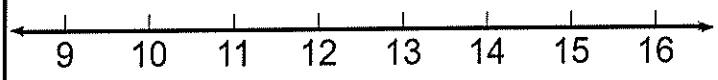
____ - ____ = ____

____ - ____ = ____

Circle the most.

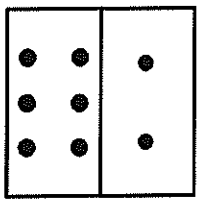


Before / After



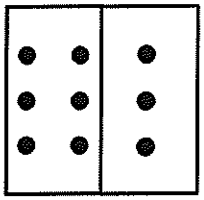
12 is _____ 15

Write addition and subtraction related facts.



____ + ____ = ____

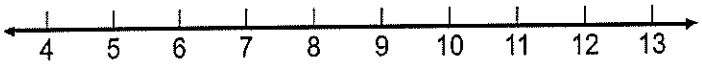
____ - ____ = ____



____ + ____ = ____

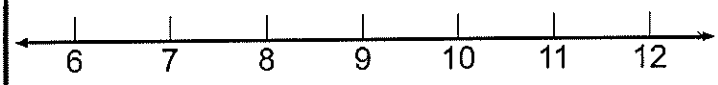
____ - ____ = ____

Counting backward on the number line.



13 ____ ____ ____

Counting 2 more on the number line.



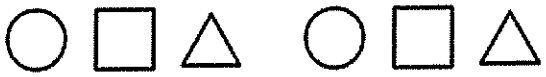
6 ____ ____

15

16

Topic 8: Patterns

Patterns form the basis of our entire number systems.
Repeating Patterns: In a repeating pattern, a unit repeats again and again.
Pattern Unit: The part that keeps repeating.
Predicting patterns: the unit of a pattern can be used to predict what comes next and extend the pattern.

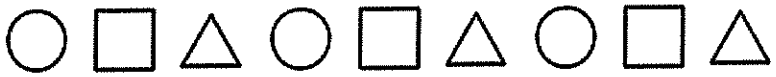
Pattern repeats: 

c s t c s t

Pattern unit:  is a unit

c s t is a unit

Practicing or extending a pattern



c s t c s t c s t ___ ___ ___

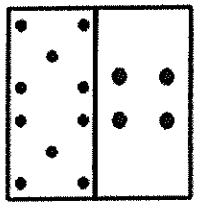
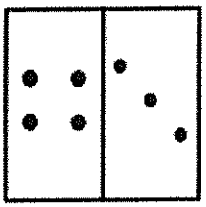
___ ___ ___

Circle the pattern unit and extend the pattern

 ___ ___ ___ ___ ___ ___

 ___ ___ ___ ___ ___ ___

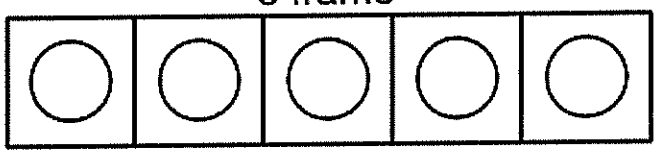
Date: Day of the week:

11 16 8 _____ _____ _____ Least between greatest	6 is before _____ 9 is after _____
Draw an oval, write number 16 on the left.	Circle the most 16 10 2
Circle the pattern unit. Extend the pattern. ABC ABC ABC _____ _____ _____	Circle the pattern unit. Extend the pattern. ✱ 0 0 ✱ 0 0 _____ _____ _____
Write related facts 14  10 4 ____ + ____ = _____ ____ − ____ = _____	Write related facts 7  ____ + ____ = _____ ____ − ____ = _____
Count backward from 14 _____ _____ _____ _____ 9	Count forward from 15 _____ _____ _____ 19
Count 2 more from 10 _____ _____	Count 4 more from 12 _____ _____ _____ _____
Write 17	Write 18

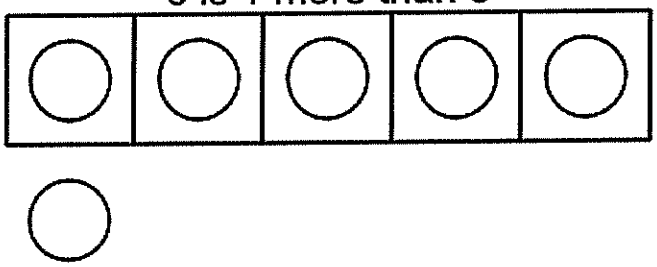
Topic 9: Five and Ten Frames

We use 5 and 10 frames for written and mental computation. 5 and 10 frames can help us with addition and subtraction.

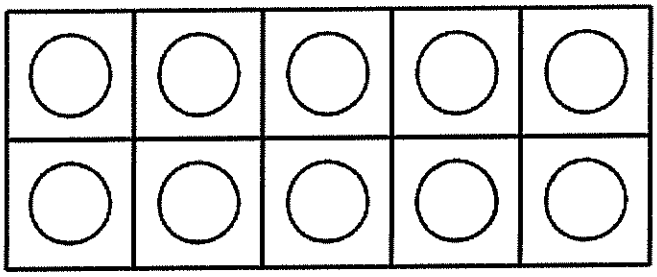
5 frame



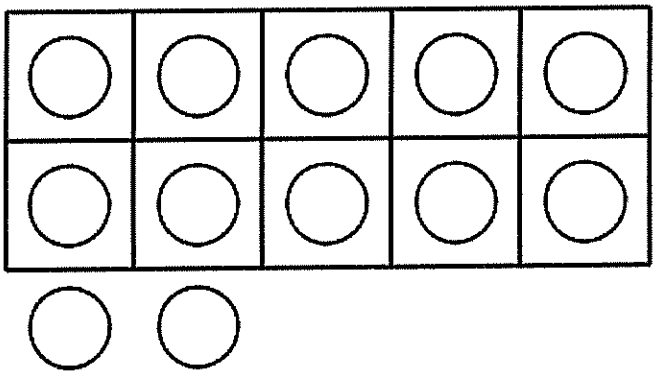
6 is 1 more than 5



10 frame

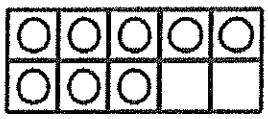


12 is 2 more than 10



Date: Day of the week:

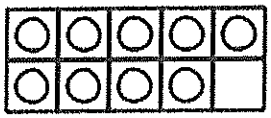
Count from 5 to find the number:



5

6, 7, 8

8 is ____ more than 5

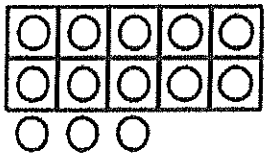


5

___, ___, ___, ___

____ is 4 more than 5

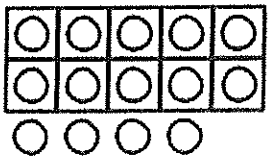
Count from 10 to find the number:



10

11, ___, ___

13 is _____ more than 10

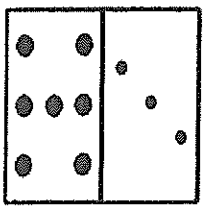


10

___, ___, ___, ___

_____ is 4 more than 10

Write related facts



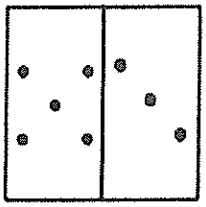
10

7 3

____ + ____ = _____

____ – ____ = _____

Write related facts



8

____ + ____ = _____

____ – ____ = _____

Circle the pattern unit. Extend the pattern.

1 2 3 1 2 3 _____ _____ _____

Draw an oval. Write 20 outside the shape.

Circle the most.

19 10 6

15 20 19

_____ _____ _____

Least between greatest

Write

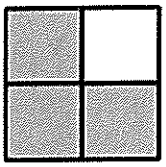
19

Write

20

Topic 10: Addition and Subtraction facts 2, 3, 4

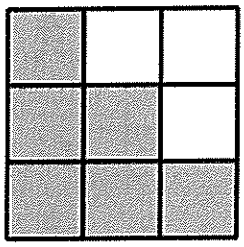
2



part	part	whole
1	1	2
2	0	2

whole	
2	− 1 = 1
2	− 2 = 0

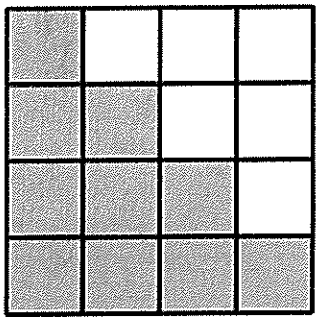
3



part	part	whole
1	2	3
2	1	3
3	0	3

whole	
3	− 1 = 2
3	− 2 = 1
3	− 3 = 0

4



part	part	whole
1	3	4
2	2	4
3	1	4
4	0	4

whole	
4	− 1 = 3
4	− 2 = 2
4	− 3 = 1
4	− 4 = 0

There are 2 different ways to write addition and subtraction facts:

<u>Vertical</u> and <u>Horizontal</u>

Write the horizontal facts.

1 + 2 = 3

2 + 2 =

4 − 4 =

3 − 2 =

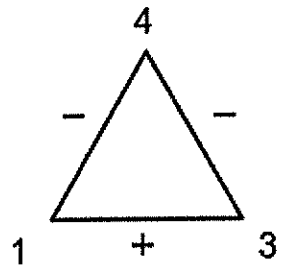
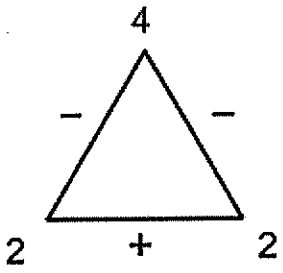
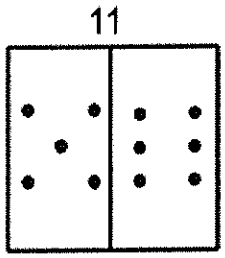
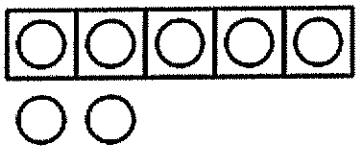
Write the vertical facts.

$$\begin{array}{r} 1 \\ +\ 2 \\ \hline 3 \end{array}$$

$$\begin{array}{r} 2 \\ +\ 2 \\ \hline \end{array}$$

Important!!!!
These numbers <u>have</u> to be in a <u>straight</u> line!

Date: Day of the week:

Vertical related facts.  1 + 3 = 4 4 − 1 = 3	Horizontal related facts.  ____ + ____ = 4 4 − ____ = ____
Write related facts  ____ + ____ = ____ ____ − ____ = ____	Count from a 5 frame  ____ is ____ more than 5
Count backward from: 23 ____ ____ ____ ____	Count forward from: 19 ____ ____ ____ ____ ____
Circle the pattern unit. Extend the pattern. 21 22 23 24 21 22 23 24 ___ ___ ___ ___ ___ ___ ___ ___	Draw a circle to the left of 24 24
21	22
23	24

Topic 11: Number Words

0 zero 1 one 2 two 3 three 4 four 5 five
6 six 7 seven 8 eight 9 nine 10 ten

Match the number with the number words.

Nine	0
Two	1
Eight	2
Five	3
Ten	4
Six	5
Zero	6
One	7
Four	8
Three	9
Seven	10

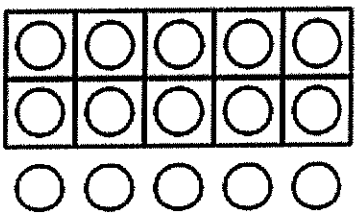
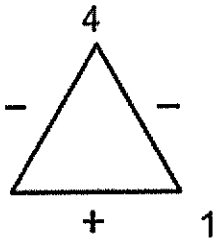
Numbers have one or more digits.

2 has one digit
4 has one digit

24 has 2 digits
The tens digit is 2
The ones digit is 4

tens	ones
2	4

Date: Day of the week:

Draw a triangle above 26. 26	Circle the most. 27 28 18
three one four _____ _____ _____ first next last	28 18 8 _____ _____ _____ least between greatest
2 10 24 _____ _____ _____ greatest between least	Count from a 10 frame.  _____ is _____ more than 10
Missing numbers: _____, 20, 21, 22, _____, 24, _____	Write related facts  _____ + _____ = _____ _____ + _____ = _____ _____ − _____ = _____ _____ − _____ = _____
25	26
27	28

Number patterns:
Topic 12: Counting by 5's, 10's and 2's

Number patterns are important in understanding math. We can learn number patterns by skip counting.

Skip count by 5 is easy because we have 5 fingers in each hand. We can skip count by 5 to 100

5 10 15 20 25 30 35 40 45 50
55 60 65 70 75 80 85 90 95 100

Skip count by 10 to 100 is also easy. We have 10 fingers.

10 20 30 40 50 60 70 80 90 100

Skip count by 2 means we skip over every number:

~~1~~ 2 ~~3~~ 4 ~~5~~ 6 ~~7~~ 8 ~~9~~ 10

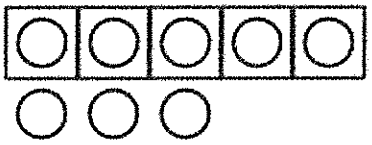
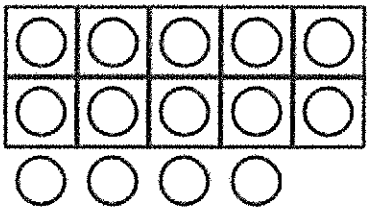
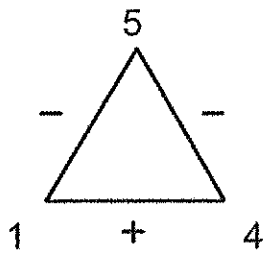
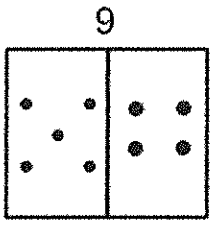
~~11~~ 12 ~~13~~ 14 ~~15~~ 16 ~~17~~ 18 ~~19~~ 20

So the numbers are:

2 4 6 8 10 12 14 16 18 20

We stop at 20 because it takes too long to count to 100 for now.

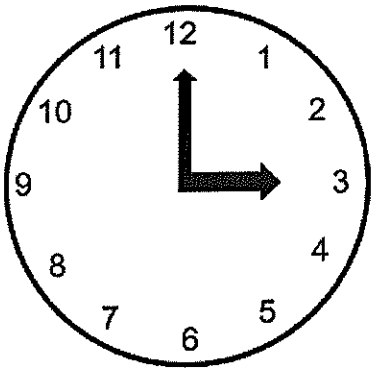
Date: Day of the week:

Count from a 5 frame.  _____ is _____ more than 5	Count from a 10 frame.  _____ is _____ more than 10
ten eight six _____ _____ _____ least between greatest	13 3 31 _____ _____ _____ greatest between least
Write related facts vertically.  5 1 + 4 + _____ + _____ _____ _____	Write related facts horizontally.  9 _____ + _____ = _____ _____ + _____ = _____ _____ – _____ = _____ _____ – _____ = _____
Skip count by 2's. 2 _____ _____ _____ _____ _____ _____ _____ _____ _____	Skip count by 10's. 10 _____ _____ _____ _____ _____ _____ _____ _____ _____ _____
29	30
31	32

Topic 13: Telling Time

We follow a schedule every day. Time to get up. Time to go to school. Time to have dinner. Time to go to bed. We read the clock to tell time.

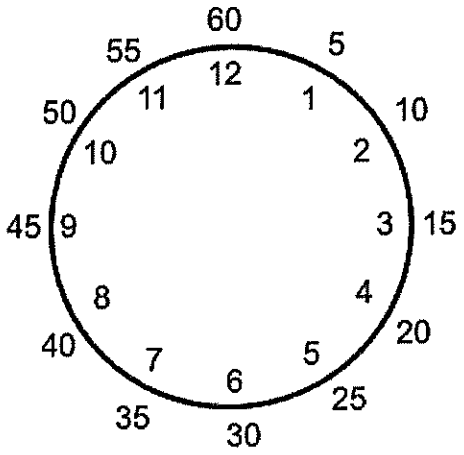
3:00



Hour hand: 3 o' clock
The short one is the hour hand.
It shows the hour.

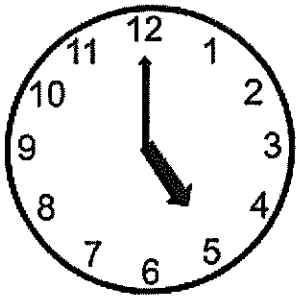
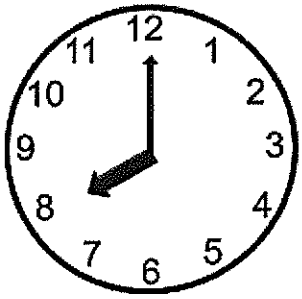
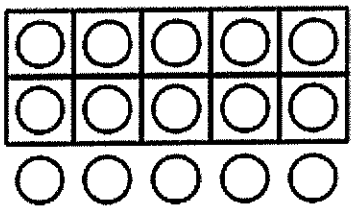
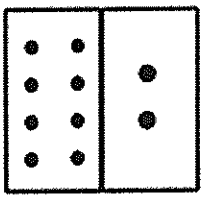
Minute hand: The long one is the minute hand.
It shows the minute.

one hour = 60 minutes half an hour = 30 minutes



We skip count by 5's to 60 around the clock to tell the minutes.

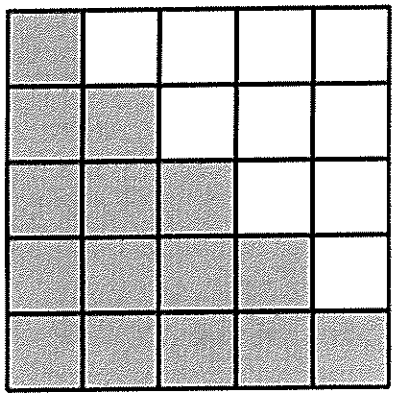
Date: Day of the week:

Write the time.  :	Write the time.  :
Circle the most. 9 19 29	Draw a square Write 32 below the square.
Count from a 10 frame.  _____ is _____ more than 10	Count back from 30 29 _____ _____ _____
Skip count by 5's 5 10 _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	Write related facts. 10  _____ + _____ = _____ _____ + _____ = _____ _____ – _____ = _____ _____ – _____ = _____
33	34
35	36

Topic 14: Addition and Subtraction Facts 5 and 6

Addition and subtraction are a part-part-whole relationship.

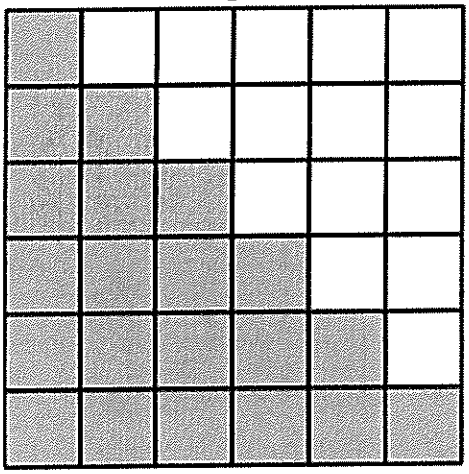
5



Part	Part	Whole
1	4	5
2	3	5
3	2	5
4	1	5
5	0	5

Whole	Part	Part
5	1	4
5	2	3
5	3	2
5	4	1
5	5	0

6



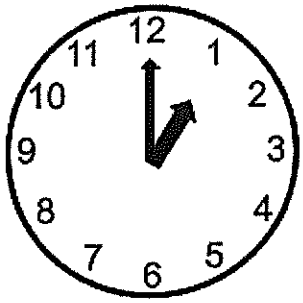
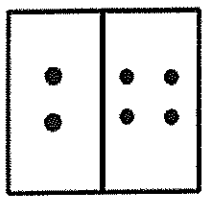
Part	Part	Whole
1	5	6
2	4	6
3	3	6
4	2	6
5	1	6
6	0	6

Whole	Part	Part
6	1	5
6	2	4
6	3	3
6	4	2
6	5	1
6	6	0

Add and subtract vertically: (Remember to write the answers in a straight line below the facts.)

5 − 1	1 + 5	6 − 2	2 + 4	2 + 3
4 − 2	1 + 3	2 + 2	1 + 1	6 − 0
6 − 6	5 − 4	3 + 3	5 − 3	5 − 4

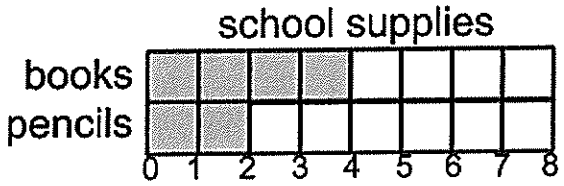
Date: Day of the week:

Count backwards from 40 40 39 _____ _____ _____ _____ _____ _____ _____	Skip count by 10's 10 20 _____ _____ _____ _____ _____ _____ _____
Circle the pattern unit. Extend the pattern. 37 38 39 40 _____ _____ _____ _____ _____ _____ _____ _____	What time is it?  :
Draw a triangle on the right. Write number 40 inside. Left | Right	Write related addition and subtraction facts with number 5, 1, 4 5 – 1 = _____ 5 – 4 = _____ 1 + 4 = _____ 4 + 1 = _____
Write related facts horizontally. 6  _____ + _____ = _____ _____ _____ = _____	Circle the most. Underline the least. 39 19 9
37	38
39	40

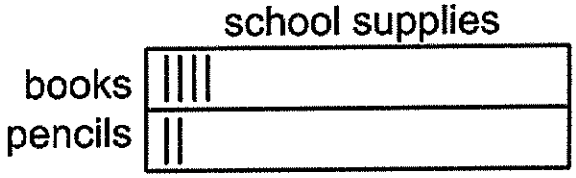
Topic 15: Data and Graphs

Data is information we collect. i.e. I have 4 books and 2 pencils.

We can make a bar graph of the data. A bar graph is a graph that uses bars to show data.



A tally mark keeps track of data.

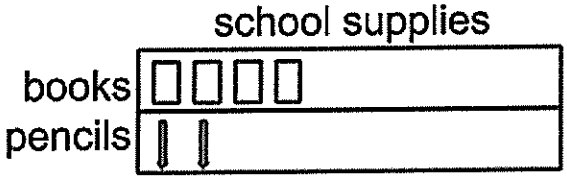


4 marks are vertical. 1 is across (diagonal)

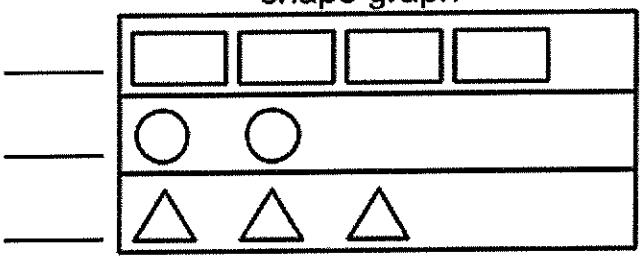
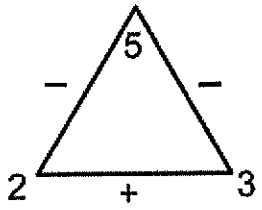
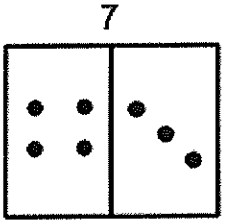
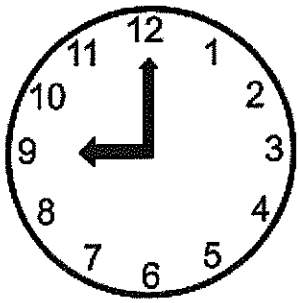
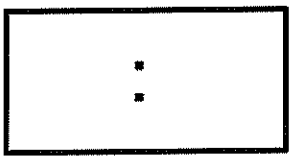
𝍸 = 5. So 6 is 𝍸 |
7 is 𝍸 ||

When we count tally marks, we start from 5, i.e. 6 is 5, 6
7 is 5, 6, 7

Picture graph shows data using pictures.



