

**KINDERGARTEN
BOARD MATH
BANK OF PROBLEMS**

Compiled by members of the Math Cadre

October, 2014

COUNTING AND CARDINALITY

Number Names & Sequence (2 problems) CC.1, CC.2, CC.3

Count from 31 to 50.

Count forward from 62 to 80.

Count to 100 by tens.

Count from 67 to 100 by ones.

Find the missing numbers.

__ 21 22 __ __

11 __ 13 __ 15

5 __ 3 __ 1

Count up.

3, __, __, __, __, __

16, __, 18, __, __

Which number goes where the star is?

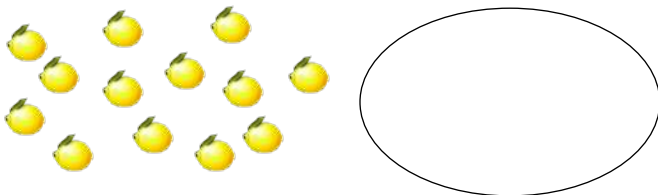
Which number goes where the happy face is?

0 ★ 2 🤔 4

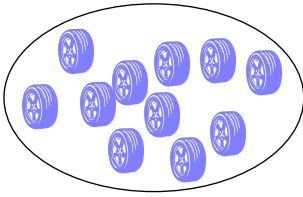
Represent and write the numeral ____.

OR

Count a set to show _____. Write the numeral in the blank. (Teacher orally says the number.)

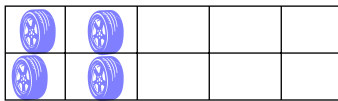


Write the numeral for the amount of objects shown.



OR

Write the numeral for the amount of objects shown.



Number of Objects—0 to 20 (2 problems) CC.4, CC.4a, b, c, CC.5

(Referring to lemon problem above) *How many would there be if we added one more lemon?*

How many apples are there? Touch one object for every one number you count.



Count the objects. Circle the number that tells how many.

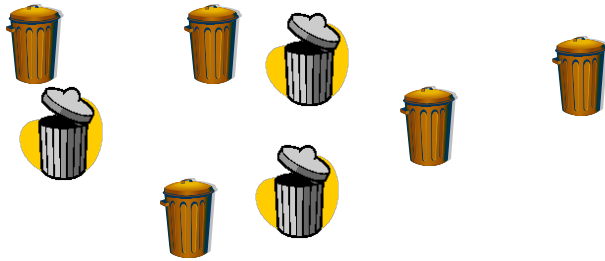


Count the objects. Tell how many.



What if we have 4 cubes and added one more. How many cubes would there be then? (No picture support for this problem)

How many cans are there? What helped you count them? (Change the arrangement of the objects each day.)



If we have 18 students and then we get one more friend in our class, how many students will we have then? (No picture support for this problem.)

Compare Numbers (1 problem) CC.6, CC.7

Count the groups. Are they equal, less, or more than the group of stars? (show picture of groups of objects)

Who has the greater/less number of balloons?

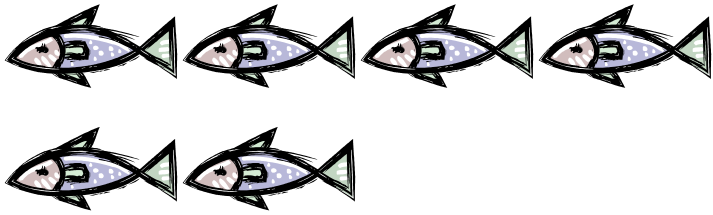
George OR Hector



Use one-to-one counting to find which group of objects has one more/less.



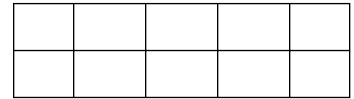
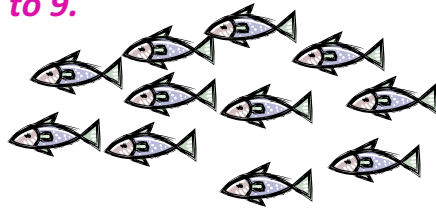
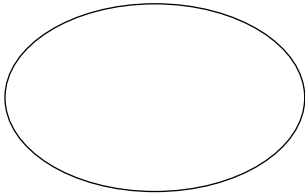
Count and draw lines to match. Write the numbers. Draw a circle around the group and number that is greater/less.