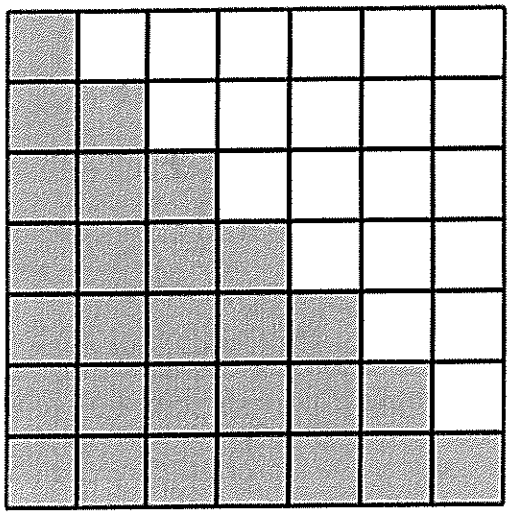
Date: Day of the week:

Word use in graphs: The most: the greatest : the fewest : the smallest Circle one answer	Word use in graphs: The least: the fewest : the greatest : the most Circle one answer
More: the group with a greater number Less: the group with a smaller number. 5 is 1 less than 6 6 is 1 more than 5	How many shapes in each row? Circle the row with the most. shape graph 
Write related addition and subtraction facts vertically. ____ + ____ ____ + ____ ____ − ____ ____ − ____ 	Write related facts horizontally. ____ + ____ = ____ ____ + ____ = ____ ____ − ____ = ____ ____ − ____ = ____ 
Tell the time:  	Skip count by 2's 4 ____ ____ Skip count by 5's 10 ____ ____
41	42
43	44

Topic 16: Addition and Subtraction Facts 7 and 8

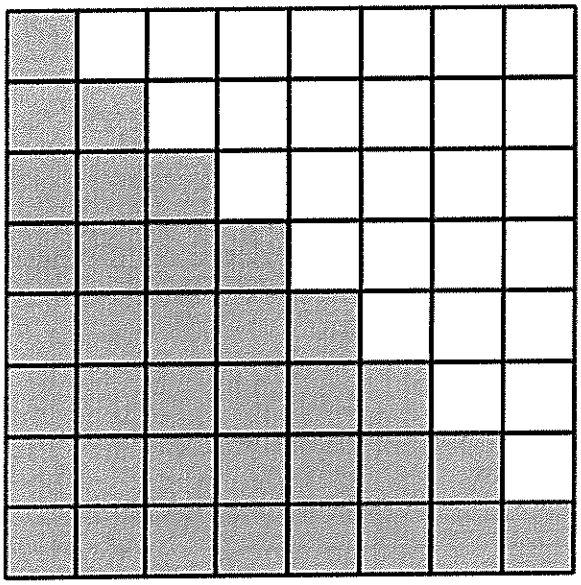
Additions and subtractions are part-part-whole relationships.

7



Additions				Subtractions			
Part		Part	Whole	Whole		Part	Part
1	+	6	= ___	7	−	1	= 6
___	+	___	= ___	___	−	___	= ___
___	+	___	= ___	___	−	___	= ___
___	+	___	= ___	___	−	___	= ___
___	+	___	= ___	___	−	___	= ___
___	+	___	= ___	___	−	___	= ___
___	+	___	= ___	___	−	___	= ___

8

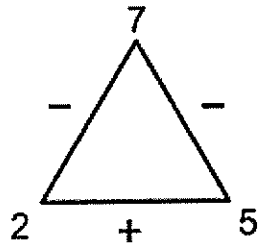
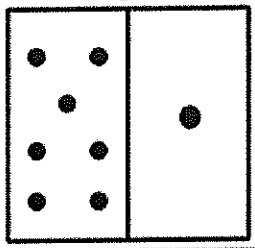
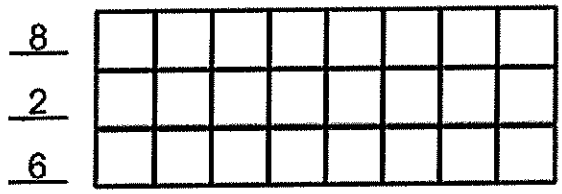
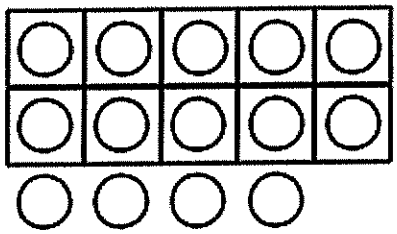


Part		Part	Whole	Whole		Part	Part
___	+	___	= ___	___	−	___	= ___
___	+	___	= ___	___	−	___	= ___
___	+	___	= ___	___	−	___	= ___
___	+	___	= ___	___	−	___	= ___
___	+	___	= ___	___	−	___	= ___
___	+	___	= ___	___	−	___	= ___
___	+	___	= ___	___	−	___	= ___
___	+	___	= ___	___	−	___	= ___

Add and subtract vertically: (Remember to write the answers in a straight line below the facts.)

1 + 6	2 + 5	7 − 1	7 − 2	7 + 1
6 + 2	8 − 6	8 + 0	8 − 8	3 + 4

Date: Day of the week:

Write related addition and subtraction facts vertically.  + ____ + ____ – ____ – ____	Write related addition and subtraction facts horizontally.  ____ + ____ = ____ ____ + ____ = ____ ____ – ____ = ____ ____ – ____ = ____
Color the bar graph to match the numbers.  Circle the row with the most.	Write tally marks: 8 _____ 2 _____ 6 _____ Circle the least number.
Missing numbers: ____ ____ ____ 44 ____ ____ 47 ____	Count from a 10 frame.  ____ is ____ more than 10.
Draw an oval. Write number 48 inside.	Skip count by 2's 6 ____ ____ ____ ____ ____ ____ ____
45	46
47	48

Topic 17: Comparing Numbers "Greater than" / "Less than"

5 is greater than 2. In math, we use the symbol > to show 5 is greater. 2 is less than 5, we use the symbol < to show 2 is less.

i.e. $5 > 2$ $2 < 5$

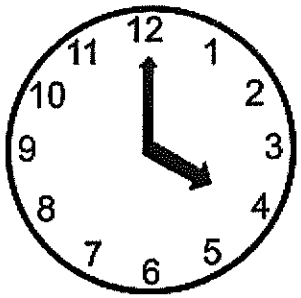
and 5 is equal to 5 i.e. $5 = 5$

Use symbols >, < or =. Write the words "equal to", "greater than" or "less than".

16 16 16 is _____ 16	28 32 28 is _____ 32
48 45 48 is _____ 45	8 8 8 is _____ 8
30 36 30 is _____ 36	41 14 41 is _____ 14

Date: Day of the week:

Telling time:



:

Skip count by 5's.

5 ____ ____ ____

____ ____ ____ ____

____ ____ ____ 60

Missing numbers:

49 50 ____

____ 53 ____

____ ____ 57

Circle the pattern unit. Extend the pattern.

53 54 55 53 54 55

53 54 55 ____ ____ ____

____ ____ ____ ____ ____ ____

Color the bar graph to match the numbers.

9									
4									
8									

Circle the most.

Write tally marks for the numbers.

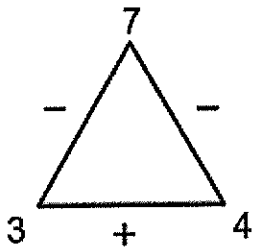
9 _____

4 _____

8 _____

Circle the fewest.

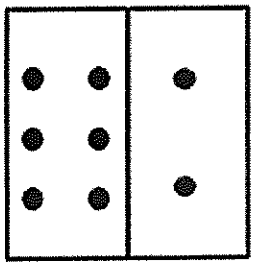
Write related facts vertically.



– ____ – ____

+ ____ + ____

Write related facts horizontally.



____ – ____ = ____

____ – ____ = ____

____ + ____ = ____

____ ____ = ____

49

50

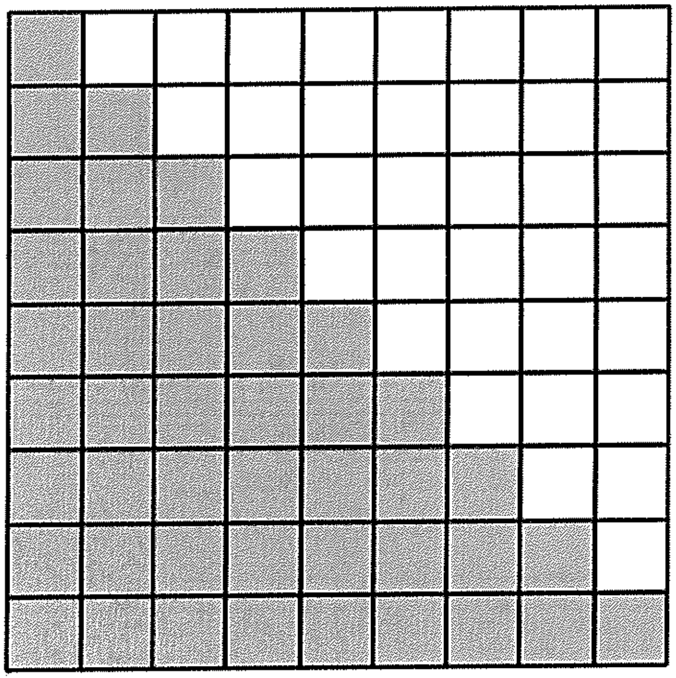
51

52

Topic 18: Addition and Subtraction Facts 9 and 10

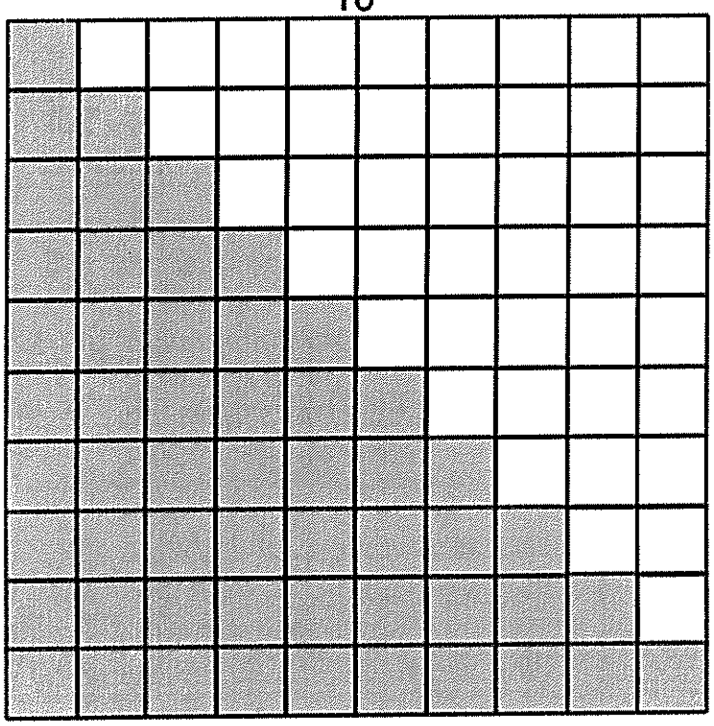
Additions and subtractions are part-part-whole relationships.

9



Additions							Subtractions			
Part		Part		Whole	Whole		Part		Part
1	+	8	=	9	9	−	1	=	8
___	+	___	=	___	___	−	___	=	___
___	+	___	=	___	___	−	___	=	___
___	+	___	=	___	___	−	___	=	___
___	+	___	=	___	___	−	___	=	___
___	+	___	=	___	___	−	___	=	___
___	+	___	=	___	___	−	___	=	___
___	+	___	=	___	___	−	___	=	___
___	+	___	=	___	___	−	___	=	___

10



Part		Part		Whole	Whole		Part		Part
1	+	9	=	10	10	−	1	=	9
___	+	___	=	___	___	−	___	=	___
___	+	___	=	___	___	−	___	=	___
___	+	___	=	___	___	−	___	=	___
___	+	___	=	___	___	−	___	=	___
___	+	___	=	___	___	−	___	=	___
___	+	___	=	___	___	−	___	=	___
___	+	___	=	___	___	−	___	=	___
___	+	___	=	___	___	−	___	=	___
___	+	___	=	___	___	−	___	=	___

1	9	10	2	10
+ 9	− 1	− 2	+ 8	− 6

Add and subtract vertically. (Remember to write the answers in a straight line below the facts).

Date: Day of the week:

Skip count by 2's.

4 _____ _____ _____

_____ _____ _____ _____

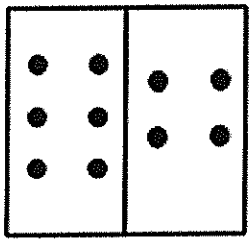
Count backward:

54 _____ _____

_____ _____ _____

_____ _____ _____

Write related facts vertically.

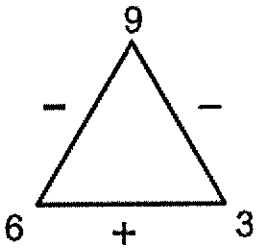


10

+ _____ − _____

+ _____ − _____

Write related facts horizontally.



_____ − _____ = _____

_____ − _____ = _____

_____ + _____ = _____

_____ + _____ = _____

Shade the bar graph to match the numbers.

9									
3									
6									

Circle the least number.

Write tally marks for the numbers. Circle the most.

14 _____

25 _____

9 _____

51 51

51 is <u>equal to</u> 51

<u>greater than</u>

Circle one answer.

Draw a square. Write 33 inside.

51

52

53

54

Everything around us can be measured. We are learning 3 different attributes of measurement.

Length: How long or short is an object.
Objects can be long, longer, or longest.
Things can also be short, shorter, shortest.

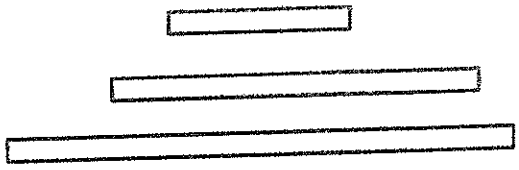
Weight: How heavy or light is an object.
Objects can be heavy, heavier, heaviest.
Things can be light, lighter, lightest.

Volume: How much space an object will take up.
We use more, most, less and least to describe volume.

Matching lengths:
Draw a line to match

longest

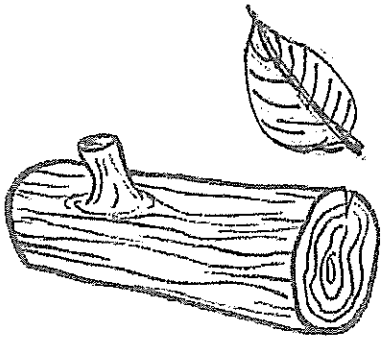
shortest



Matching weights:
Draw a line to match

heaviest

lightest

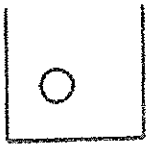


(a leaf)

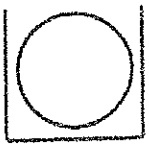
(a log)

Matching volume:
Draw a line to match

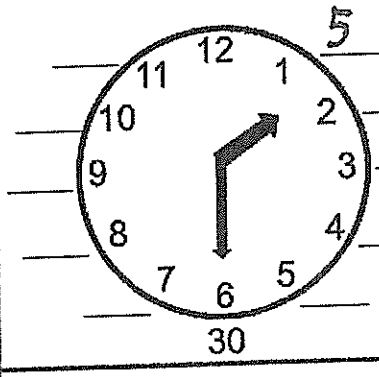
most space



least space



Date: Day of the week:

Circle the pattern unit. Extend the pattern. 2 4 6 2 4 6 2 4 6 2 4 6 ___ ___ ___ ___ ___ ___	Write the related facts vertically using numbers. 10 6 4 + + − − ___ ___ ___ ___
56 _____ 58 > or < 56 is _____ 58 equal to greater than less than	55 _____ 51 > or < 55 is _____ 51 equal to greater than less than
Count by 5's to 60. 5 ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___	Count by 5's, write the numbers around the clock.  It is 1:30
Count backwards 58 ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___	Draw a rectangle. Write number 56 on the right. left right
55	56
57	58

Topic 20: Fact family of the number "10"

Fact family is the same as related facts. We look at addition and subtraction of related facts as part of the same family.

Learning the 10 fact family is very helpful when we add and subtract.

Write the 10 fact families:

10 1 9

1 + 9 = 10 10 - 1 = 9

9 + 1 = 10 10 - 9 = 1

10 2 8

____ + ____ = ____ ____ - ____ = ____

____ + ____ = ____ ____ - ____ = ____

10 3 7

____ + ____ = ____ ____ - ____ = ____

____ + ____ = ____ ____ - ____ = ____

10 4 6

____ + ____ = ____ ____ - ____ = ____

____ + ____ = ____ ____ - ____ = ____

10 5 5

____ + ____ = ____ ____ - ____ = ____

____ + ____ = ____ ____ - ____ = ____

10 6 4

____ + ____ = ____ ____ - ____ = ____

____ + ____ = ____ ____ - ____ = ____

10 7 3

____ + ____ = ____ ____ - ____ = ____

____ + ____ = ____ ____ - ____ = ____

10 8 2

____ + ____ = ____ ____ - ____ = ____

____ + ____ = ____ ____ - ____ = ____

10 9 1

____ + ____ = ____ ____ - ____ = ____

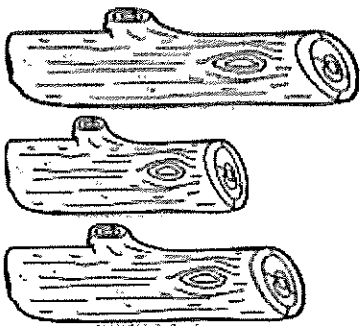
____ + ____ = ____ ____ - ____ = ____

10 0 0

____ + ____ = ____ ____ - ____ = ____

____ + ____ = ____ ____ - ____ = ____

Date: Day of the week:

Match the length: short shorter shortest	Match the length: long longer longest
Match the weight: heavy heavier heaviest 	Match the weight: light lighter lightest 
Count forward: 55 ____ ____ ____ ____ ____ ____ ____	Missing numbers: ____ 60 ____ 80 ____ 100
Shade the bar graph, then write the tally mark. Tally 5 8 4	Draw a square. Write 60 above it. Write 62 below it.
59	60
61	62

Topic 21: Hundred Chart

A hundred chart is a table or a chart that shows numbers from 1 to 100.
We can use a number chart to count numbers in order.

The numbers from 1 to 9 have 1 digit.
The numbers from 10 to 99 have 2 digits.
The number 100 has 3 digits.

A hundred chart is helpful when we skip count by 2, 5 and 10.
We can even skip count by 3, 4, 5, 6, 7, 8 and 9.

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

Date: Day of the week:

Write the numbers in order. 36 52 47 65 ____ ____ ____ ____ Circle the greatest number.	Write the numbers in order. 59 63 34 43 ____ ____ ____ ____ Circle the least number.
Write the fact family. 8 2 6 Circle the whole number. ____ + ____ = ____ ____ ____ = ____ ____ + ____ = ____ ____ ____ = ____	Write the fact family. 8 2 10 Circle the whole number. ____ + ____ = ____ ____ ____ = ____ ____ + ____ = ____ ____ ____ = ____
Match the number words. zero 1 one 0 two 2	Draw a shape with 4 sides that are equal in length.
Underline the pattern. Draw the missing shapes. ○ △ □ ○ △ □ ____ ____ ____ ____ ____ ____	Compare 66 46 66 is _____ 46 more than less than
63	64
65	66

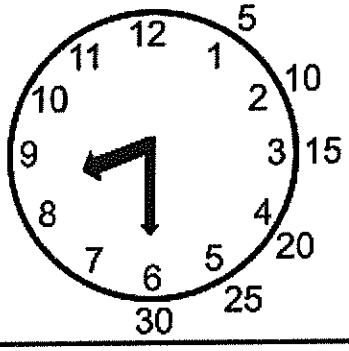
Topic 22: More number words

eleven 11	twelve 12	thirteen 13
fourteen 14	fifteen 15	sixteen 16
seventeen 17	eighteen 18	nineteen 19
twenty 20	thirty 30	forty 40
fifty 50	sixty 60	seventy 70
eighty 80	ninety 90	one hundred 100

Match the number to the number word:

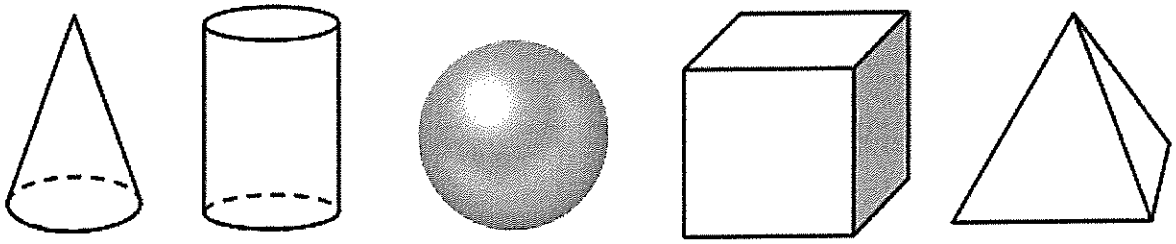
nineteen	80
eighty	60
thirteen	14
sixty	100
fourteen	11
one hundred	19
twelve	12
eleven	13

Date: Day of the week:

Write the numbers in order. Circle the least value. 18 38 8 68 _____ _____ _____ _____	Write the missing number. Circle the greatest value. 20 _____ 40 _____ 60
Write the facts vertically. Circle the whole number. 7 3 4 +_____ −_____ +_____ −_____	Draw a figure with 3 corners. Write 70 on the left.
Write the time. (Use counting by 5's)  	Match the length. shortest short shorter
Compare 16 26 16 is _____ 26 greater than less than equal to	Bar graph and tally. Shade in the number: Tally 6 3 4 5
67	68
69	70

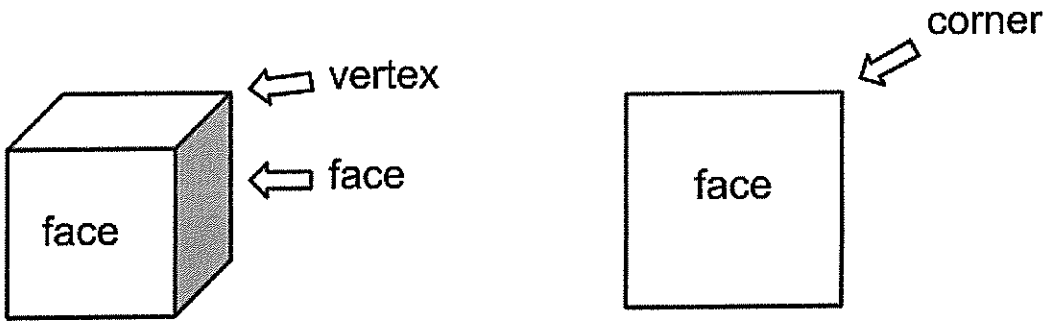
Topic 23: Solid Figures

Solid figures have <u>length</u>, <u>width</u>, and <u>height</u>. Shapes such as circle, rectangle, square and triangle are plane shapes.
Here are some solid figures.

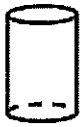


cone cylinder sphere cube pyramid

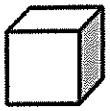
Solid figures (or shapes) have faces and corners. The face is the flat side. The corner (vertex) is where the faces meet. Vertex is a point where 3 or more edges meet.



A cone  has 1 face, 1 corner (vertex).

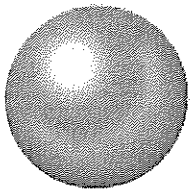
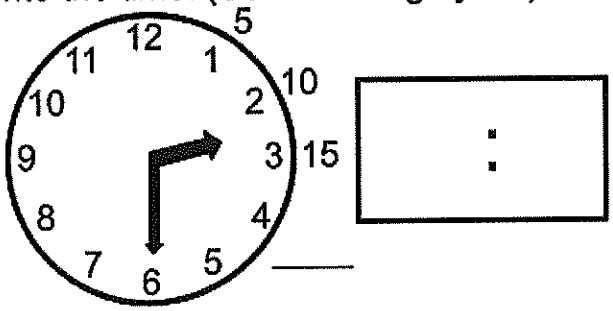
A cylinder has 2 faces, 0 corner. 

A sphere  has 0 faces, 0 corner.

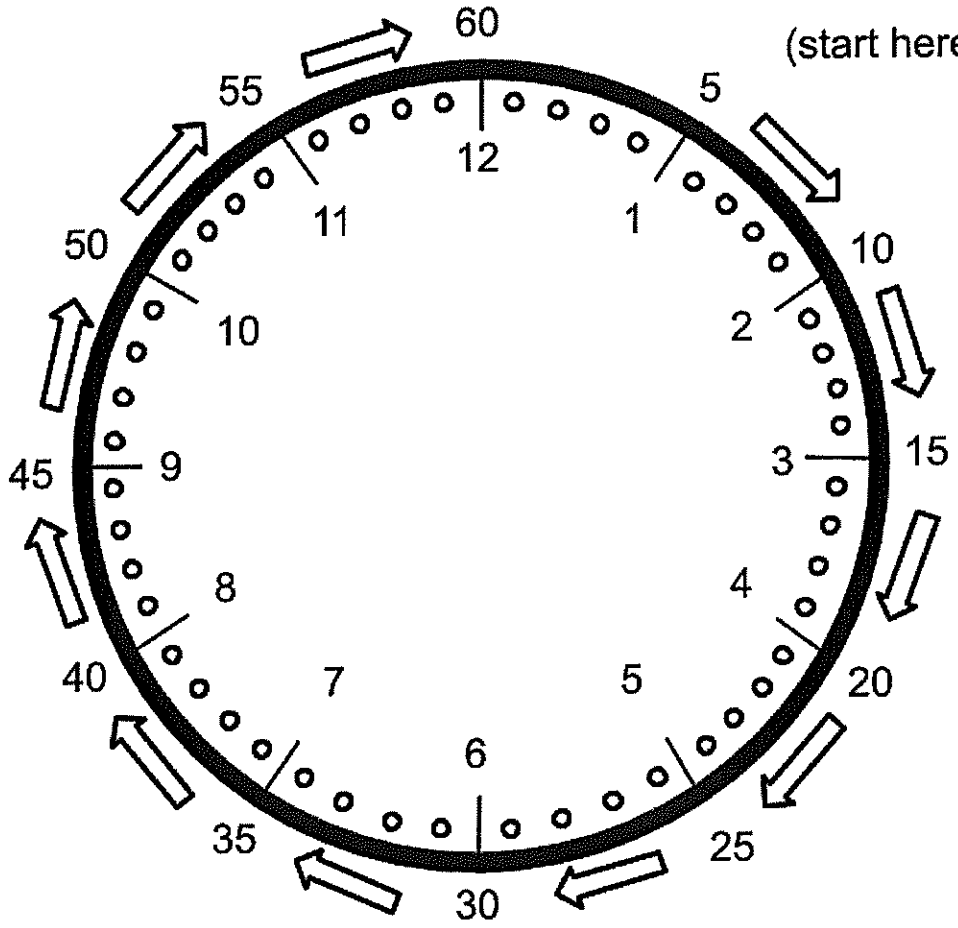
A cube has 6 faces, 8 corners. 

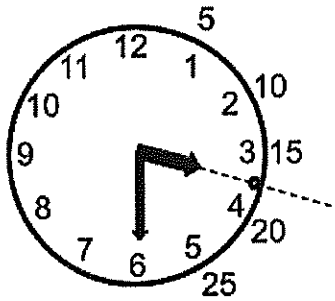
A pyramid has 5 faces, 4 corners. 

Date: Day of the week:

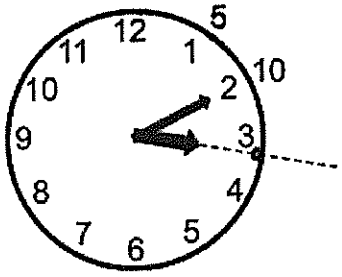
Skip count by 2's. 42 , 44 , 46 , _____ _____ _____ _____ _____ _____	Write the number words. 11 _____ 12 _____ 13 _____ eleven thirteen twelve
Circle the solid. This is a  cone cylinder sphere	Skip count by 5's. 35 _____ 45 _____ _____ _____ _____ _____ _____ _____ _____ _____
Write the related facts (fact family) 7 3 10 ____ + ____ = ____ ____ − ____ = ____ ____ + ____ = ____ ____ − ____ = ____	Match the length. long longer longest
Write the time. (Use counting by 5's)  _____ _____ _____	Write the numbers in order. 71 7 67 17 _____ _____ _____ _____ Circle the least number.
71	72
73	74

The long hand, or minute hand moves by 5's around the clock. The short hand, or hour hand moves slowly from one hour to the next.

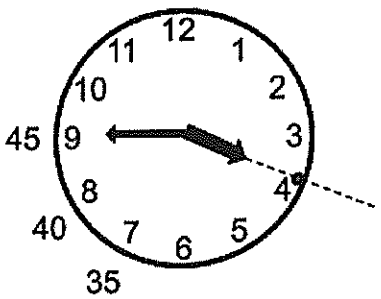




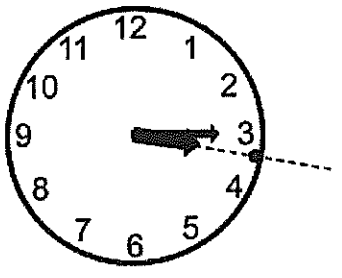
3:30



3:10

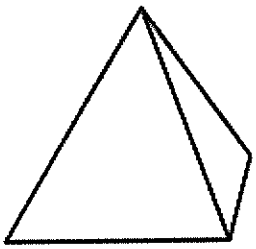
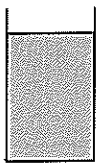
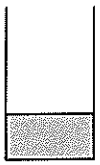
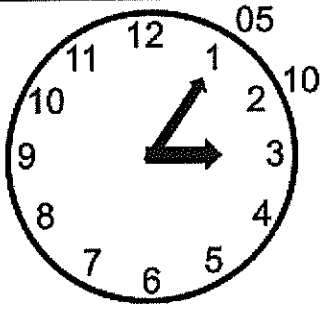


3:45



3:15

Date: Day of the week:

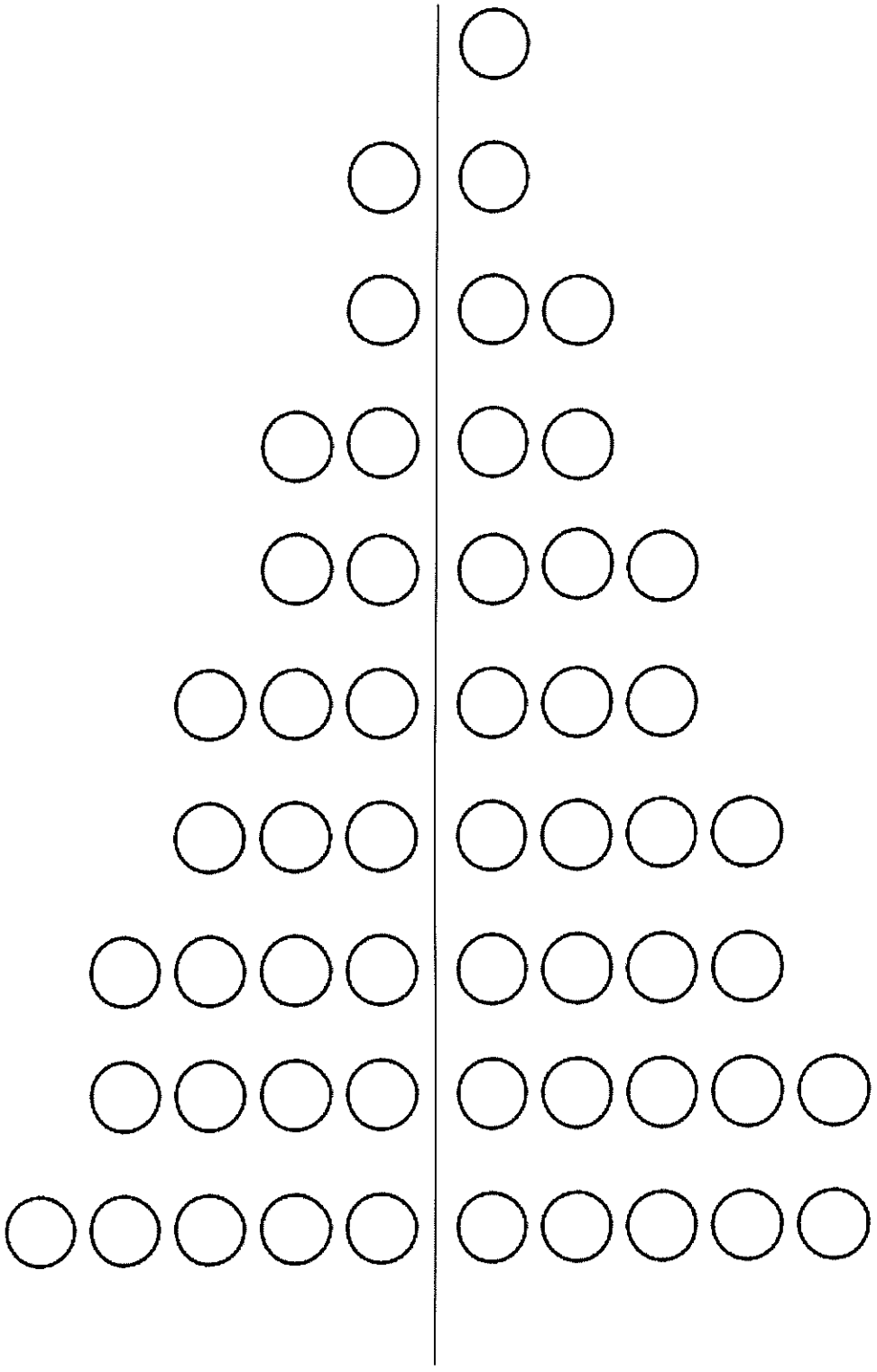
Complete the fact family. 9 + 1 + − − ____ ____ ____ ____	Circle one answer  cube pyramid sphere
Write the number words 17 _____ 18 _____ 19 _____ eighteen nineteen seventeen	Matching volume.  least space  most space
 The time is <u>3:05 / 3:50</u>. (Circle one)	Draw a rectangle. It has _____ sides. It has _____ corners.
Compare 75 72 < or > 75 is _____ 72 greater than less than	Circle the pattern unit. Extend the pattern. 15 20 25 ____ ____ ____ ____ ____ ____ ____ ____ ____ The pattern is counting by 2's, 5's, 10's. Circle one answer.
75	76
77	78

Topic 25: Odd and even numbers

Odd numbers are numbers that cannot be divided in half equally.

1, 3, 5, 7, and 9 are odd numbers.

Even numbers can be divided in half equally.



1 is odd

2 is even

3 is _____

4 is _____

5 is _____

6 is _____

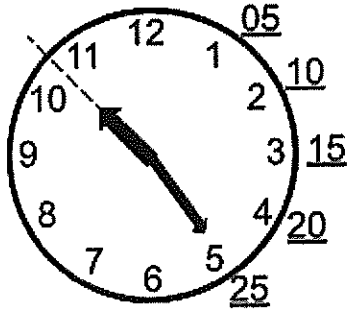
7 is _____

8 is _____

9 is _____

10 is _____

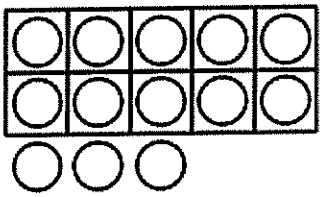
Date: Day of the week:

Write forward. 75 _____ _____ _____ 79 _____ _____ _____	Put the numbers in order. 79 81 18 19 _____ _____ _____ _____ Circle the least value.
The fact family. 2 8 10 (circle the parts) ___ + ___ = ___ ___ - ___ = ___ ___ + ___ = ___ ___ - ___ = ___	Write the number words. 20 _____ 30 _____ 40 _____ twenty thirty forty
Draw a triangle. Put number 82 inside. _____ sides _____ corners	Name the solid shape.  _____ _____ face _____ corner cone sphere square
 The time is 10:_____.	Compare 18 81 < or > 18 is _____ 81 greater than less than
79	80
81	82

Topic 26: Tens and ones

We can count objects by ones. Or we can put objects into groups of ten and then count by tens.

thirteen

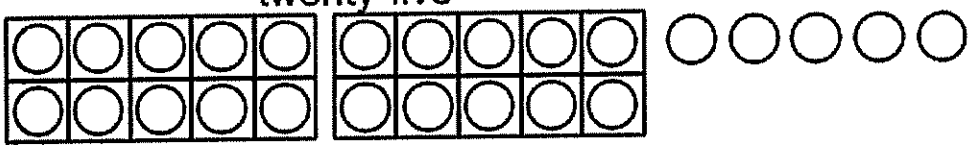


13 is 10 and 3 ones
(We learned this in a previous topic)

13 is ____ more than 10.

---

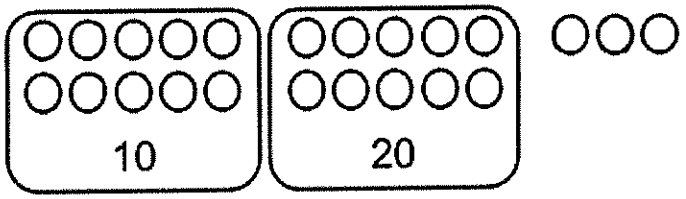
twenty-five



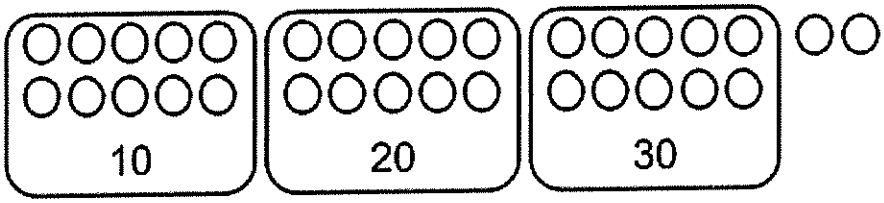
25 is 20 and 5 ones. Or:

25 is ____ more than 20

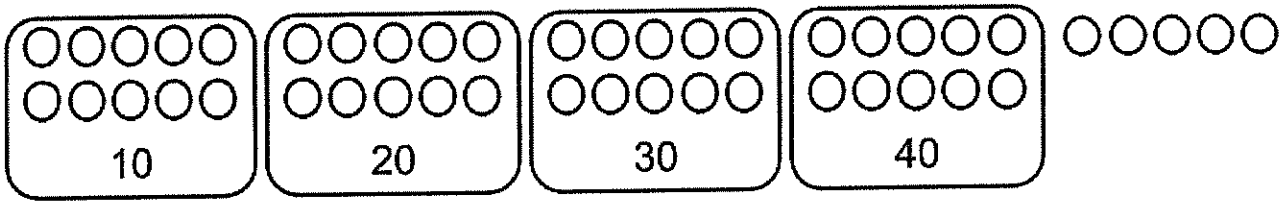
We can estimate to find about how many objects there are. We circle 10. Then estimate.
Estimate means making a good guess.



about 20

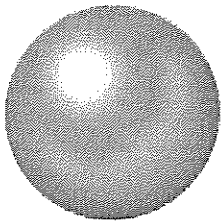


about 30



about ____

Date: Day of the week:

Count the items. Circle: odd even 	1, 3, 5, 7 are _____ numbers 2, 4, 6, 8 are _____ numbers
23 twenty-three 23 is 20 and _____ ones	Name the solid figure.  _____ sphere cone cylinder
Order the numbers 68 16 86 26 _____ _____ _____ _____ Circle the greatest value.	Write backward: _____ _____ _____ 78 _____ _____ 81 82 _____ _____ 85 86
Write the number words 50 _____ 60 _____ 70 _____ sixty fifty seventy	Fill in the missing numbers on a part of the hundred chart. 61 66 72 75 81 86 93 95
83	84
85	86

We can count on to add 6 + 2 = 8

6 o o = 8

⇩ ⇩

7 8

Start with the greater number
Count on to add.

(9) + 3 = 12

o o o

⇩ ⇩ ⇩

10 11 12

(8) + 6 = 14

o o o

o o o

(7) + 6 =

⇩

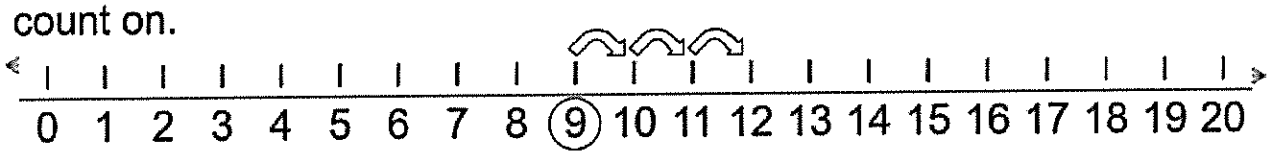
Make dots

Then count on from 7

(10) + 3 =

⇩

We can use a number line to add. Start with the greater number and count on.



9 + 3 = 12 8 + 6 = _____ 11 + 6 = _____

7 + 6 = _____ 7 + 7 = _____ 5 + 6 = _____

2 + 14 = _____ 16 + 2 = _____ 8 + 4 = _____

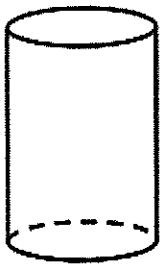
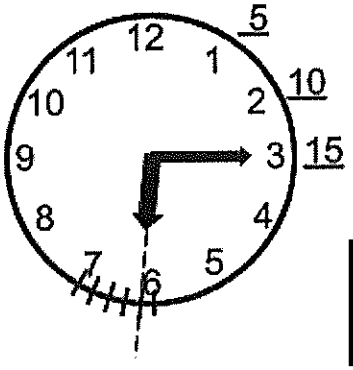
3 + 15 = _____ 3 + 17 = _____ 10 + 10 = _____

10 + 2 = _____ 0 + 9 = _____ 12 + 5 = _____

10 + 6 = _____ 9 + 4 = _____ 8 + 9 = _____

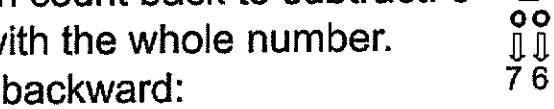
3 + 10 = _____ 1 + 15 = _____ 14 + 2 = _____

Date: Day of the week:

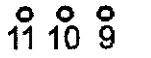
Draw a circle. Put number 90 above it.	Write forward 56 _____ _____ _____ 60 66 _____ _____ _____ _____ 86 _____ _____ _____ _____
Write the number words. 80 _____ 90 _____ 100 _____ eighty ninety one hundred	Estimate. Circle groups of ten.  about  thirty  forty Circle the answer
18 : eighteen 18 is 10 and _____ ones.	10 12 14 are even odd numbers circle the answer
Name the solid figure.  It is a _____ It has _____ faces. It has _____ corner. cube cylinder cone	The time is  5 10 15 :
87	88
89	90

Topic 28: Subtraction to 12 and more

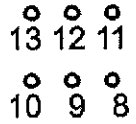
We can count back to subtract. 8 − 2 = 6
Start with the whole number.
Count backward:



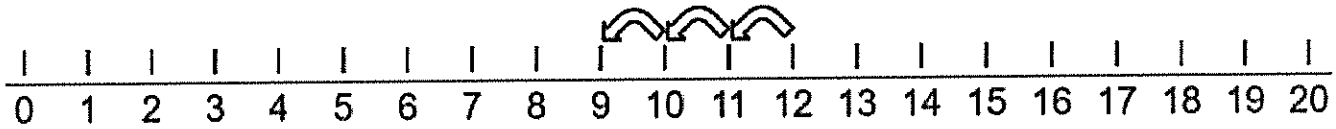
12 − 3 = 9



14 − 6 = 8

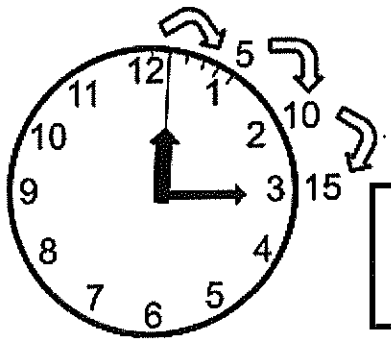
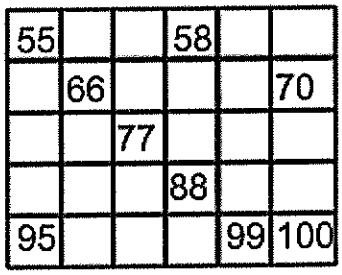


We can use a number line to subtract. Start with the greatest number, then count back.



12 − 3 = 9	14 − 6 = ___	18 − 2 = ___
13 − 6 = ___	16 − 3 = ___	15 − 6 = ___
18 − 3 = ___	15 − 7 = ___	17 − 3 = ___
12 − 2 = ___	19 − 7 = ___	17 − 6 = ___
15 − 3 = ___	11 − 4 = ___	16 − 7 = ___
11 − 6 = ___	12 − 5 = ___	18 − 9 = ___
19 − 4 = ___	14 − 5 = ___	15 − 5 = ___

Date: Day of the week:

Count on to add	Count back to subtract
12 + 4 = 16 + 3 =	16 − 4 = 19 − 3 =
Matching length long  longer  longest 	**Matching length** short  shorter  shortest 
Write forward: 88 ____ ____ ____ 93 ____ ____ ____ 97 ____ ____ ____	**Write backward** 94 ____ ____ 91 90 ____ ____ ____ ____ ____ ____ 83
The time is 	Fill in the missing numbers on a part of the 100 chart. 
87	88
89	90

Topic 29: Writing number sentences from word problems

Word problems (or stories) can be shown by a number sentence.

3 boys and 5 girls equal 8 children.

$3 + 5 = 8$ Addition

8 children, 5 went home, 3 are left.

$8 - 5 = 3$ Subtraction

Words for addition are:

add, plus, combine, addend, total and sum

The symbol for addition is " + "

Words for subtraction are:

subtract, minus, take away, difference

The symbol for subtraction is " − "

Problem - solving strategy:

1. Circle the numbers
2. Underline the question
3. Write the number sentence

Write number sentences:

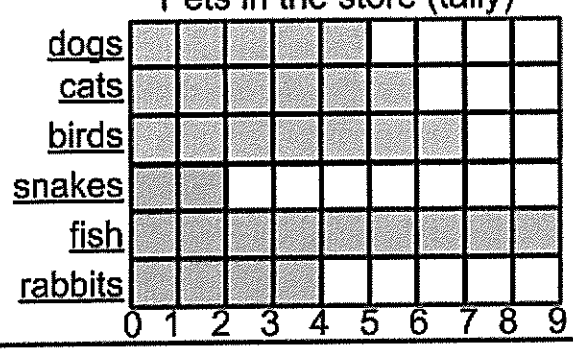
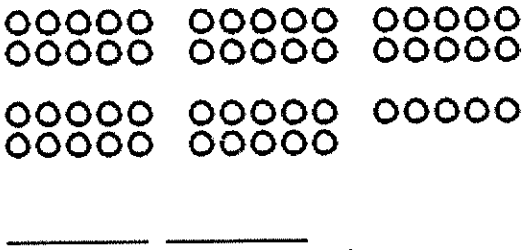
(6) fish and (2) fish equal 8 fish

$6 + 2 = 8$

8 dogs, 2 ran away, 6 dogs stayed

$8 - 2 = 6$

Date: Day of the week:

Circle the pattern unit. Extend the pattern. 135 135 135 _____ The number is odd / even Circle one answer	Compare 96 98 > < 96 is _____ 98 less than / greater than
Write the numeral for these word numbers. eleven _____ twelve _____ thirteen _____	Write forward 88 _____ _____ _____ _____ 93 _____ _____ _____ _____ _____ _____
Complete the fact family. 8 + 4 = _____ 4 + 8 = _____ _____ - _____ = _____	Draw a plane shape that is round. Write 93 inside it.
Bar graph, circle the most, cross out the least. Pets in the store (tally)  	Circle the groups of ten. Write the 2 digits numbers.  _____ _____ The number word is fifty-five fifty-six (circle one)
91	92
93	94

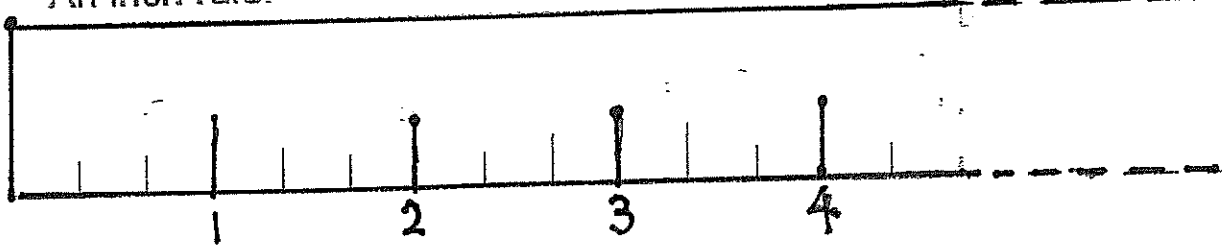
Topic 30: Measurement - length

We can compare the length of items by using comparing words:

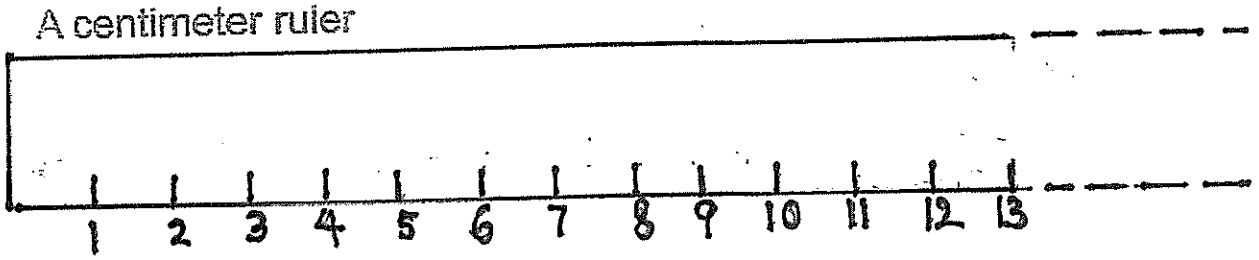
short, shorter, shortest;	low, lower, lowest
long, longer, longest;	tall, taller, tallest

We can measure to find length by using a ruler. There are two kinds of rulers:
An inch ruler and a centimeter ruler.