Which numbers are greater than 5? (Can use numbers up to 10)

1 8 3 10

Show a group that is equal to 9.



Which group is greater than 5?



OPERATIONS AND ALGEBRAIC THINKING

Understanding Addition and Subtraction (3 problems) – OA.1, OA.2, OA.3, OA.4, OA.5

Is this addition or subtraction? I have 3 blocks and I find 2 more. What is the sum or difference?

Find the difference. (within 5)

$$4 - 3 =$$

I have 6 toys. How many more toys do I need to make 10? (Have an empty ten frame displayed.)

Five apples are on the table. Three are red and the rest are green. How many apples are green?

What are all of the ways to show 10?

There are 4 plates on the counter. I put some more next to them and now there are 9 plates. How many plates did I put down?

Find the sum. (within 5)

$$3 + 2 =$$

I want to fill a vase with 8 red and blue flowers. What are all of the ways I can do this?

Use a model to show what this problem looks like. There are 2 white cats in a tree. Two more black cats come join them. One orange cat climbs the tree too. How many cats are there in the tree?

I have 7 teddy bears. How many more do I need to make 10?

Use a plus sign and an equal sign to record addition.



*I have 5 counters in my hand. I will put some in each hand. I will show you some.
Tell me how many are hiding.*

$$5 - 2 = 3$$

$$5 - 3 = 2$$

$$5 - 0 = 5$$

Count the flowers. (Draw circles around the groups of objects.)



___ and ___

Circle the answer. (Circle the groups of objects.)



___ and ___

1 and 4 4 and 1 5 and 0

Draw a group that shows one more.



There are 2 apples on one plate and 3 apples on another plate. How many apples in all?

Show different ways to make 3.

Show what 3 and 2 more looks like.

Decompose ___. (Note: Numbers up to 10 using “and” equations are 1st grade).

NUMBERS IN BASE TEN

Foundation for Place Value (1 problem) – NBT.1

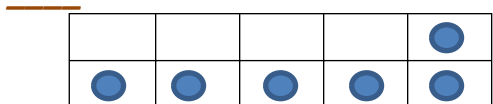
Show one way to take apart 11 – 9.

I have 14 balls. Record 14 on the ten frame. Show how many groups of tens and ones there are.

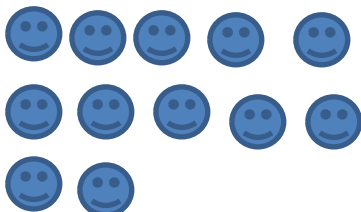
Equation:

Count the circles in each Ten Square.

Count the total number of circles in both Ten Squares.



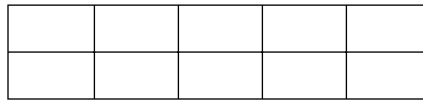
Count the objects. Circle ten objects, and count how many are left over.



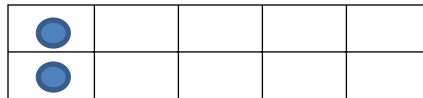
___ + ___ = ___

Say the number. Draw more counters to show the number.

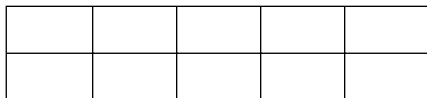
13



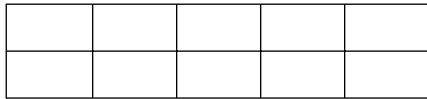
___ and ___ more



Group 13 objects into groups of tens and ones.