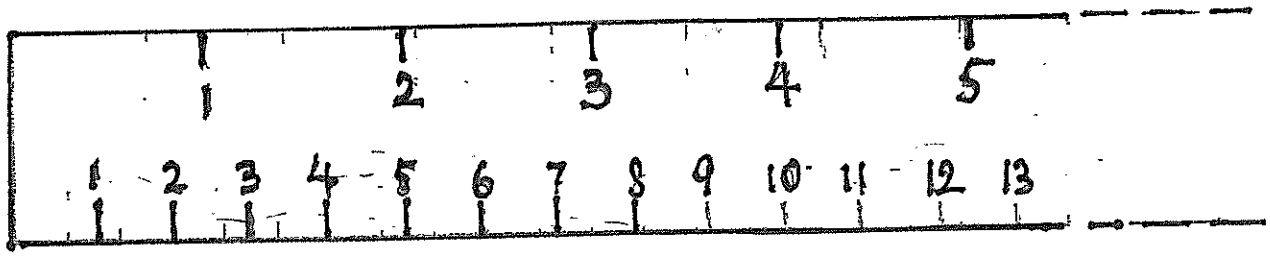
An inch ruler



A centimeter ruler



Most rulers we use combine both measurements.
They are usually longer too.

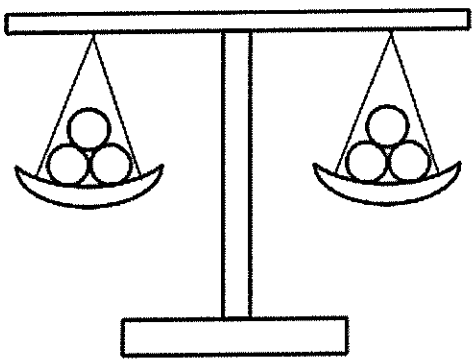


Date: Day of the week:

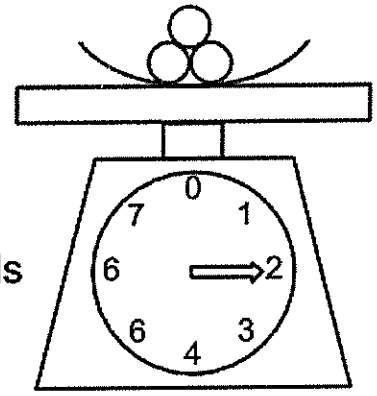
Count on to add 15 + 2 = _____ 10 + 7 = _____ 12 + 4 = _____ 18 + 1 = _____ 11 + 6 = _____ 14 + 3 = _____	Count back to subtract 15 − 4 = _____ 10 − 7 = _____ 12 − 4 = _____ 18 − 1 = _____ 11 − 6 = _____ 14 − 3 = _____
Circle the pattern unit. Extend the pattern. 246 246 246 246 _____ _____ _____ _____ The number is odd / even	Put the numbers in order. 17 97 79 71 _____ _____ _____ _____ Circle the least value
Complete the fact family 10 4 14 10 + _____ = _____ | 14 − _____ = _____ _____ + _____ = _____ | _____ − _____ = _____	Write the numeral for these number words. sixty _____ eighteen _____ forty _____ eleven _____ fifty _____ twelve _____
Write a number sentence. 7 boys, 5 more came. There are _____ boys _____ _____ = _____ 12 boys, 7 go away. There are _____ left. _____ _____ = _____	100 2 45 Circle the number with 1 digit. Cross out the number with 2 digits. Draw a triangle on the number with 3 digits.
95	96
97	98

Topic 31: Measurement: weight and volume

We can compare the weight of objects and estimate which is heavier and which is lighter. This is the weight measurement. We use a scale to measure weight.



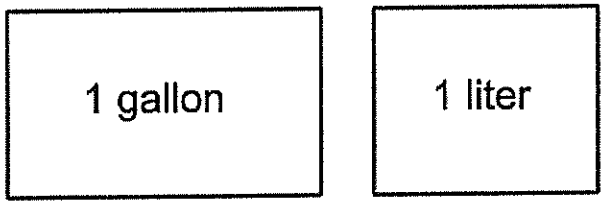
When the two sides of the scale is the same, it is balance



2 pounds

Another scale uses numbers to tell how heavy an object or objects is/are.

We can compare the volume of and estimate which holds more space and which holds less. When we estimate, we think of "about" how much/many.
This is the volume measurement.
Different containers can hold different amounts.
Some hold more. (Some hold the most.)
Some hold less. (Some hold the least.)
Some containers give us the number it can hold.

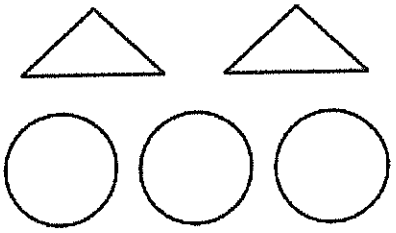


Date: Day of the week:

Draw tally mark |||| 15 _____ 6 _____ 21 _____	Measure in inches  _____ inches Measure in centimeter  _____ centimeter
Circle the 1 digit number. Cross out the 3 digits number. Underline the 2 digits number. 21 4 101	Write the number sentence. 2 cats, 6 more cats, 8 cats in all. _____ _____ = _____
Write the number sentence. 8 cups, 2 broke, 6 left. _____ _____ = _____	Complete the fact family. 8, 3, 5 3 + 5 _____ _____ _____
Write the numeral for these number words. eight _____ thirty _____ nine _____ twelve _____	94 ninety-four 94 is _____ and _____ ones
12 14 16 18 20 are _____ numbers 13 15 17 18 21 are odd / even _____ numbers	Compare > < 101 100 101 is _____ 100 more than / less than
99	100
101	102

Topic 32: Ordinal numbers through tenth

Cardinal numbers tell how many objects are in a set.



2 triangles

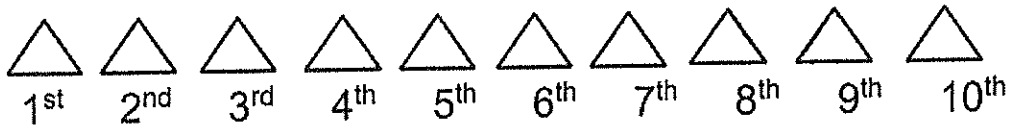
3 circles

Ordinal numbers tell position. It is dependent on the object's position in relation to other objects.

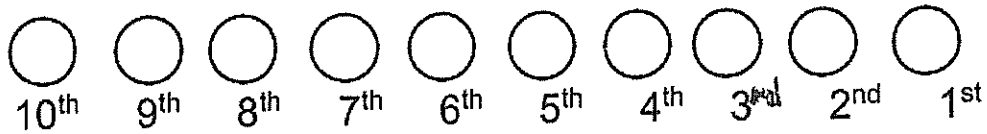
1st	2nd	3rd	4th	5th
first	second	third	fourth	fifth
6th	7th	8th	9th	10th
sixth	seventh	eighth	ninth	tenth

The position depends on whether the front of the line is at the right or left / top or bottom.

Left in front

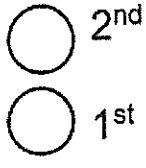


Right in front



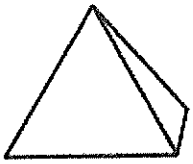
Top

Bottom



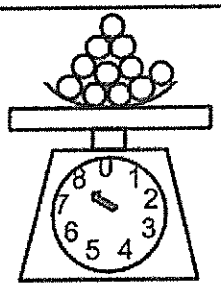
Date: Day of the week:

Name the solid figure.



_____

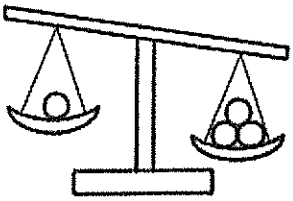
cone, cube, pyramid, sphere



_____ pounds

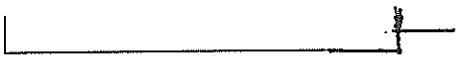
1 gallon	1 gallon

_____ gallons



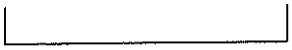
Circle the heavier side

Measure in inches



_____ in.

Measure in centimeter



_____ cm.

Write the numeral for these number words.

six _____

five _____

four _____

Write a number sentence.

0 mice and 7 mice are _____ mice.

_____ _____ = _____

Write a number sentence.

10 flowers, 2 picked, _____ are left.

_____ _____ = _____

Circle groups of ten. Write the 2 digit number.

_____ _____

Circle the pattern unit. Extend the pattern.

246 246 246 _____

246 are odd / even number.
(Circle one choice.)

Addition.

8	9	4	6	7
+ 0	+ 1	+ 4	+ 2	+ 2
_____	_____	_____	_____	_____

Topic 33: Days of the week

There are 7 days in a week. The names are: Sunday Monday Tuesday Wednesday Thursday Friday Saturday

The length of a week is set by religious and historical tradition, not by the movement of planets or stars.

The names, however, is somewhat like our planets and stars.

Sunday — Sun's day 

Monday — Moon's day 

Saturday— Saturn's day 

The other days come from other traditions.

On our calendars, the names are sometimes shortened:

Sun Mon Tue Wed Thu Fri Sat

When we learn the days of the week, we also learn before/after.

What day comes before Monday?

What day comes after Wednesday?

Date: Day of the week:

Complete the ordinal numbers on the shelf.

fourth

third

second

first

Complete the ordinal numbers on the shelf.

third

second

fourth

first

86 is eighty-six

86 is _____ tens and _____ ones

Which shape does not belong?

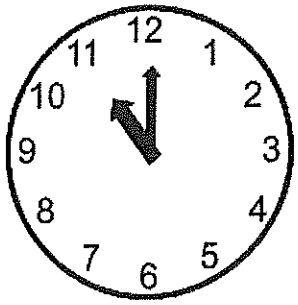
Circle it.

Write a number sentence. 10 cars, 4 drove away, how many are still there?

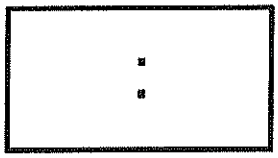
_____ _____ = _____

Write a number sentence. 6 butterfly, 5 more come. How many in all?

_____ _____ = _____



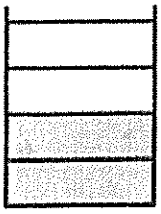
The time is



1st 2nd 3rd 4th 5th

The butterfly is _____

first second fifth



_____ liters

Measure in inches

_____ in.

_____ in.

Subtraction

8	9	4	6	7
− 0	− 1	− 4	− 2	− 2

Topic 34: Months of the Year - the Western Calendar

There are twelve months in a year.
Many countries have calendars and names of months that are different. The names of each month in the Western Calendar come from religious and historical tradition, not by the movement of planets of stars.
However, the length of the month is determined by the moon.
A month is the time it takes the moon to circle the earth. A month is about 30 days long.

The names of the months:

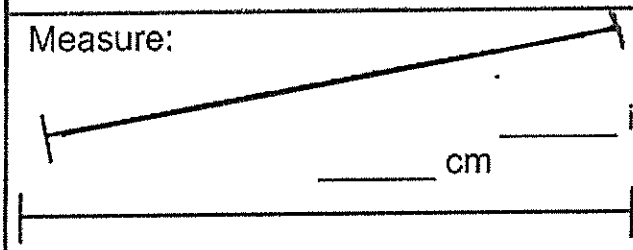
January February March April May June July August September October November December

---

Match the months to the ordinal numbers:

January	5th	July	8th
February	3rd	August	10th
March	6th	September	7th
April	1st	October	9th
May	2nd	November	12th
June	4th	December	11th

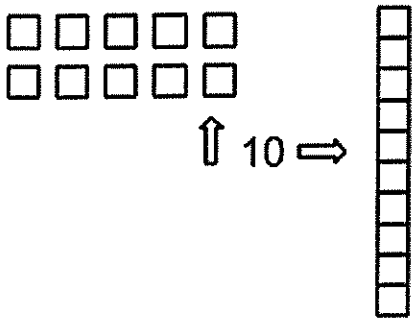
Date: Day of the week:

What day comes before Wednesday? _____ What day comes after Friday? _____	Which month comes before May? _____ Which month comes after September? _____
Number sentence: 5 children, 2 went home, how many left? _____ _____ = _____	Write the number words: 1 _____ 2 _____ 3 _____
Measure:  _____ in. _____ cm	99 ninety-nine 99 is _____ tens and _____ ones.
 1st _____ The triangle is _____  1st The sun is _____	Order the numbers: 99 89 19 29 ___ ___ ___ ___ Circle the greatest value. Cross out the least value.
Compare 62 < or > 82 62 is <u>less than / more than</u> 82 Compare 89 98 98 is <u>less than / more than</u> 89 Circle the answer	Complete the fact family 9 + 2 = _____ _____ _____ = _____ _____ _____ = _____ _____ _____ = _____

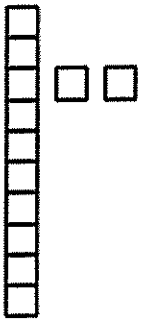
Add and subtract	8 + 0 = _____	8 − 0 = _____	9 + 1 = _____	9 − 1 = _____	4 + 9 = _____	4 − 4 = _____

Topic 35: Place Value

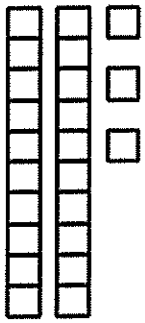
We can group 10 objects together and call it one ten.



When we add 2 more to the 1 ten, we have 12.



If we make 2 groups of tens and add 3 more, we have 23.



10, 11, 12 ..... 20, 21, 22, 23 ..... 99, are 2 digit numbers. We learned the number chart earlier in topic 21. All the numbers from 10 to 99 have 2 digits.
The 1st digit is the tens' place.
The 2nd digit is the ones' place.

Put the numbers in the correct place.

	tens	ones
10	1	0
23	2	3
46	4	6
59		
96		
12		

	tens	ones
64		
46		
13		
31		
81		
18		

Date: Day of the week:

Twenty-four is (24)

_____ tens and _____ ones

Sixty-seven (67) is

_____ tens and _____ ones

Number sentence: 4 balls, 2 more.
How many in all?

_____ _____ = _____

Write the number words:

4 _____

5 _____

6 _____

Before	This month	After
	(Look at topic 34) February	
	August	
	September	

Write 2 one digit even numbers

_____ _____

Write 2 one digit odd numbers

_____ _____

Complete the fact family

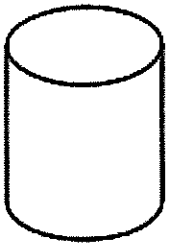
7 + 3 = _____

_____ _____ = _____

_____ _____ = _____

_____ _____ = _____

Name the solid figure.



_____

sphere cylinder
square cube

Complete the missing numbers on the 100 chart.

1	2	3	4	5	6
11		13			16
21			24		

Compare 72 56 > <

72 is greater than / less than 56

56 is greater than / less than 72

1st

The fish is _____

1st

The fish is _____

Add and subtract

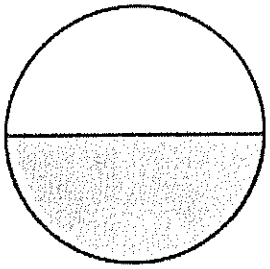
7	9	6	7	8
− 5	− 4	+ 4	+ 4	− 2
_____	_____	_____	_____	_____

Topic 36: Fractions

We had learned in other topics whole - part - part relation.
A fraction is part of a whole object or a group.
However, in fraction, the key word is <u>equal parts</u>.

The circle is divided into 2 equal halves.

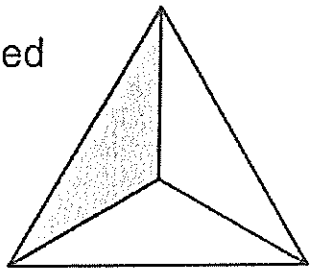
$\frac{1}{2}$ is shaded



$\frac{1}{2}$ 1 numerator, 2 denominator

The triangle is divided into 3 equal parts.

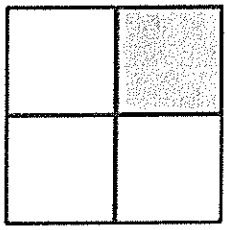
$\frac{1}{3}$ is shaded



$\frac{1}{3}$ 1 numerator, 3 denominator

The square is divided into 4 equal parts.

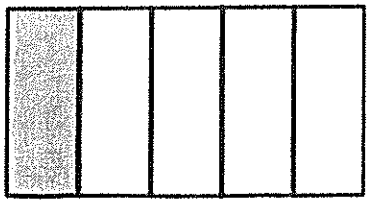
$\frac{1}{4}$ is shaded



$\frac{1}{4}$ 1 numerator, 4 denominator

The rectangle is divided into 5 equal parts.

$\frac{1}{5}$ is shaded



$\frac{1}{5}$ 1 numerator, 5 denominator

Date: Day of the week:

Fifty-seven (57) is

_____ tens and _____ ones

Forty-nine (49) is

_____ tens and _____ ones

Number sentence.

6 cats, 4 dogs.

How many pets in all?

_____ _____ = _____

Write the number words.

7 _____ 10 _____

8 _____ 9 _____

Complete the fact family

8 + 6 = _____

_____ _____ = _____

_____ _____ = _____

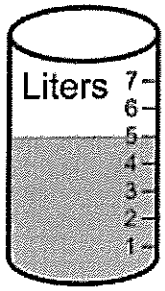
_____ _____ = _____

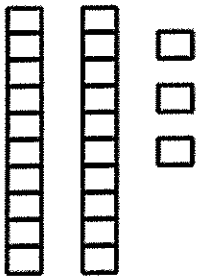
Which shape does not belong?

Cross it out.

This cylinder contains .

_____ liters of water





Write the 2 digits number.

_____

_____ tens _____ ones

Order the numbers

46 39 93 64

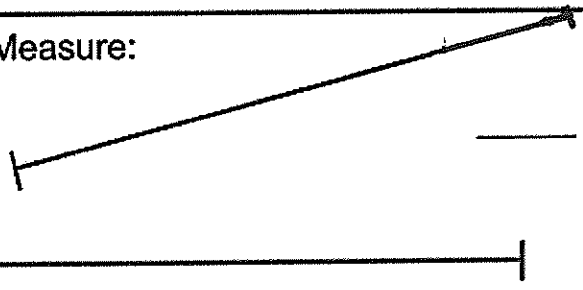
_____ _____ _____ _____

Circle the greatest value.

Cross out the least value.

Draw a triangle. Write the number word 1 inside.

Measure:



_____ in.

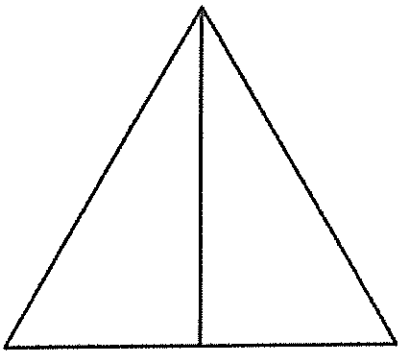
_____ cm.

Subtract zero and all.

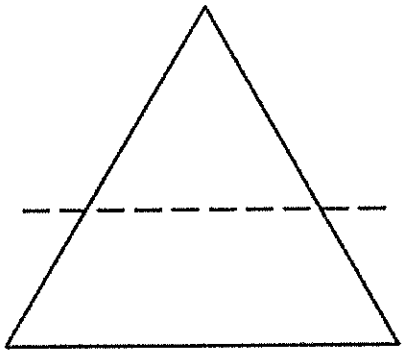
8	8	7	7	9	9
− 8	− 0	− 7	− 0	− 9	− 0
_____	_____	_____	_____	_____	_____

Topic 37: Some geometry words and their meaning

Lines of symmetry: A line of symmetry is a line that divides the shapes into 2 equal parts.



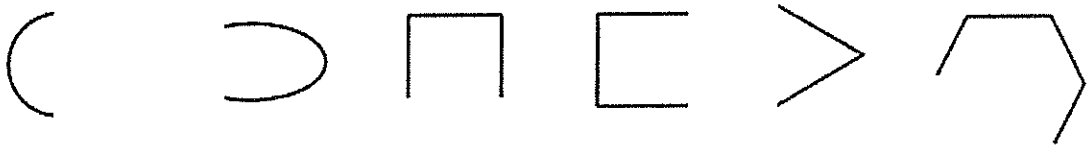
The 2 parts are equal



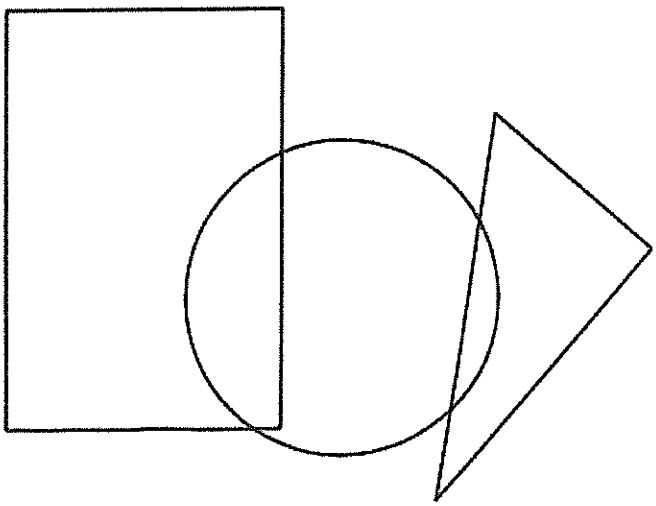
The 2 parts are not equal

Open figures: Flat shapes  circle,  triangle  square,  oval and  rectangle are closed figures.

If one or part of their line is missing, we call it open figures.

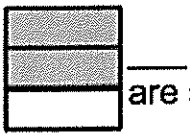
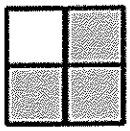
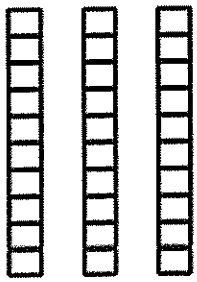


Overlapping figures: Overlap figures are shapes that contain or overlap each other.



This figure contains a rectangle, a circle, and a triangle.

Date: Day of the week:

Fill in the numerator and the denominator of each fraction.  ___ are shaded  ___ are shaded	Draw a closed figure with 3 lines. It is a _____.
Number sentence. 7 apples, 9 oranges. How many fruits in all. _____ _____ = _____	Write the number words 11 _____ 12 _____
Which month comes after June? _____ Which month comes before May? _____	Today is Thursday. What day was yesterday? _____
Draw a figure with 4 equal closed lines. It is a _____.	Complete the fact family 12 + 4 = _____ _____ _____ = _____ _____ _____ = _____ _____ _____ = _____
 Write the 2 digits number _____ _____ tens _____ ones	Complete the missing numbers on the chart. |					
---	---	---	---	---	---
		7			10
					20
25					30	

Add and subtract

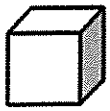
9	7	7	7	8
− 7	+ 9	+ 3	− 3	+ 5
_____	_____	_____	_____	_____

Topic 38: More on Geometric Solids

We learned the names of 5 geometric solids.


sphere


cylinder


cube


cone


pyramid

Flat surfaces: Some solids have flat surfaces, 1 solid has one, and another has none.

A sphere has no flat surface. It is all round.

A cone has 1 flat surface. It's pointed on top and round at the bottom.

A cylinder has 2 flat surfaces. It's body is round.

A pyramid has 5 flat surfaces.

A cube has 6 flat surfaces.

The flat surfaces help each solid to do some actions: roll, slide, stack.

A sphere can roll because it is round. But it cannot slide or stack without flat surfaces.

A cone can roll, slide and stack because of the one flat surface.

A cylinder can roll, slide and stack because it has 2 flat surfaces and a round body.

A pyramid cannot roll, but it can stack and slide.

A cube cannot roll, but it can stack and slide.

Date: Day of the week:

Number sentence.
8 stickers, 5 used up. How many left.

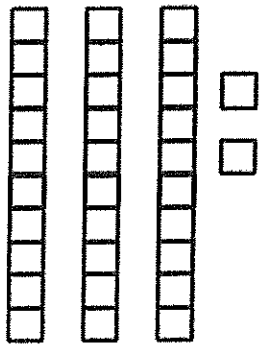
_____ _____ = _____

Seventy (70) is

_____ tens and _____ ones

Eighty-nine (89) is

_____ tens and _____ ones



Write the 2 digits.

_____

_____ tens and _____ ones

Measure:

_____ cm.

_____in.

1st □ Write the ordinal numbers □ _____

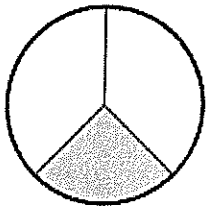
_____ ○ ○ _____

_____ △ △ _____

_____ □ □ _____

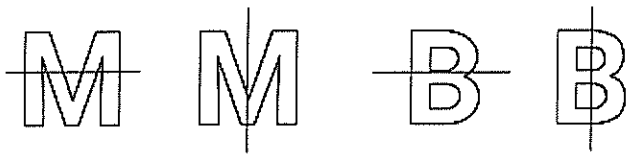
_____ ⬭ ⬭ 1st

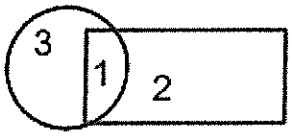
Fill in the numerator and the denominator of the fraction.



_____ is shaded

Line of symmetry. Circle the equal parts.





_____

Which number is in the circle and rectangle?

Complete the fact family.

12 - 4 = _____

_____ _____ = _____

_____ _____ = _____

_____ _____ = _____

Order the numbers

82 12 65 97

_____ _____ _____ _____

Cross out the greatest value.

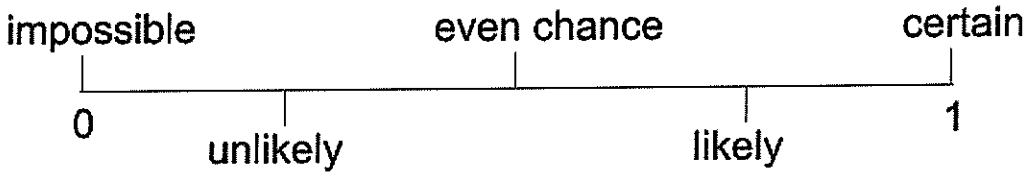
Circle the least value.

Add and subtract.

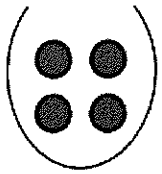
5	8	7	9	10
+ 8	- 5	+ 2	- 7	- 6
_____	_____	_____	_____	_____

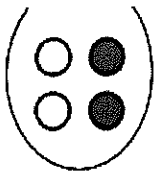
Topic 39: Probability

Probability is the chance that something will happen— how likely it is that some event will happen. We use words such as:
"impossible, " possible"
"unlikely", "likely"
"certain" and "even chance" to tell the event



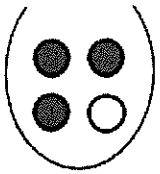
If we have 4 black marbles in a bag,
it is <u>certain</u> that we will pull out a black marble.
It is <u>impossible</u> to get a white one.





If we have 2 white and 2 black marbles, it is <u>even chance</u> that we will pull out a black or a white marble.

If we have 3 black and 1 white marbles,
it is <u>likely</u> that we will pull out a black one.
It is <u>unlikely</u> that we will pull out a white one.



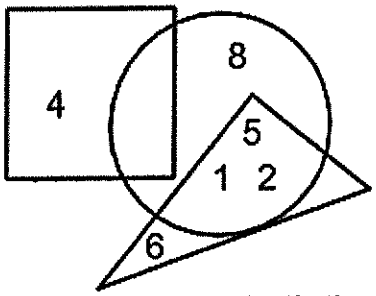
We can predict the event in a fraction. If there are 2 marbles, 1 white, 1 black, we can express the event as $\frac{1}{2}$ ⟸ numerator / denominator

If we throw a dice, there are 6 possible outcomes: 1, 2, 3, 4, 5, 6.
the possibility of any number is $\frac{1}{6}$ ⟸ numerator / denominator

Date: Day of the week:

Guess what I am? Circle one.
I am a solid with no flat surface. I can roll. I cannot slide or stack.
I am a sphere, cube, cone.

Circle one.
I am a solid. I have 2 flat surfaces.
I can roll, slide and stack.
I am a cylinder, cube, cone.



The 1 number in the circle only is _____ .
The 1 number in the square is _____.

The numbers in both the circle and triangle are _____ _____ _____

Sixty-nine (69) is ___ tens and ___ ones.

Ninety-six (96) is ___ tens and ___ ones.

Number sentence.
10 books, 6 pencils.
How many things in my schoolbag?

Complete the fact family.

15	15		
− 2	−	+	+

10			
− 6	−	+	+

Circle all odd numbers.
Cross out all even numbers.

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15

Draw an open figure with 5 lines any way you want.

What day comes before Monday?

_____

What day comes after Thursday?

_____

Which month comes before November?

_____

Which month comes after July?

_____

Add and subtract

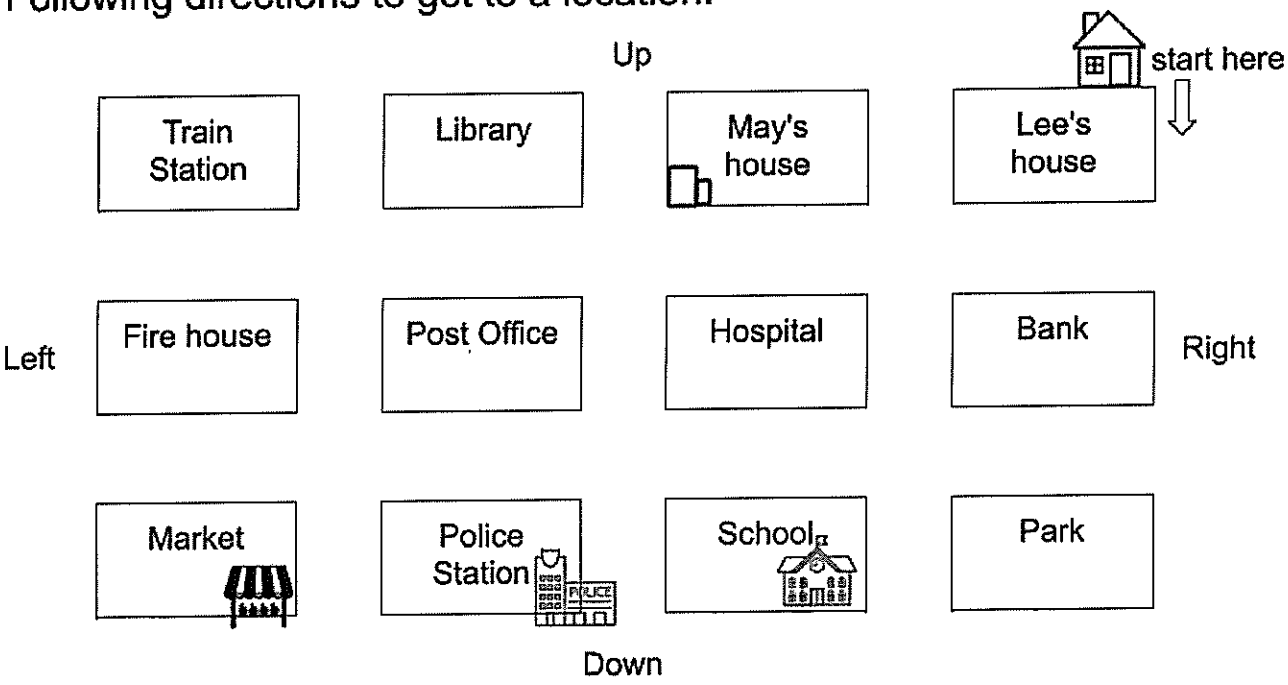
4	8	4	8	3
+ 6	− 6	− 0	+ 5	+ 7

Topic 40: Positional Words

Positional words help us locate things or places. It also helps us follow or give directions. Positional words include:

above / below	inside / outside
left / right	near / far
between	

Following directions to get to a location.



Each rectangle is called a block.

1. How does Lee go to school?

   Lee goes <u>down</u> 3 blocks and turn <u>right</u> 1 block.

2. How to go to May's house from the Market?

   Go <u>up</u> 2 blocks and turn <u>right</u> 1 block.

3. Where is the police station?

   It is <u>between</u> the market and the school.

Date: Day of the week:

Lee saw 8 fish, 2 swam away. How many were left?

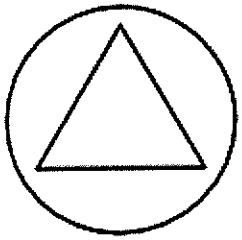
Which one does not belong to the fact family? Circle it.

6	8	14	14
+ 8	+ 6	− 8	7
____	____	____	____

Put the numbers in order. Cross out the greatest value. Circle the least value.

60 49 89 98

____ ____ ____ ____



The triangle is _____ the circle.

Compare the numbers using the symbol
> < =

62 _____ 57

49 _____ 49

12 _____ 32

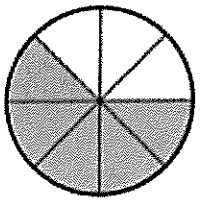
Sixty - two

_____ is _____ tens _____ ones

Circle one
I am a solid.
I have 5 flat surfaces.
I can slide and stack.
I cannot roll.
I am a cube pyramid cone.

Fill in the numerator and the denominator of each fraction.

____



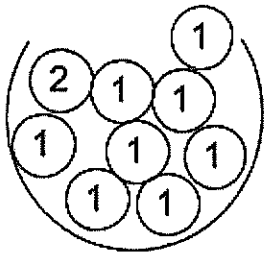
____

It is

certain (Circle one)

likely

that I will get a number 1



Count by 5's

10 _____ _____ _____ _____

Count by 10's

_____ _____ _____ _____ _____

Add and subtract.

8	5	7	8	5
+ 8	+ 5	+ 7	− 8	− 5
____	____	____	____	____

Topic 41: More on Addition

Addition means putting numbers together. When we add two numbers together, the answer we get is called the sum.

The sum of 3 + 2 is 5

The sum of 3 + 4 = 7

Another way of saying 3 + 2 = 5 is "three plus two equal five".

The "+" sign or symbol can also be read as "and".

Adding a one-digit and a two-digit number with a sum less than 20.

Start with the larger number and count up with the smaller number.

Then bring the number in the ten's place down.

$$\begin{array}{r} 13 \\ +\ 4 \\ \hline 17 \end{array} \qquad \begin{array}{r} 12 \\ +\ 6 \\ \hline \end{array} \qquad \begin{array}{r} 5 \\ +\ 10 \\ \hline \end{array} \qquad \begin{array}{r} 3 \\ +\ 11 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \\ +\ 4 \\ \hline \end{array} \qquad \begin{array}{r} 1 \\ +\ 18 \\ \hline \end{array} \qquad \begin{array}{r} 17 \\ +\ 2 \\ \hline \end{array} \qquad \begin{array}{r} 2 \\ +\ 15 \\ \hline \end{array}$$

Date: Day of the week:

Circle groups of ten. Write the 2 digit number.

OOOOO OOOOO
OOOOO OOOOO ____ ____
OOOOO

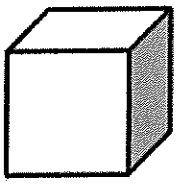
The number is odd / even.

Circle the pattern unit. Extend the pattern.

153 153 153 _____ _____

153 are odd / even.

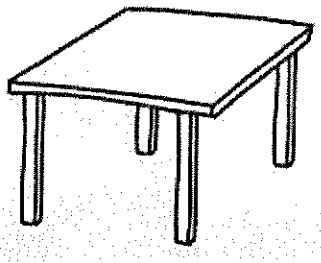
Name the solid figure.



It is a cone / cube / cylinder.

Circle the answers below:
It can slide / stack / roll.

Circle the heavier object.



Write the numeral for these number words.

ten _____

eleven _____

twelve _____

Number sentence

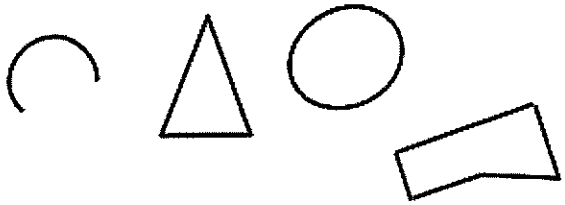
6 cats, 3 ran away. How many left?

_____ _____ = _____

0 vans and 4 vans

_____ _____ = _____

Circle the open shape.



Circle the fifth.

first

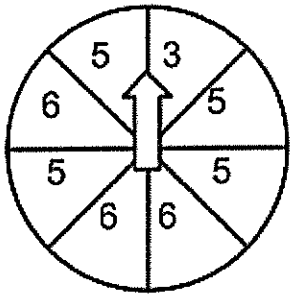
Circle one answer

It is

unlikely /

impossible

to get a 3.



Complete the fact family.

5, 7, 12

\- _____ - _____ + _____ + _____

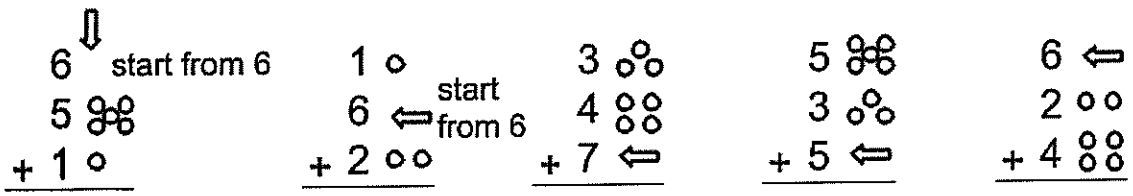
Adding doubles.

$\begin{array}{r} 2 \\ +\ 2 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ +\ 3 \\ \hline \end{array}$ $\begin{array}{r} 4 \\ +\ 4 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ +\ 5 \\ \hline \end{array}$ $\begin{array}{r} 6 \\ +\ 6 \\ \hline \end{array}$

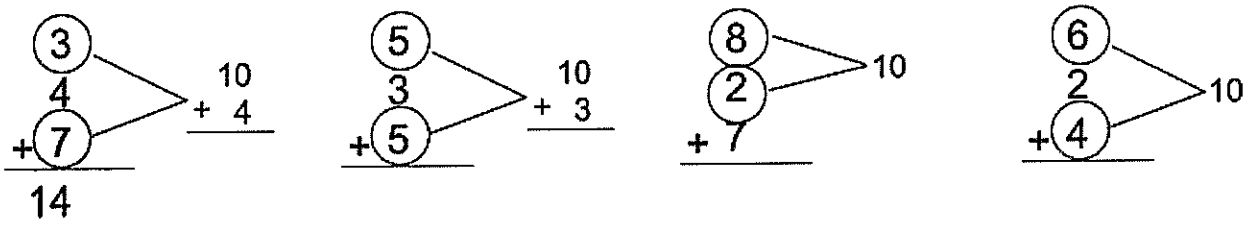
Topic 42: More on addition

Adding 3 one-digit numbers with a sum greater than 10.

Start with the largest number and count up with the smaller numbers.



Another way to find the sum is to look for the 10 facts.



Adding 3 one-digit numbers horizontally. When adding 3 one-digit numbers, you can do the same. Or you can add the first 2 numbers first, then add the third number to the sum.

5 + 2 + 7 =

7 + 7 = 14

2 + 8 + 6 =

10

4 + 6 + 8 =

10

3 + 9 + 7 =

10

3 + 4 + 2 =

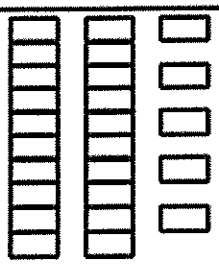
7

6 + 6 + 5 =

double

12 + 5

Date: Day of the week:



Write the 2 digit number.

_____

Twenty-five is ____tens and ____ ones

Before	This month is	After
	November	
	January	
	June	

Write 2 even number

_____ _____

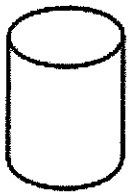
Write 2 odd number

_____ _____

Complete the missing numbers on part of the 100 chart.

5		7	8		10
	16				
				29	30

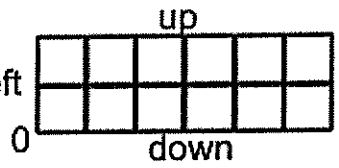
Name the solid figure. Circle things it can do.



It is a cylinder, / cone, / cube.

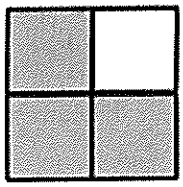
It can slide / stack / roll.

Following directions.

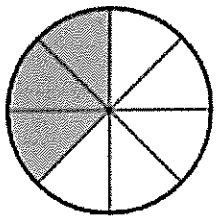


Start from 0, go 2 blocks right.
Go 1 block up, write the letter A.

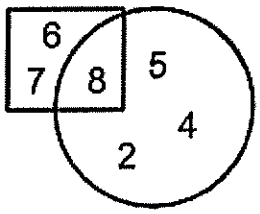
Fill in the numerator and the denominator.



_____



_____



The numbers in the circle are _____

The number in both shape is _____.

Circle one.

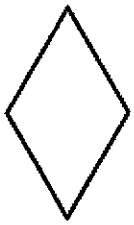
I am a solid.

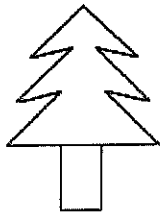
I have 6 flat surfaces.

I can slide and stack.

I am a cube, / pyramid, / sphere.

Draw lines of symmetry.





Adding and subtracting doubles.

$\begin{array}{r} 7 \\ +\ 7 \\ \hline \end{array}$ $\begin{array}{r} 8 \\ +\ 8 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ +\ 9 \\ \hline \end{array}$ $\begin{array}{r} 4 \\ -\ 4 \\ \hline \end{array}$ $\begin{array}{r} 6 \\ -\ 6 \\ \hline \end{array}$

Topic 43: More about Subtraction

Subtraction means take away.

$5 - 2 = 3$

The sign or symbol "−" means minus. We can say "five minus two equal three."

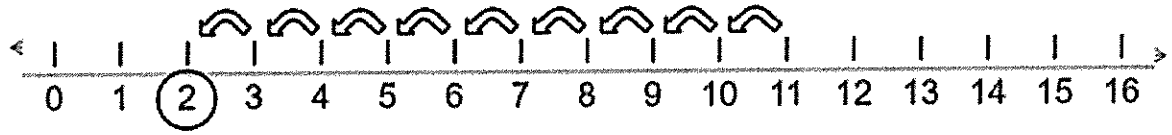
The difference: The number you have left after you subtract is called the difference. $7 - 3 = 4$

The difference is 4.

Learning the subtraction facts of 11, 12, 13 and 14.

When doing subtraction with more than 10, you can:

1. Use the number line and count backward.



$11 - 9 = 2$

2. Use the dots.

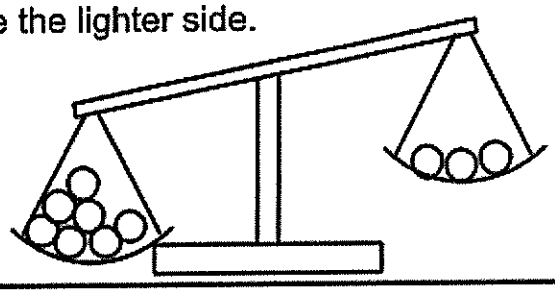
$$\begin{array}{r} 11 \\ -\ 9 \\ \hline 2 \end{array}$$

3. Remember the patterns of each fact.

11	11	11	11	11	11	11	11	11	11
− 1	− 2	− 3	− 4	− 5	− 6	− 7	− 8	− 9	−10
10	9	8	7	6	5	4	3	2	1
12	12	12	12	12	12	12	12	12	12
− 1	− 2	− 3	− 4	− 5	− 6	− 7	− 8	− 9	−10
11	10	9	8	7	6	5	4	3	2
13	13	13	13	13	13	13	13	13	13
− 1	− 2	− 3	− 4	− 5	− 6	− 7	− 8	− 9	−10
12	11	10	9	8	7	6	5	4	3
14	14	14	14	14	14	14	14	14	14
− 1	− 2	− 3	− 4	− 5	− 6	− 7	− 8	− 9	−10
13	12	11	10	9	8	7	6	5	4

Date: Day of the week:

Circle the lighter side.



Which one does not belong to the fact family?

$9 - 7 = 2$ $2 + 7 = 9$

$7 + 2 = 9$ $7 - 2 = 5$

Cross it out.

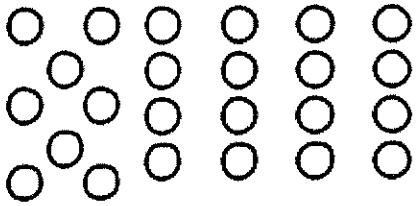
Write the numbers:

twelve _____ sixteen _____

eleven _____ ten _____

twenty _____ fourteen _____

Circle groups of ten. Write the 2 digit number.



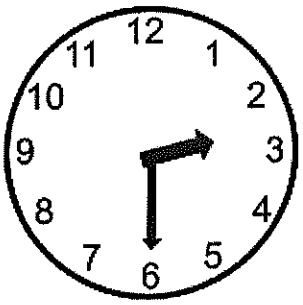
_____

Measure in inches.

_____ in.

Measure in centimeter.

_____ cm.



Telling time:

: _____

Write tally marks for the numbers.

15 _____

9 _____

12 _____

16 91 61

_____ _____ _____

first next last

Circle one answer.

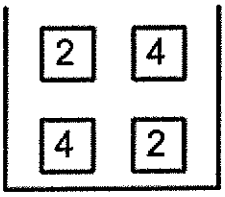
It is:

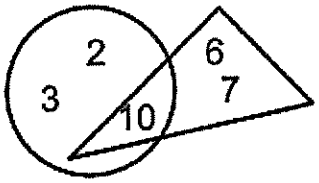
-even chance

-impossible

-certain

to pick a number 4





The numbers in the circle are

_____

The number in both the circle and triangle is _____.

Add and subtract doubles.

$\begin{array}{r} 7 \\ -\ 7 \\ \hline \end{array}$ $\begin{array}{r} 8 \\ +\ 8 \\ \hline \end{array}$ $\begin{array}{r} 8 \\ -\ 8 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ -\ 9 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ +\ 9 \\ \hline \end{array}$

Topic 44: Estimating length of time

It takes time to do things.

Something we do takes longer.

Something we do takes shorter.

We want to guess about how much time we need to do certain things.