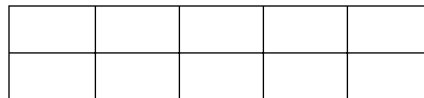
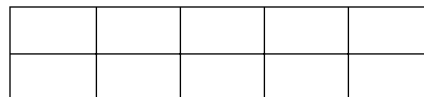


Equation:



Group objects into tens and ones.

I have to put my toy cars away in the tray. How many toy cars do I have? How many groups of tens and ones?



MEASUREMENT AND DATA (MD)

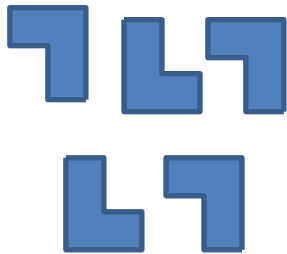
Classifying & Attributes (1 problem) – MD.1, MD.2, MD.3

Count the number of objects in groups and sort the groups by count. (Display various groups.)

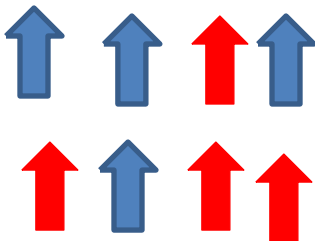
Sort the objects by size.



Circle the objects that are like this object.



Sort and classify.



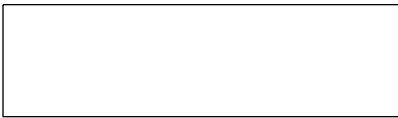
(Display an analog clock.) What time did ___ eat?

Sort and classify the following objects into categories. Label your categories and how many are in each one. (Use manipulatives for sorting.)

List 3 attributes of this shape.



Compare the two shapes. Which is wider? (shorter, taller, thinner)



GEOMETRY

Shapes (1 problem) – G.1, G.2, G.3, G.4, G.5, G.6

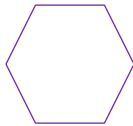
What is this shape? How do you know? Is it still a ___ if we turn it?

(Show multiple shapes.)

Find all of the _____. How do you know they are _____? (triangles, squares, etc.)

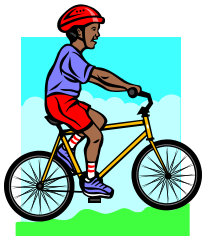
Describe this shape.

___ sides



___ vertices (points)

Look at the objects. Draw an X on the object that shows above. Circle the object that shows below.



Circle the two shapes that are the same.



Which shape(s) has

___ sides and ___ vertices (corners)?



Square



Circle

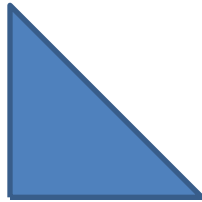
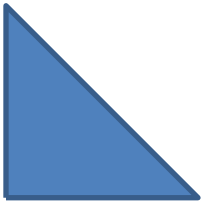


Triangle

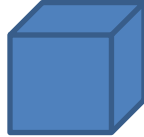


Rectangle

Combine these shapes to make another shape.



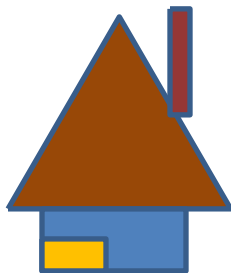
Is this shape two-dimensional or three-dimensional? How do you know?



What real objects can you make with these shapes?



Describe the shape and location of roof.



MATH REASONING (1 problem)

(NOTE: If problems require several steps, such as a MARS task, you can do one step per day until the problem is solved.)

Teacher can select word problems to meet student needs from the textbook, MARS tasks, problems of the day, etc.

You can add these words to the Math Reasoning section of your board:

Action:

Operation:

Number Sentence:

Solve the problem using the PUSD Problem Solving Strategy:

The children feed the classroom fish. There are 3 fish bowls. Each bowl has 2 fish. How many fish do they feed. Show your work.

The children pass out 4 drums  and 2 triangles.  How many children will be playing instruments?

There are ___ brown bears and ___ black bears. How many bears altogether?

There is a group of students on the play structure. ___ of them are on the slide and ___ of them are on the tunnel. How many students are on the play structure?