Brushing our teeth takes about 2 min.

Eating breakfast takes about 15 min.

Eating dinner takes about 30 min.

Doing homework takes about 45 min.

Which activity takes the most time?

_____

Which activity takes the least time?

_____

Estimate how much time each activity take.

Brushing your hair _____ min.

Getting dressed _____ min.

Shopping with mom _____ min.

Sliding down the slide _____ min.

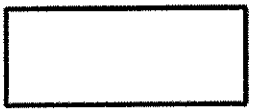
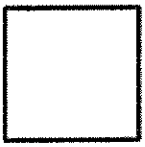
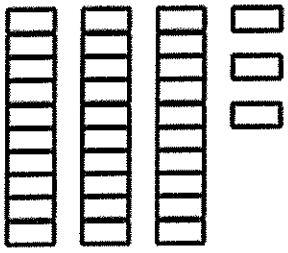
Learning different days:

To-day: on this day

Yesterday: the day before today

To-morrow: the day after today

Date: Day of the week:

To-day is Thursday. What day was yesterday? _____	52, 54, 56, 58 We count by 2's, / 1's 45, 46, 47, 48: We count by 2's, / 1's Circle one choice.
Which takes longer? Drawing a picture or Count to 10 Underline one sentence.	Write a number sentence. 12 books, 6 more books. How many all together? _____ _____ = _____
Compare 86 66 Use the symbol > < 86 _____ 66 66 _____ 86	Circle one answer. I am a solid. I have 2 flat surfaces. I can roll, slide and stack. I am a cylinder, / cone, / sphere.
Split the rectangle in 2 halves. Write the fraction.  _____	Split the square in 4 parts. Shade 1 part. Write the fraction.  _____
Write the 2 digit number.  ___ ___	Order the number from least to greatest. Cross out the least value. Circle the greatest value. 12 94 21 49 ____ ____ ____ ____

Find the difference.

$$\begin{array}{r} 11 \\ -\ 2 \\ \hline \end{array} \qquad \begin{array}{r} 12 \\ -\ 2 \\ \hline \end{array} \qquad \begin{array}{r} 11 \\ -\ 7 \\ \hline \end{array} \qquad \begin{array}{r} 12 \\ -\ 8 \\ \hline \end{array} \qquad \begin{array}{r} 11 \\ -\ 9 \\ \hline \end{array}$$

Topic 45: Measuring a line segment to the nearest inch / centimeter

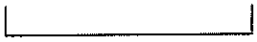
When we measure a line segment, the length of an object does not measure exactly at the mark. We should use the closest mark anyway.

Measure the length of each line segment to the nearest inch.

_____ in.

_____ in .

_____ in.



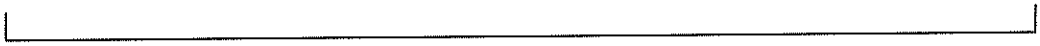
_____ in.

Measure the line segment to the nearest centimeter.

_____ cm.

_____ cm.

_____ cm.



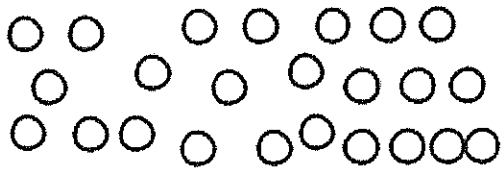
_____ cm.

Date: Day of the week:

Draw a closed figure with 4 equal lines.

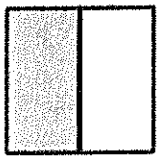
It is a _____.

Write the 2 digit number. (Make groups of ten.)



_____

Fill in the numerator and the denominator of each fraction from the shaded part.



_____

_____

Today is Monday. Yesterday was

_____.

Tomorrow will be _____.

Before	This month	After
	May	
	November	
	January	

Complete the missing numbers on part of the 100 chart.

13						19
	24				28	

Which takes longer? (Underline one sentence)

Eating an apple.

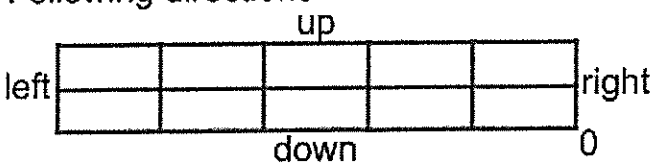
Drinking one sip of water.

Circle one answer.

It is likely / unlikely / even chance to get a number 1.

1	1	1	1
1	2	1	5

Following directions



Start from zero. Go left 4 blocks. Go up 2 blocks. Draw a △

Number sentence.

13 pencils, used up 3. How many are left?

_____ _____ = _____

Find the difference.

13	14	13	14	13
− 1	− 1	− 2	− 2	− 3
_____	_____	_____	_____	_____

Topic 46: Measuring length with non-standard units

Rulers are marked with units of measure that are a standard size.

We can also measure with non-standard units.

The length of an object is the distance from one end to the other.

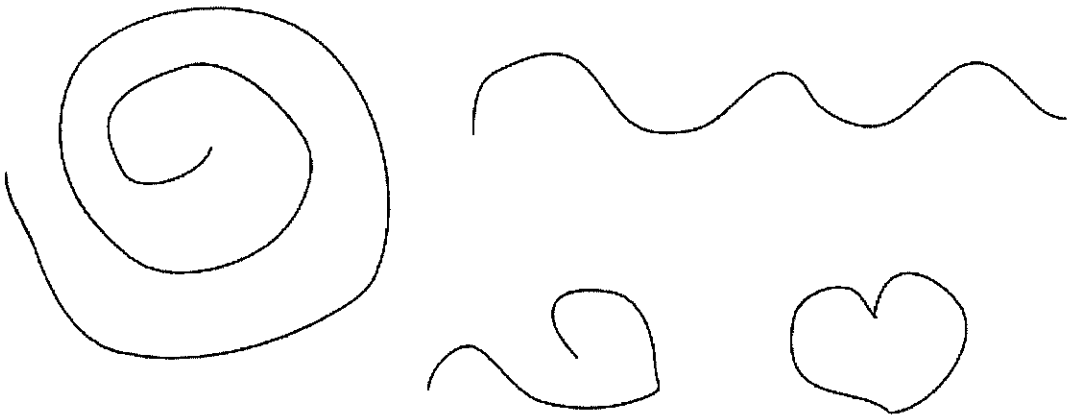
We can measure length in many different ways.

We can measure with a string or paper clips.

We can measure with a pencil.

We can measure with a finger.

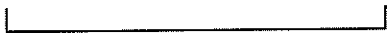
What if the line segment is not a straight line?



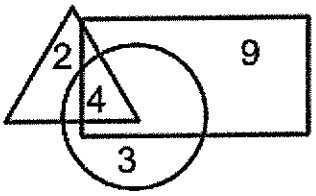
Use a string to measure. Then measure the string using an inch ruler or a centimeter ruler.

Date: Day of the week:

Measure the line segment to the nearest in / cm.

 _____ cm.

 _____ cm.



The number in all 3 shapes is _____.

The number in only the circle is. _____.

I am a solid with 6 flat surfaces. all my surfaces are equal. I can stack and slide. I cannot roll.

I am a cube / cone / sphere.

Complete the fact family.

12 8 4

_____ – _____ = _____

_____ – _____ = _____

_____ + _____ = _____

Circle all odd numbers. Cross out all even numbers.

11	12	13	14	15
21	22	23	24	25
31	32	33	34	35

Ninety-seven is

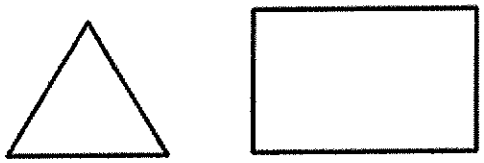
_____ tens and _____ ones.

Eighty-five is

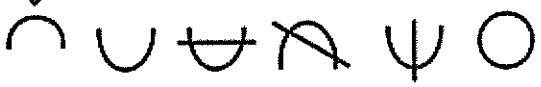
_____ tens and _____ ones.

Circle the longer line. (use a string to help)

Draw lines of symmetry.

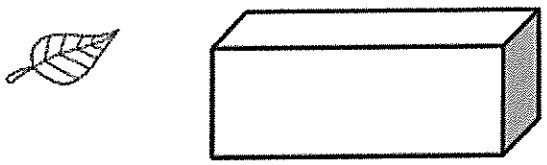


first ⇩



Circle the fourth

Circle the lighter object



Find the sum.

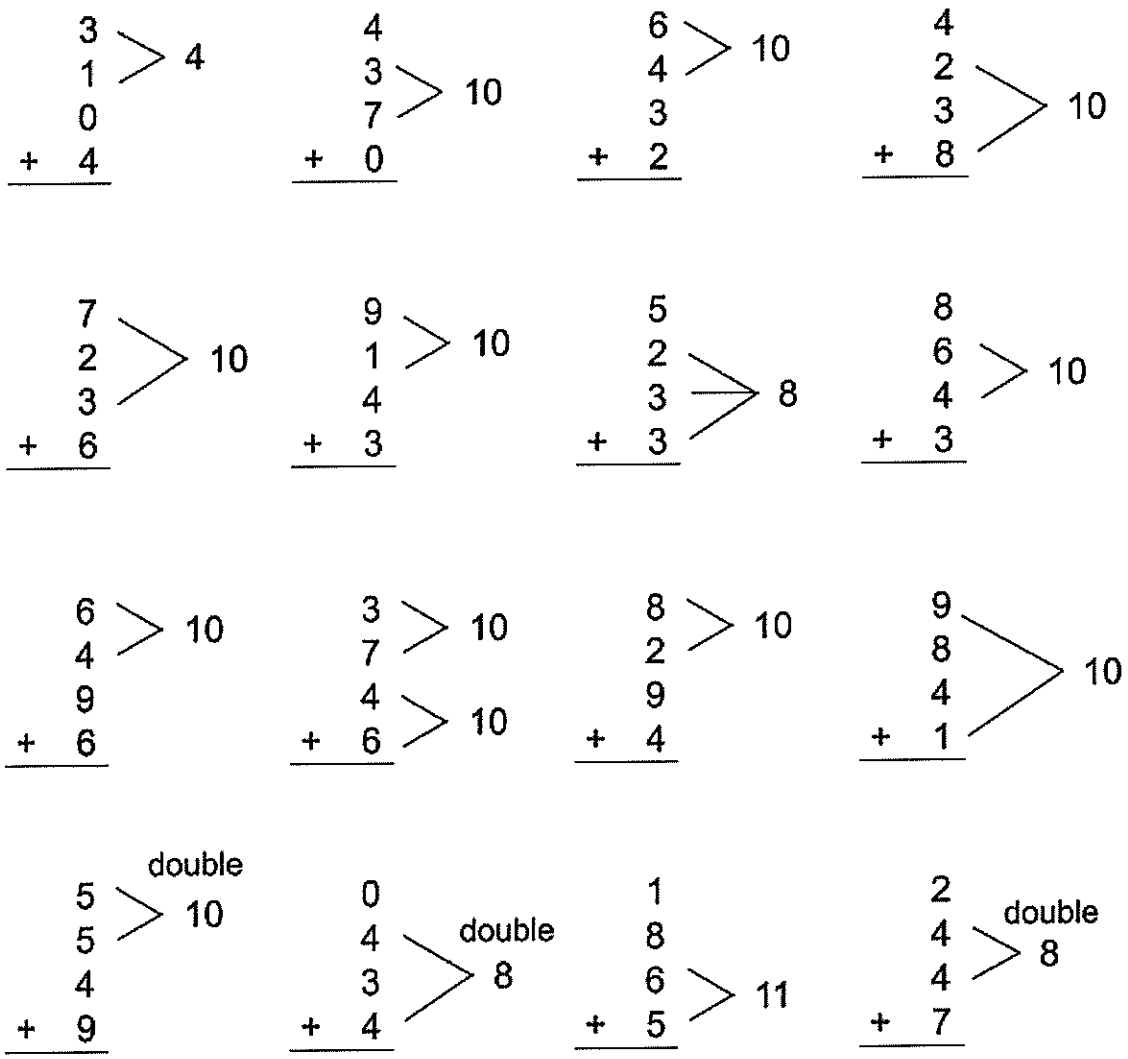
34	53	46	82	77
+ 3	+ 2	+ 3	+ 5	+ 10
_____	_____	_____	_____	_____

Topic 47: Adding 4 one-digit numbers

When we add 4 one digit numbers, we do the same as what we learned in topic 43.

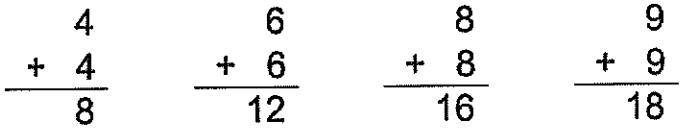
We first look for the 10 facts.

Then we add the rest of the numbers.

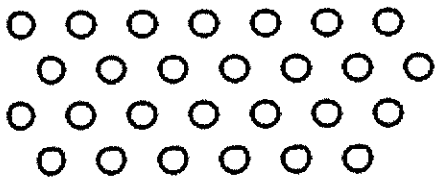
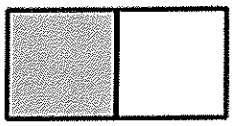


If there is no 10 facts, look for the double facts.

Doubles are when the 2 numbers are the same.



Date: Day of the week:

Write the numbers in fraction. 4 marbles. 3 are black, 1 is white $\frac{3}{4}$ black $\frac{\quad}{4}$ white	6 marbles. 4 are black, 2 are white $\frac{\quad}{6}$ white $\frac{\quad}{6}$ black
To-day is Monday. Yesterday was _____. To-morrow will be _____.	Make groups of ten. Write the 2 digit number.  _____
Estimate which takes less time. Underline it. Counting from 1 - 100. Do 10 pages of homework.	How many part is shaded?  $\frac{\quad}{2}$
Select a number from the set: 7, 8, 2 7 < _____ 7 is less than / greater than (circle one)	Select a number from the set: 25, 37, 35 35 > _____ 35 is less than / greater than (circle one)
Order the set of number from least to greatest 28, 14, 41, 82 _____ _____ _____ _____	Number sentence. John has 4 toy trucks. His dad gave him 10 more. How many now? _____ _____ = _____

Find the sum.

13	17	5	12	16
+ 4	+ 2	+ 12	+ 12	+ 3
_____	_____	_____	_____	_____

Topic 48: More on addition

Adding a two digit number and a one-digit number (without regrouping). We learned about tens and ones. Now we are going to add tens and ones.

	tens	ones
	3	7
+	⇩	2
	3	9

7 ones + 2 ones = 9 ones

3 tens and 9 ones is 39

	tens	ones
	5	3
+	⇩	5
	5	8

3 ones + 5 ones = 8 ones

5 tens and 8 ones is 58

Adding a two-digit number to another two-digit number (without regrouping).

	tens	ones
	1	2
+	3	4
	4	6

2 ones + 4 ones = 6 ones

1 tens + 3 tens = 4 tens

4 tens and 6 ones is 46

	tens	ones
	4	2
+	3	2
	7	4

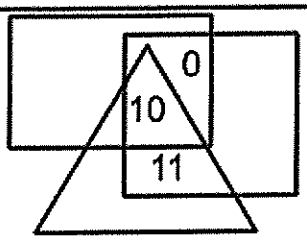
2 ones + 2 ones = 4 ones

4 tens + 3 tens = 7 tens

7 tens and 4 ones is 74

31	73	43	52	82
+ 3	+ 4	+ 5	+ 6	+ 4
16	43	32	64	
+ 42	+ 15	+ 21	+ 12	

Date: Day of the week:



The number in all three shape is _____.

The number in the triangle and square is _____.

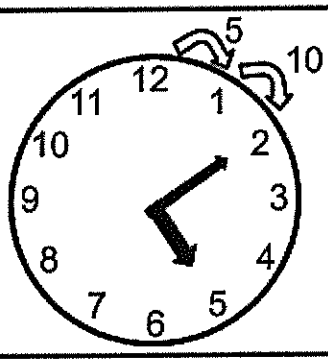
Complete the fact family

15 10 5

_____ _____ _____ _____

The time is

_____ : _____



Circle one answer.

It is likely / unlikely to get a 9.

It is impossible / even chance to get a 3.

(9) (8) (9) (9) (4) (9) (5)

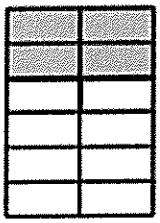
To-day is Tuesday.

Yesterday was _____.

To-morrow will be _____.

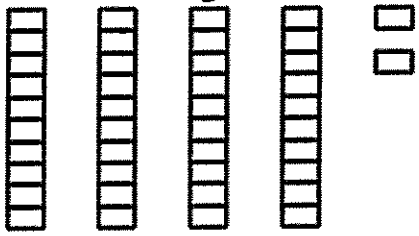
before	now	after
	April	
	June	
	November	

Write the fraction for the shaded area.



_____

Write the 2 digit number.



_____

Order the set of numbers from greatest to least.

89 36 54 72

_____ _____ _____ _____

Number sentence:

May has 12 juice. She drank 2. How many are left?

_____ _____ = _____

Find the sum

3	5	3	6	2
4	5	2	5	8
+ 6	+ 4	+ 7	+ 1	+ 6
_____	_____	_____	_____	_____

Topic 49: More on subtraction

Subtracting a one-digit number from a two-digit number (no regrouping)

We do the same with tens and ones as in addition

	tens	ones
	5	8
−	⇩	2
	5	6

8 ones − 2 ones = 6 ones

5 tens and 6 ones is 56

	tens	ones
	8	6
−	⇩	4
	8	2

6 ones − 4 ones = 2 ones

8 tens and 2 ones is 82

Subtracting a two-digit number from another two-digit number.

	tens	ones
	7	6
−	4	1
	3	5

6 ones − 1 ones = 5 ones

7 tens − 4 tens = 3 tens

3 tens and 5 ones is 35

	tens	ones
	5	6
−	2	5
	3	1

6 ones − 5 ones = 1 ones

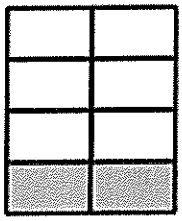
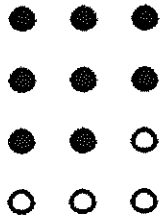
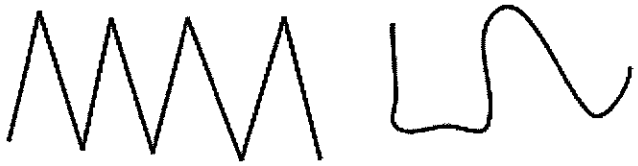
5 tens − 2 tens = 3 tens

3 tens and 1 ones is 31

Try these subtraction problems:

43	64	28	89
− 1	− 3	− 4	− 6
75	43	57	68
− 61	− 21	− 32	− 25

Date: Day of the week:

Circle the pattern unit. Extend the pattern. 4 6 8 4 6 8 4 6 8 ____ ____ ____ 4 6 8 are odd / even numbers	Write the numeral for these number words fifty-one _____ thirty-two _____ ninety _____
Write the numerator for the fraction. ___ are shaded 8 	Write the numerator for the fraction. ___ black 12 
Measure the line segment to the nearest in / cm. _____ in. _____ cm.	Circle the shorter line. (use a string) 
Draw lines of symmetry 	 Circle the third. Cross out the sixth first
Seventy-eight is _____ tens and _____ ones Eighty-seven is _____ tens and _____ ones	I am a solid with one flat surface. I can roll, stack and slide. I am a cone / cylinder / sphere

Find the difference

11	12	11	11	11
− 1	− 4	− 4	− 5	− 6
____	____	____	____	____

Topic 50: Finding the missing number

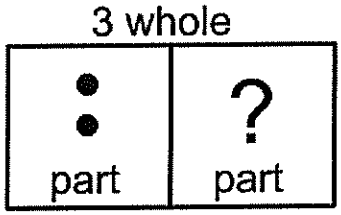
Fill in the missing addends in a number sentences.

We go back to think about the whole-part-part relationship.

$3 = 2 + \underline{1}$

or

$2 + \underline{1} = 3$



1 dot is missing

Try these:

$3 + \_\_\_\_\_ = 5$ $\quad 1 + \_\_\_\_\_ = 9$ $\quad 7 + \_\_\_\_\_ = 7$

$\_\_\_\_\_ + 6 = 11$ $\quad \_\_\_\_\_ + 2 = 8$ $\quad 7 + \_\_\_\_\_ = 10$

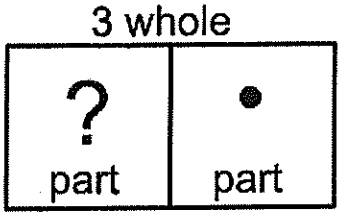
Fill in the missing subtrahends in a number sentence.

$1 = 3 - \underline{2}$

or

$3 - 2 = 1$

2 dots are missing



Try these:

$6 - \_\_\_\_\_ = 1$ $\quad 8 - \_\_\_\_\_ = 6$ $\quad 9 - \_\_\_\_\_ = 3$

$10 - \_\_\_\_\_ = 4$ $\quad 7 - \_\_\_\_\_ = 3$ $\quad 4 - \_\_\_\_\_ = 2$

When we work on missing addends and subtrahends, the value on the left of the equal sign must have the same value of what is on the right.

Date: Day of the week:

Find the missing subtrahends.

10 − _____ = 6 8 − _____ = 6

7 − _____ = 4 5 − _____ = 3

Find the missing addends:

_____ + 2 = 5 1 + _____ = 8

_____ + 6 = 7 6 + _____ = 10

Complete the fact family

7 5 2

+ ____ + ____ − ____ − ____

Select a number for the set 17, 15, 12

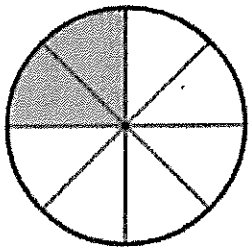
12 < _____ less than / greater than

15 > _____ less than / greater than

Complete the missing number in part of the 100 chart.

2						8
		14				
22						18

Write the fraction for the shaded area.



_____

Circle the heavier object:

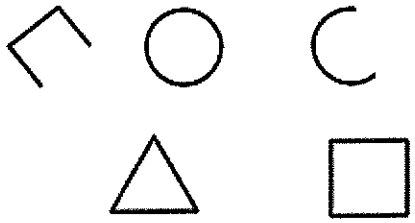
Circle the pattern unit. Extend the pattern.

791 791 791 _____

791 are _____ numbers

odd / even

Cross out the closed shapes



Number sentence

I have 10 flowers.

I gave mom three.

How many flowers are left?

_____ _____ = _____

Find the sum and difference

31	36	78	84	55
+ 1	− 2	+ 21	− 4	− 13
_____	_____	_____	_____	_____

Topic 51: Word Problems with addition

Problem solving is a major difficulty for young learners to learn and teachers to teach.

This section attempts to help students to think analytically and critically. There is more than one way to approach a problem.

The Singapore model drawing is introduced here as one of the approaches to help learners organize their thoughts.

Beginning Model Drawing

Mom picked 4 apples.

I picked 2 apples.

How many apples did we pick in all?

(a) Draw the apples.
Mom's apples  My apples 

(b) Count or add the apples 4 + 2 = _____

(c) Complete the sentence.

(d) They picked _____ apples in all.

Draw a three inches line segment, then write the date

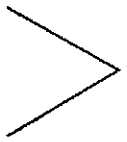
Today is _____ (day of the week)

Tom read 6 books. Lee read 3. How many books did they read in all?

(a) Draw the number of books.

Tom's Books. 

Lee's Books. 

 ____ ?

(b) Count or add

6 + 3 = _____

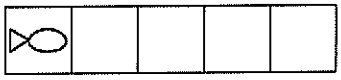
(c) They read _____ books in all.

(d) Does your answer make sense?

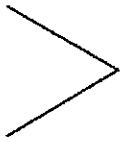
Meiye has 5 fish.

Her friend gave her 2 more.

How many fish does she have in all?

(a) Meiye's fish 

She has 2 more 

 ____ ?

(b) Count or add

5 + 2 = _____

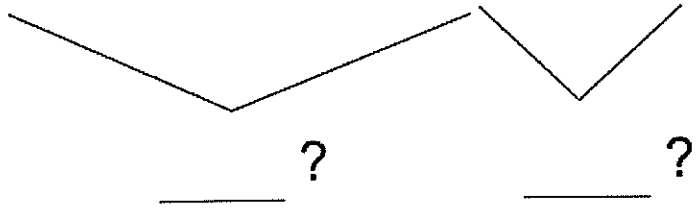
(c) Meiye has _____ fish in all.

(d) Does your answer make sense?

Topic 52: Word problems with subtraction

Amy has 10 stickers. She puts 3 in her sticker book. How many are left?

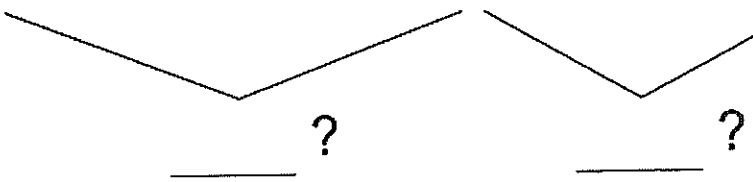
Amy's stickers  10



(a) Fill in the missing numbers.
(b) Fill in the blank after the equal sign
10 − 3 = _____
There are _____ stickers left.

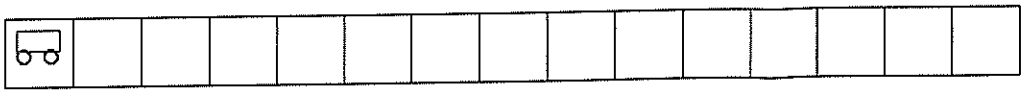
Ming has 12 cookies. His brother ate 5. How many cookies are left?

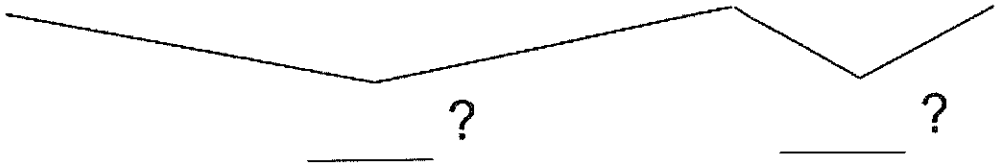
Ming's cookies.  12



(a) Fill in the missing numbers in the drawing.
(b) Fill in the blanks after the equal sign.
12 − 5 = _____
There are _____ cookies left.

John had 15 toy cars. He gave 4 to his best friend. How many cars are left?

John's toy car  15



15 − 4 = _____ _____ toy cars are left

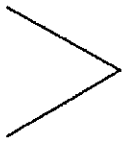
Draw an eight cm. line segment with your ruler. Write the date.

Draw a ten cm. line segment, write the day of the week.

Try to draw your own model with addition and subtraction.

Jennifer has 7 crayons. Mia has 6 crayons. How many crayons do they have in all?

Jennifer's crayons



____ ?

Mia's crayons

_____ + _____ = _____

There are _____ crayons in all.

My little brother had 9 buttons on his shirt. He ripped 2 buttons out. How many buttons are left?

My little brother's buttons

_____ – _____ = _____

There are _____ buttons left.

I picked 6 flowers. Mom put 5 in a vase. How many do I still have?

My flowers

_____ – _____ = _____

I still have _____ flower.

Topic 53: Problems with missing numbers

Max picked 8 flowers for his mom. His sister made the same number of paper flowers. How many flowers does mom get?

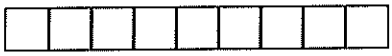
Max's flowers  8

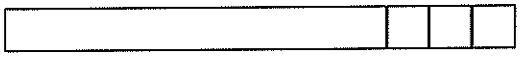
His sister's paper flowers  _____ ?

_____?

_____ + _____ = _____ Mom has _____ flowers in all.

Rich read 9 books on Saturday. He read 9 and 3 more the next day. How many books did he read in all.

On Saturday  9

On Sunday 

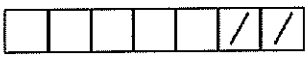
9 + 3 = _____

_____ + _____ = _____

Rich read _____ books in all.

Dan packed 7 T-shirts for camp. His friend packed 2 shirts fewer. How many T-shirts did they pack together?

Dan's shirts  7

His friend  _____ ?

_____?

_____ + _____ = _____ They packed _____ shirts in all.

Draw a line segment that is five inches.

Date:

Draw a line segment that is eight inches.

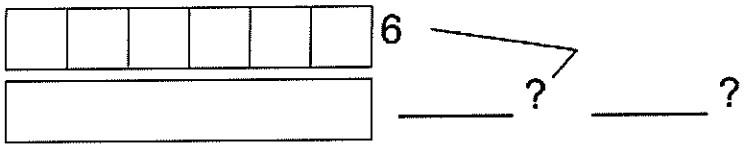
Day of the week:

Mrs. Lee checked out 6 books at the library.

Mr. Lee checked out the same number of books. How many books did they check out together?

Mrs. Lee's books

Mr. Lee's books

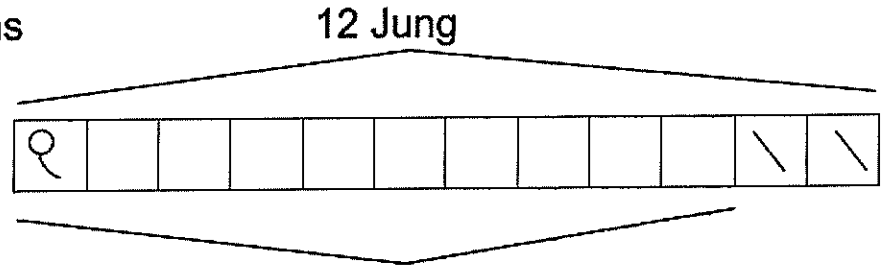


_____ + _____ = _____

They have _____ books together.

Jung has 12 balloons. His sister has 2 fewer balloons than Jung. How many balloons do they have in all?

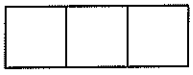
Jung's balloons

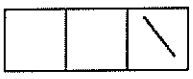


_____ ? sister's balloons

12 + _____ = _____ = balloons in all.

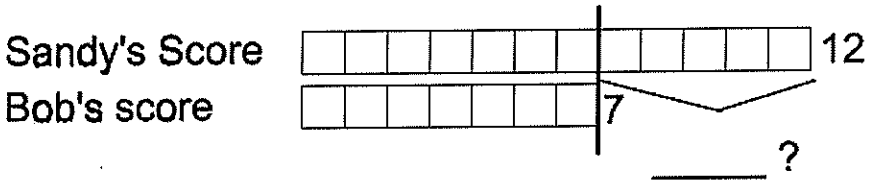
May practiced 3 hours of piano on Monday. She practiced 1 hour less on Tuesday. How many total hours she practiced on the two days?

Monday  3 hours _____ + _____ = _____

Tuesday  ___ hour _____ hours in 2 days

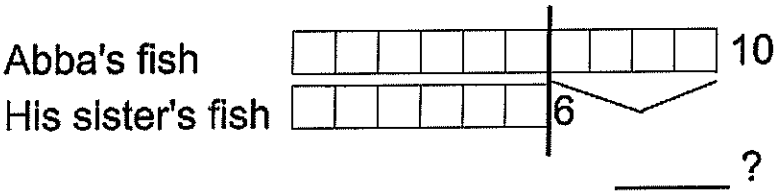
Topic 54: Comparison Problems

Sandy scored 12 points in math.
Bob scored 7 points in the same test.
What is the difference in their score?



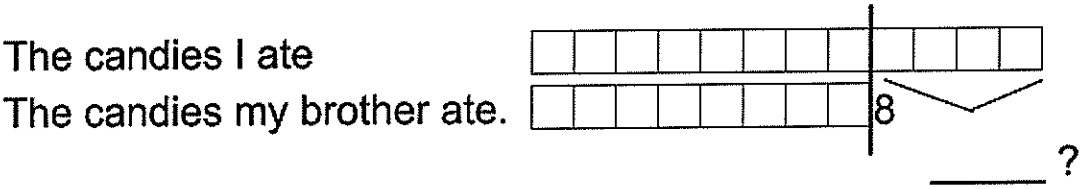
12 – 7 = _____
The difference in their score is _____ points.

Abba has 10 fish in his tank.
His sister has 6 fish in her tank.
What is the difference in the number of fish?



10 – 6 = _____
Abba has _____ more fish in his tank.

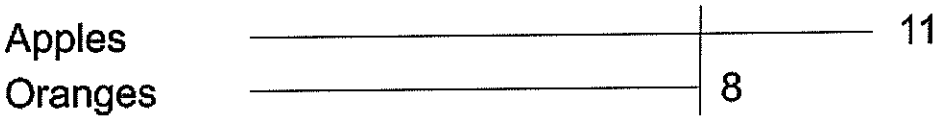
I ate 12 candies. My brother ate 8. How many more candies did I eat?



12 – 8 = _____

I ate _____ more than my brother.

Mrs. Johnson has 11 apples and 8 oranges in the fruit bowl. How many more apples than oranges does she have?



(try this yourself)

_____ – _____ = _____

Mrs. Johnson has _____ more apples.

Himari scored 12 baskets. Yee Yee scored 8 baskets. What is the difference in the numbers of scores? (draw your bars)

Himari scored
Yee Yee scored
(try this: draw the bars)

_____ – _____ = _____

Himari scored _____ more than _____ _____.

Adam drew 14 pictures on Saturday. He drew 10 pictures on Sunday. How many fewer pictures did he draw on Sunday. (Draw your bars)

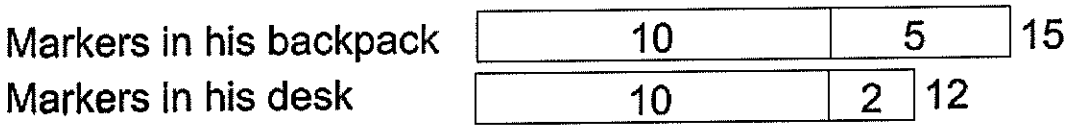
On Saturday
On Sunday

_____ – _____ = _____

Adam drew _____ fewer pictures.

Topic 55: Adding with Continuous Model

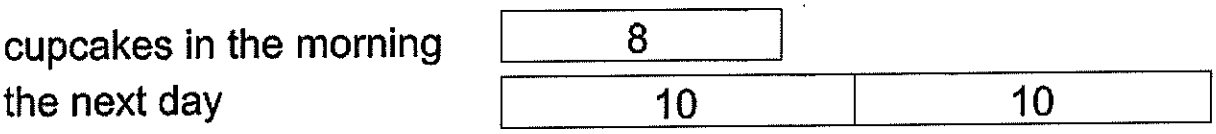
Mai-chin has 15 markers in his backpack. There are 12 markers inside his desk. How many markers does he have in all.



$$\begin{array}{r} 10 \\ +\ 10 \\ \hline 20 \end{array} \qquad \begin{array}{r} 5 \\ +\ 2 \\ \hline 7 \end{array}$$

20 + 7 = 27 Mai-chin has _____ markers

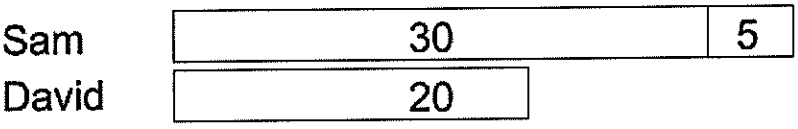
The baker baked 8 cupcakes in the morning. He baked 20 the next day. How many cupcakes did he bake?



_____ + _____ = _____

The total cupcakes baked is _____.

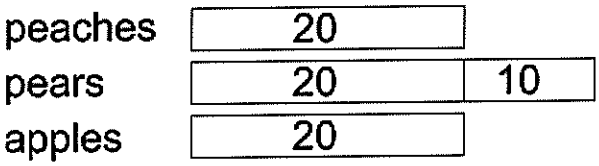
Sam collected 35 seashells at the beach. David collected 20 seashells. How many seashells in all?



_____ + _____ = _____ _____ seashells in all.

Adding more of the same thing using the continuous model

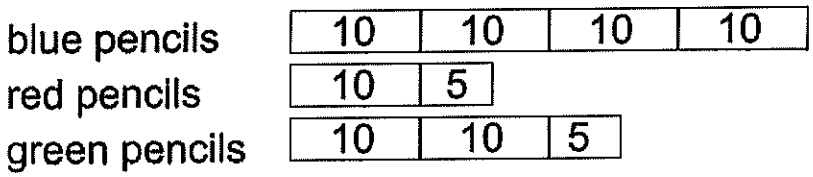
Goldin has 20 peaches, 30 pears, 20 apples. How many pieces of fruit does he have?



20 + 20 + 20 + 10 = _____

Goldin has _____ pieces of fruit.

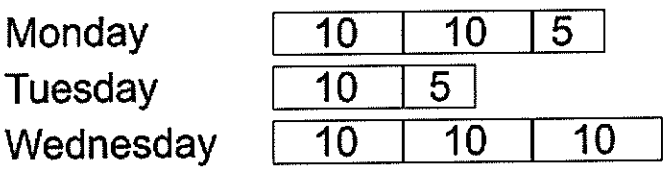
Mia has 40 blue pencils, 15 red pencils and 25 green pencils. How many in all?



70 + 5 + 5 or 70 + 10 = _____

Mia has _____ pencils in all.

Mr. Nakamura read 25 minutes on Monday. 15 minutes on Tuesday and 30 minutes on Wednesday. How many minutes did he read totally?

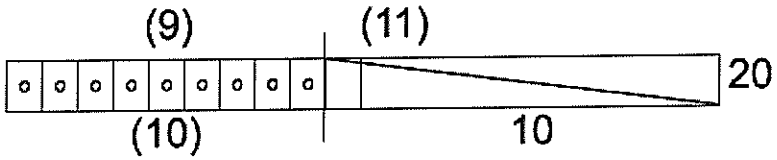


60 + 10 = 70

Mr Nakamura read a total of _____ min.

Topic 56: Subtracting with the continuous Model

Ahnjong had 20 story books. She gave away 11. How many books are left?



20 − 11 = _____ (count and write it)

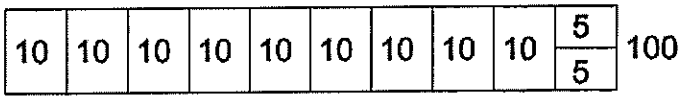
Ahnjong still had _____ books.

Mrs. Kim made 40 hot dogs. Her students ate 20 of them. How many hot dogs are left?

(cross out the hot dogs eaten)

_____ − _____ = _____

Binh had 100 lollipops for sale. He sold 95 of them. How many lollipops does he have now?



(cross out the lollipops sold)

_____ − _____ = _____

Binh has _____ lollipops left.

Subtractions and addition story problems

There were 26 monkeys and 32 snakes at the zoo. What was the total number of monkeys and snakes? (draw your own bars)

Monkeys

Snakes

(Draw quickly without a ruler is fine. 2 tens and 6 for monkeys. 3 tens and 2 for snakes.)

_____ + _____ = _____ There are _____ animals in all.

Claire had 16 beads. She used 10 to make a bracelet. How many beads did she have after making the bracelet? (draw your own bar)

Claire's beads

(Draw quickly and cross out the beads used.)

_____ - _____ = _____ Claire had _____ beads left.

There are 76 math problems in Arthur's math workbook. He completed 46 of the problems. How many he still needs to complete?

Arthur's math

_____ _____ = _____ _____ more problems

My mom is 30 years old. Grandma is 22 years older. What is Grandma's age?

Mom
Grandma

_____ _____ = _____ Grandma is _____ years old

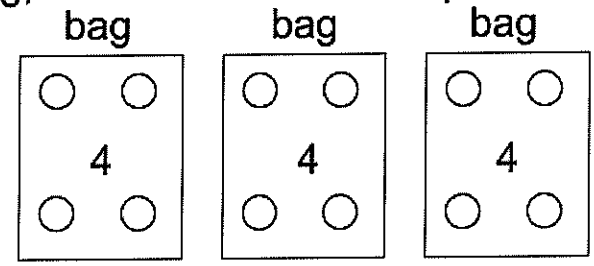
Given a math problem:
Three bags of marbles. Each bag holds 4 marbles. How many in all?

Young students always jump to the answer when they see two numbers and the words "in all".

They usually assume it is 3 + 4 = 7

With model drawing, the bar or bars will help them see the problem as it should be.

3 bags
4 marbles

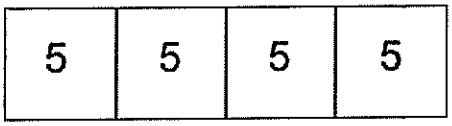


each has
4 marbles

4 + 4 + 4 = _____ There are _____ in all.

There are 4 plates of cookies. Each plate has 5 cookies. How many all together?

plates of cookies



5 cookies on each place

_____ + _____ + _____ + _____ = _____

There are _____ cookies.

4 birds were sitting on 2 trees. How many birds are there in all?

Victor put 12 toy cars in each box. There are 3 boxes. How many toy cars Victor has?

Mrs. Weber made 6 pies. She used 4 apples in each pie. How many apples did she use?

Cam reads 2 books today. The same number of books yesterday and tomorrow. How many book she reads in three days?

Topic 58: Reading details and exploring facts in word problems.

This topic helps learners to read carefully and understand clearly what the word problem is asking for.
Duc has 20 pencils and 5 pencil sharpeners.
How many sharpeners Duc has?
(Underline "5 pencil sharpeners.")
(Underline "How many sharpeners.")
Young learners need to be reminded of that the only thing asked is pencil sharpeners, not pencils.

Josh found 12 shells and 10 sand dollars on the beach.
How many shells did Josh found?
(Underline what was asked.)

Josh found _____ shells.

Cam saw 22 rabbits and 12 chicken at the farm.
How many chicken did she see?
(Underline what was asked.)

Cam saw _____ chicken.

Mary has 2 tennis rackets and 20 tennis balls. How many tennis ball does she has?

Mary has _____ tennis balls.

Taya had 6 rocks. She found 12 more. How many rocks did she found?

Gabriel ran 6 miles on Friday. He ran 4 miles on Sunday. How many miles he ran on Friday?

Emma sold 22 boxes of cookies in October.
She sold 31 boxes of cupcakes in November.
How many boxes of cupcakes she sold?

We have 20 sunny days and 10 rainy days this month. How many rainy days we have this month?

Topic 59: Review all the strands

We did a lot of drill and practice in our previous topics. The rest of the exercise will emphasize higher order thinking skills. The purpose is to help students see connections among topics: –

- Critical thinking
- problem solving
- geometry
- measurement
- estimation / mental math
- logic
- probability / statistic
- patterns
- number sense
- consumer applications
- algebra
- communicating mathematic

A tally mark is a way of counting by 5's. 𝍸 . 4 straight sticks and one across the four.

In the next section, we practice tally marks to count days of the month. Let's say today is November 25th. The tally marks will be:

𝍸	𝍸	𝍸	𝍸	𝍸
5	10	15	20	25

We can use the tally marks in many ways.
Boys in my class: 13 𝍸 𝍸 |||
Girls in my class: 11 𝍸 𝍸 |

(Draw a 2 in. line segment for the date.)

Date: Tally:

What numbers come next?

2 , 4 , 6 , _____ , _____ , _____

1 , 3 , 5 , _____ , _____ , _____

Explain your number patterns.

Eight children were playing ball. Three went home. How many children were left? (Draw bars to show problem.)

Number sentence:

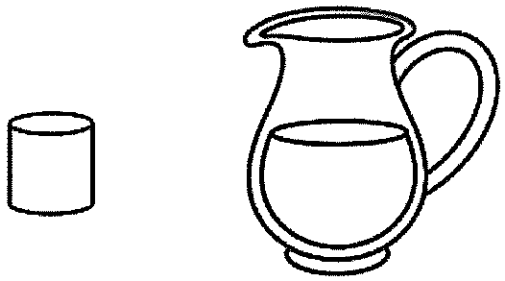
_____ were left playing ball.

Write the numbers that are <u>one</u> less than each number.

_____ 5 , _____ 20 , _____ 39

_____ 74, _____ 81 , _____ 100

Circle the container that holds more water.



Explain how you can find out.

Topic 60 Review

Draw the shapes that come next. Circle the pattern unit.

_____

Name or write the three shapes.

_____ _____ _____

Dae has 5 crayons. Two are outside the box. How many crayons are in the box. (Draw bars to show problem)

Number sentence

There are _____ crayons in the box.

Ian and Haejun went swimming. Ian swam for 30 minutes. Haejun swam for 1 hour. Who swam longer?

Explain your answer:

Write the missing day of the week.

Sunday	Monday	Tuesday	Wednesday	Thursday		Saturday

Which day do you like the best?

_____ , because _____ .

Date: (Draw a 6 cm. line)

Tally Mark: _____.

To-day is _____.

Use the picture graph to answer the questions. How is the weather like this month?

Rainy										
Sunny										
Cloudy										

There are _____ sunny days.

There are _____ cloudy days.

How many cloudy and rainy days?

Number sentence:

What number is 3 more than 10? _____

6 more than 10? _____

10 more than 10? _____

Jan had 7 pencils and 5 crayons. He gave one pencil to Shaun. How many pencils Jan has now? (Draw bars to show the problem.)

Number sentences _____

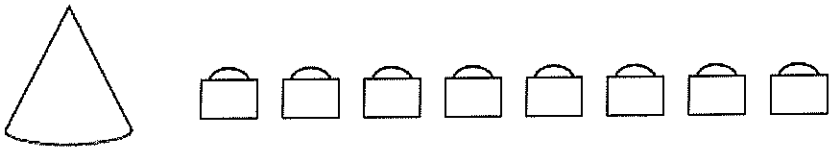
Jan had _____ pencils now.

Count by 10's. Fill in the missing numbers.

10 , 20 , 30 , _____ , _____ , _____ , _____

Topic 61 Review

Alex's lunch box is the third from the cone. Circle his box.



How many lunch boxes are on the left side of Alex's box? _____ boxes

How many boxes are on the right side of Alex's box? _____ boxes.

Lee had 11 cookies in his lunch box. He ate 3. Draw bars to show how many cookies are left.

Number sentence _____.

Lee still had _____ cookies.

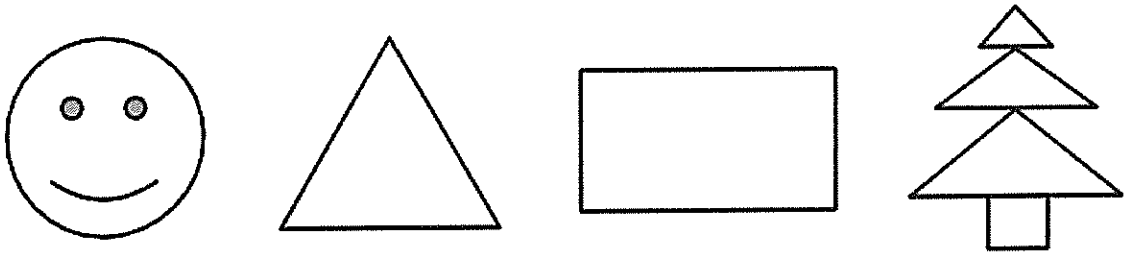
Put an X on the even numbers. Circle the odd numbers.

The next number after 20 is _____.

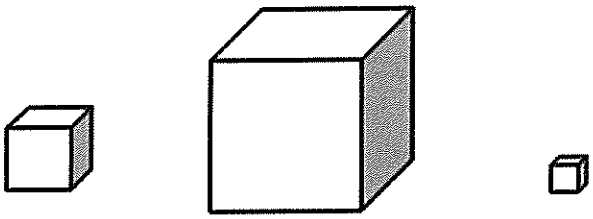
It is an _____ number. (odd or even)

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

Draw lines of symmetry in each shape.



Circle the largest cube. Put an X on the smallest cube.

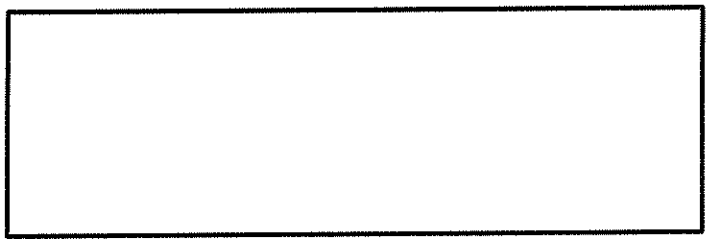


Write the number that is one more.

8 , _____ ; 15 , _____ ; 23 , _____ ;

Divide the rectangle in halves. Draw a triangle on the left half.

Write the fraction one half on the right half.



Count by two's

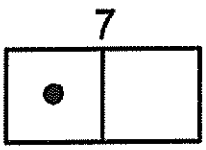
12 _____ 16 _____ _____ _____ _____

There are six stuffed bears and three dolls on the shelf. 2 more stuffed bears are on the floor. Draw bars to show the number of bears.

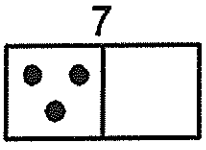
Number sentence _____.

There are _____ bears in all.

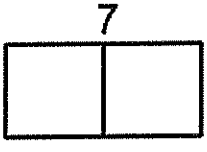
Different ways to show 7.



____ + ____ = ____ ;



____ + ____ = ____ ;

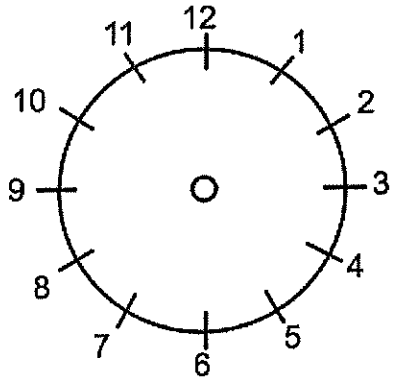


____ + ____ = ____

Topic 62 Review

Show the time.

8:00



Circle the number in the box that is between 14 and 18.
Put an X on the least number.

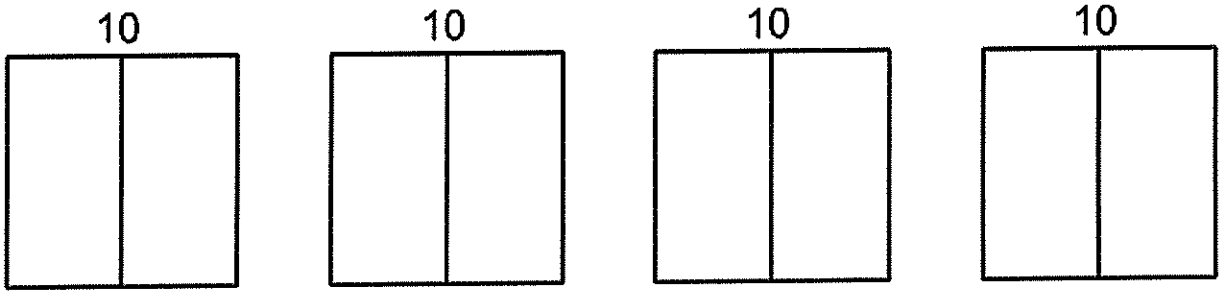
19	17	8

Elaine wrote the number 8 seven times. She crossed out three of the 8's.
Draw bars to show how many 8's are not crossed out.

Number sentence _____.

There are _____ 8's not closed out.

Show different ways to make 10.



___ + ___ = ___ + ___ = ___ + ___ = ___ + ___ =

Write the number that is 2 more.

2, _____ ; 18, _____ ; 21 , _____ ; 34 , _____

Write the number that is 2 less.

_____ , 6 ; _____ , 9 ; _____ , 24 ; _____ , 62

tally

Date: _____ Week day: _____

Shik is in line to get lunch. There are two students in front of her. Is she first, or is she third in line?

She is _____.

Natalie has 7 fish and 3 turtles. How many more fish than turtles? Draw bars to compare.

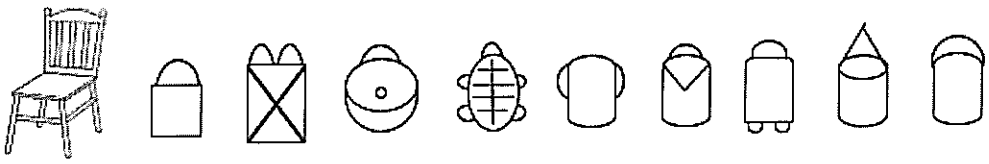
Number sentence: _____.

There are _____ fish more than turtles.

Count by 5's

40 _____ _____ _____ _____ _____

Yui's backpack is the fifth from the chair.



There are _____ back pack from the left.

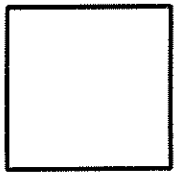
There are _____ back pack from the right.

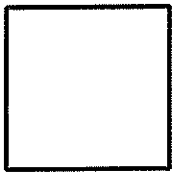
Fill in the missing numbers.

41			44		46				50

Circle the odd numbers.

Divide the squares in halves vertically and horizontally.

Horizontally ⇨ 

 ⇦ Vertically

Circle the number in the box that is between 27 and 32.

Put an X on the greatest number.

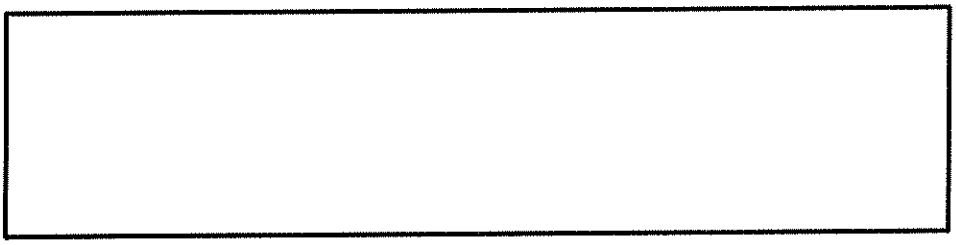
30	13	33

Eight children were playing outside. Five went home for dinner. Draw bars to show many are still playing outside.

Number sentence _____.

There are _____ children playing outside.

Divide the rectangle in 3 equal parts. Write the fraction on each part.



Fill in the missing numbers

51			54					59	

Count by 10's backwards

100 , _____ , _____ , _____ , _____

Draw a 7 cm. line segment.

Date: Tally: _____

Day of the Week: _____

Two tables, each has 4 chairs.
How many chairs in all?
Draw bars to show the chairs.

Number sentence _____

There are _____ chairs in all.

Fill in the missing numbers. Cross out the odd numbers.

10	11				15		17		

Show 2 different ways to divide the rectangle in 4 equal parts. Write the fraction in each part.

I have 4 sides. My sides are the same length. I have square angles.

I am a _____. Draw the shape.

Fill in the missing numbers

	62						68		

Two baskets, each has 15 apples. How many apples in all? Draw bars to show.

Number sentence _____.

There are _____ apples in all.

This shape has 4 sides. The opposite sides are equal. It has square angles.

Draw the shape.

It is a _____.

Daisukel has some coins on his desk. He covered 3 with a book. How many coins are there in all?

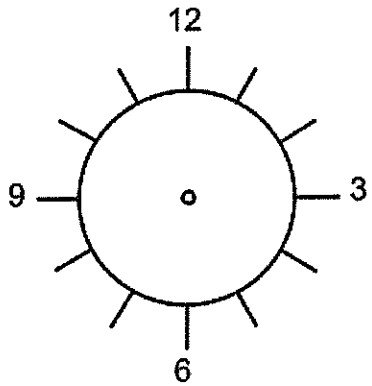
There are _____ coins.

What time is it?

Write the missing numbers on the clock face.

Show the time.

10:30



Date: Tally: _____

Day of the Week: _____

Julio counted 15 fish in the fish pond. He counted twice as many silver fish as black fish. How many fish in all. How many silver fish? How many black fish? Draw bars to show.

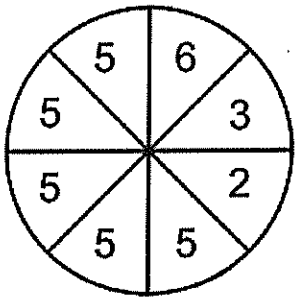
Number sentence:

Julio counted _____ in all.

Draw a line that is 3 cm. long. Draw a second one that is 6 cm. long. Circle the longer line. How much longer?

_____ cm. longer

Here is a spinner. Chances that the spinner will stop on a "5" is likely or unlikely. Circle the answer.



Bob's birthday is on January 27. Alecia's birthday is on the same day 4 months later. When is Alecia's birthday?

Alecia's birthday is on _____

Jan., _____., _____,. _____,. _____

More Review and Practice

What number is under the seashell? 

 +  +  = 12

Draw bars to show. Or count by 2 or 4.

Number sentence: _____.

Adam has a piece of wood 12 in. long. How many 5-inch pieces can he cut from this piece of wood?
Draw bars to show. Or count by _____.

Adam cuts _____ pieces of wood.

Which has more crayons?
2 boxes of 10 or 4 boxes of 5
Draw boxes to show.

Circle one answer: 2 boxes / 4 boxes / the same

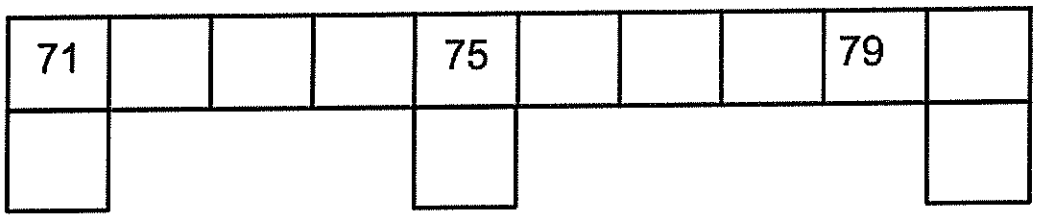
There are 3 bicycles in Aito's house. How many wheels in all? Show 2 ways to solve this problem.
Count by _____
Draw bars:

There are _____ wheels in all.

Date: Tally: _____

Day of the Week:

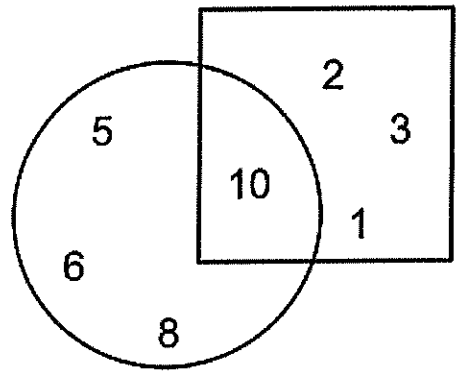
Fill in the missing numbers.



Which numbers are in the square?

Which numbers are in the circle?

Which number is in both the square and the circle.



square

_____

_____

circle _____ both _____

Use these four digits to make two 2-digit numbers. Use each digit once.

Make the least and greatest numbers you can.

9 7 4 2

The least number is _____.

The greatest number is _____.

Topic 65: Higher order Thinking skills

The last 6 topics emphasize higher order thinking skills. It is intended for learners to discover multiple ways to solve a problem.

Learners are encouraged to think out of the "box".

Tutors, please take your time and be patient with our young minds. Use paper and pencil as needed to show your learners ways to arrive at an answer.

Below are two examples of higher order thinking skills.

Sang saw 7 rabbits in the children's zoo. There are white ones and brown ones. What is the possible color of white and brown rabbits? Remember the 7 combination?)

White		Brown
6	and	1
5	and	2
4	and	3
3	and	4
2	and	5
1	and	6

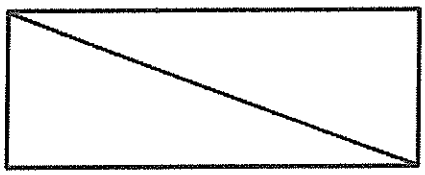
All these are possible answers except 7 and 0

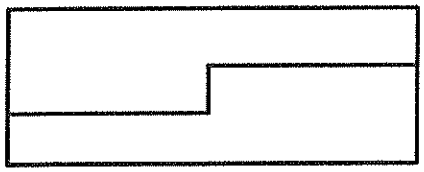
Why? Can learner answer this question?

Divide this figure into two equal parts.

We have done a lot of dividing vertically and horizontally.

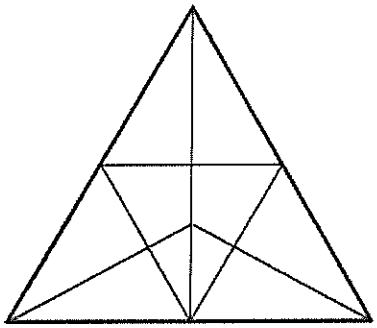
But how about diagonally?





Is there other ways?

1. Find 2 equal parts in the triangle. Trace the parts with a red crayon.
2. Find 3 equal parts in the same shape. Trace the parts with a blue crayon.
3. Find 4 equal parts and trace the parts with a brown crayon.



Can you draw 2 more vertical lines and make 8 equal parts?

I have 5 tens. My one digit is 3 more than my ten digit.

What number am I? _____

School starts at 8:00am.
Ichika arrives half an hour early.
What time does she get to school?
Mila is an hour late because her mom has a flat tire.
What time does she arrive?
Ichika arrives at _____ am.
Mila arrives _____ am.
Try to answer without a clock.

Underline the true sentence.
All the numbers are greater than 40.
Some of the numbers are greater than 40.
None of the numbers are greater than 40.
18 42 24 45 28 36 45 37

Write the numbers that are two less and two more. (use the hundred chart if needed.)

_____ 15 _____ , _____ 10 _____ , _____ 30 _____

Which measurement makes sense?
Efron's mom is 5 feet 4 inches tall.
Efron's mom is 10 inches tall.

Candance's dog is 1 pound.
Candance's dog is 30 pounds.

Four cups of water will fill my water bottle.
Eight gallons of water will fill my bottle.

Underline the answer.
Ask learners to use their hand motions to estimate the measurement they underlined.
(ex. how tall is 5'4", and 10")

14 people are going to the beach.
4 people can go in 1 car.
How many cars are needed. (Draw bars)

We need _____ cars.

One liter of milk fills 8 glasses.
How many liters of milk to fill 24 glasses. (Draw bars).

It takes _____ liters of milk to fill 24 glasses.

How many ways you can make a sum of 8? (Review the 8 combination if needed).

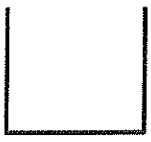
Anna has 18 crayons in the one box.
She has another box with 12 crayons.
She wants to have the same number of crayons in each box. (Draw bars)

Each box has _____ crayons.

Danh can fit 6 pumpkins in his wagon. If Danh fills is wagon 4 times with pumpkins, how many pumpkins would that be in all? (Draw bars)

That would be _____.

Draw lines to complete the shapes. Name the shapes.



_____ _____ _____

Add the missing tens (use the 100 chart if needed)

8	36	58	56	44
+ ___	+ ___	+ ___	+ ___	+ ___
48	86	68	86	94

Add four numbers. Circle numbers that make 10 or doubles.

3	3	3	3	7
6	4	7	5	7
4	2	2	5	4
+ 2	+ 3	+ 4	+ 4	+ 1
___	___	___	___	___

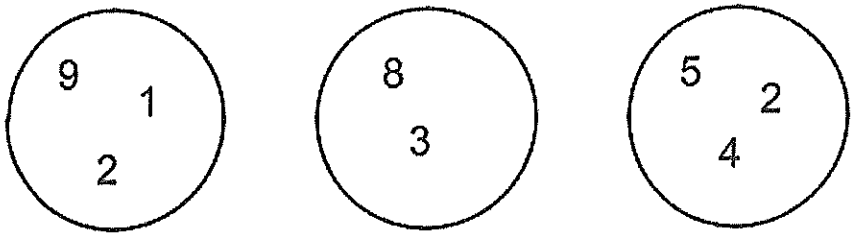
Hanh eats 3 meals every day. Today she has eaten breakfast, but not lunch or dinner. What fraction of her meals has Hanh eaten?

$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$ Circle the fraction

Draw pictures to show

A shape with 3 sides and 3 corners	A shape with 4 sides and 3 corners.
It is a closed / opened shape	It is a closed / opened shape

Look at the three circles. Cross out a number in one circle so that all the circles in the row have the same sum.



The sum is _____

My tens digit is greater than 8. My one digit is less than 3. What is my number. (There are 3 possible answers)

Batya is taller than Vinh. Sakura is shorter than Vinh. Write the names in order, from shortest to tallest.

_____ _____ _____

How many legs are there on 3 dogs? (Draw bars)

There are _____ legs on 3 dogs.

Fill in the missing number.

5	3	6	10	9
− ____	− ____	− ____	− ____	− ____
2	0	3	8	6

10 − 8 = 5 − _____ 3 + 2 = 6 − _____

5 + 3 = 10 − _____ 5 + 5 = 10 − _____

How many legs are there on 2 spiders? (Draw bars: a spider has eight legs)

There are _____ legs on 2 spiders.

Topic 68: Challenge

Sometimes, we come across informations that we do not need to solve our problem. These are "extra informations." When you see facts that you do not want, cross them out. You want to focus only on the facts you want.

There are 16 boys and 15 girls in 1st grade. The boys scored 14 points in a game. The girls scored 20 points. Which group score more? How many points more? (Cross out the extra information) (Draw bars)

Number sentence _____.

The _____ scored _____ points more.

Which is heavier, dad's car or Abigail's bicycle.

The _____ is heavier, the _____ is lighter. Explain why.

Write the number: –

1 more than 8 _____ , 1 less than 8 _____

2 more than 8 _____ , 2 less than 8 _____

Two teachers, Mrs. Tran teaches 1st grade. Miss. Cohn teaches 2nd grade. Each has twenty students. How many students in all. (Cross out facts you do not need) (Draw bars)

Number sentence _____.

There are _____ students in all.

I have 8 equal sides and corners. I am the shape of a stop sign. Draw the shape. Can you name it? If not, how can you find out the answer?

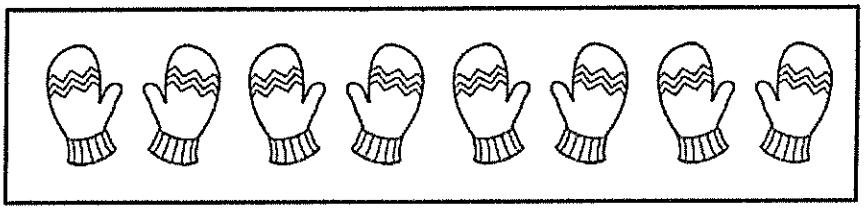
It is a

_____.

How many mittens are in Eiji's dresser?

_____ mittens

_____ pairs



Jan saw 5 lions, 6 elephants and 7 tigers at the zoo. Cross out the animal that does not belong to the big cat family.

Did Jan see more lions or tigers?

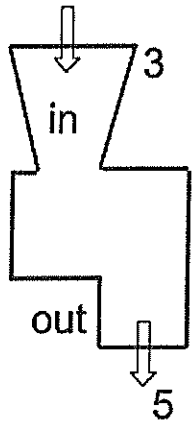
Jan saw more _____.

How many big cats did Jan see?

Jan saw a total of _____ big cats.

(Try to do this in your head.)

Add 2 to every number, complete the table.



in	3	4	5	6	7	8	9
out	5						

Topic 69: Challenge

There are 35 fish in one tank. The other tank holds 42 fish. A goldfish can live for 15 years. How many fish are in both tanks. Cross out the extra information. Can you add in your head?

Number sentence _____.

There are _____ fish in both tanks.

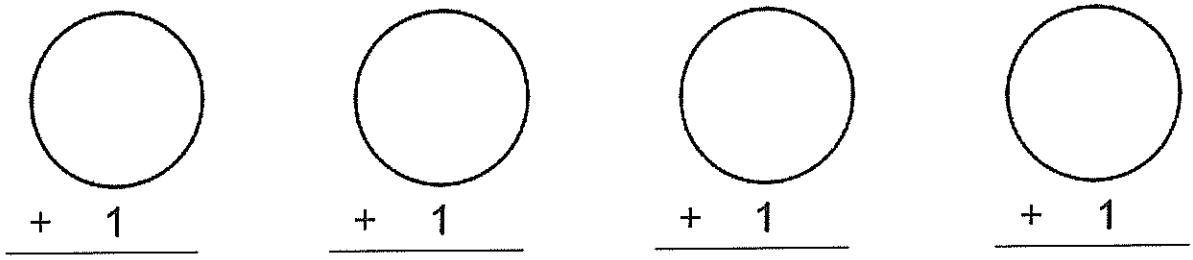
Guess how many inches long is your arm. Then guess how long is your leg. Ask someone to measure your arm and leg in inches.

My estimate	The measurement
Arm _____	_____
Leg _____	_____

(Do not forget to write the name of the measurement unit: inches)

Draw what comes next in the pattern.

Choose 4 different even numbers. Write them in the circles. Complete the addition problems.



The answers are odd / even (Circle one)

There are 7 birds on the power line. There are 3 birds pecking on the lawn. Emma says there are three birds in all. Bae says there are 10 birds in all. Who is correct? (solve the problem mentally)

_____ is correct. (name of girl) Explain.

I am a closed shape with 5 sides and 5 corners. I look like a house. Draw the shape. (Do not name the shape)

Three pots, each has twelve flowers. How many flowers in all? (Draw bars)

Number sentence _____.

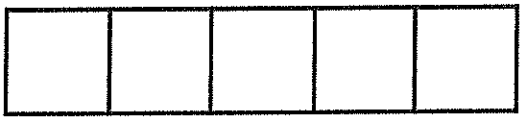
There are _____ flowers in all.

Mrs. Ngo baked 2 dozen cupcakes. Phong ate 5 of them. There are 12 in a dozen. How many cupcakes are left? (Is there extra information to cross out?) Draw bars to show.

Number sentence _____.

There are _____ cupcakes left.

Write the letter "h" in the second square.
Write the letter "r" in the third square.
Write the letter "t" in the first square.
Write the letter "e" in the last 2 squares.



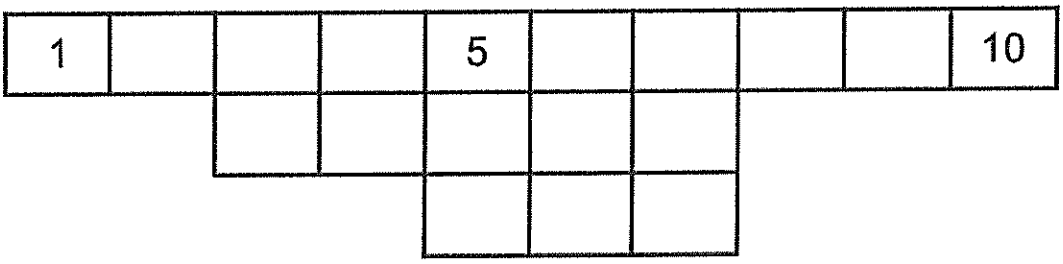
The word is _____.

Louis has 32 baseball cards and 16 Disney stickers. His brother gave him 12 more baseball cards. How many baseball cards in all? Cross out the information you do not need. Underline the information you need. (Draw bars or mental math.)

Number sentence _____.

Louis has _____ baseball cards.

Fill in the missing numbers from the 100 chart.



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4 pots, each has 10 flowers. How many flowers in all? (Mental math, count by 10's.)

There are _____ flowers in all.

Mr. Wong's phone number is 987 - 654. Mrs. Wong's phone number is 234-567. What is the pattern. How are they the same? How are they different? Explain to the tutor.

Count by 10's from 3. (use the number chart if needed)

3 , _____ _____ _____ _____

_____ _____ _____ _____

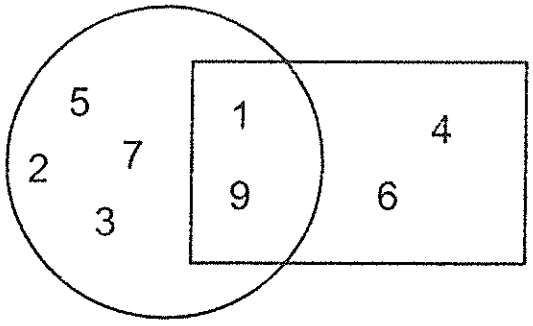
The name of the solid that is like a ball is a _____.

The name of the solid that is like a can is a _____.

The name of the solid that is like a box with equal sides and faces is a

_____.

Solid names: cone. cube. sphere. cylinder, rectangular prism, pyramid.



The numbers in the circle but not in the rectangle are

_____.

The numbers in both shapes are

_____.

The sum of numbers in the circle is

_____.