



(1.01e)

Nifty Numbers

Working in groups, have students group three or four different types of objects into tens and ones. Students will label each group, indicating how many tens, how many ones, and the two-digit number it represents. Suggestions of objects and how to group: Toothpicks/rubber bands; Unifix cubes/ stacking; dried beans/ small cups; 2-color counters/stack; beads/pipe cleaners; M&M's/snack-size baggies; pennies/ film containers.



Brain Teaser

Seven children were in line to buy ice cream. May was in the middle. How many children were in front of her?



(3.04)

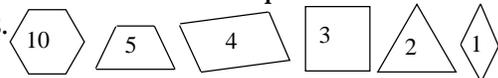


(5.03, 1.04)

Look And See

Make a kite. Use a piece of adding machine tape for the tail. Use pattern blocks to create a repeating pattern down the tail.

Assign a point value to each pattern block. Using the kites from the pattern section, have students use their calculators to find the point value of their kites. Write the points on the kite and put in order from least points to the most points.



Let's Explore

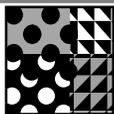
Activity: Working in pairs, have students trace each other's foot. Students cut out and color their footprints. Place it in the correct order from shortest to longest. Look for any footprints that are the same length.

Discussion: Would it make any difference if we made footprints without our shoes on? Are the students with the longest feet also the tallest students? Are students with the same length feet all the same height?

Literature tie: Read The Foot Book by Dr. Seuss.



(2.01a)



Patterns Galore

Continue this pattern until you get to the number 10: A 1, B 2, C 3, D 4 . . .

(5.03)



Writing About Math

Record "Patterns Galore" in journal. How did you know what came next? How did you know when to stop the pattern?

(5.03)

Scoop-De-Doo

Materials: Gameboard for each player, beans or corn kernels, ten small cups per player, spoon for each player.

Number of Players: Two - four

Directions: The object is to be the first to make 100 by scooping ones, trading for tens, and finally trading tens for a 100. Players take turns scooping a spoonful of beans or corn, placing the ones on the mat in appropriate places. Trade for a ten when possible. The first to have 10 tens is the winner.



10

10

10

10

10

10

10

10

10

10

1	1	1	1	1	1	1	1	1	1
---	---	---	---	---	---	---	---	---	---

(1.01e)

Name _____

Finish the pattern:
 22, 24, 26, _____ 32, 34, _____

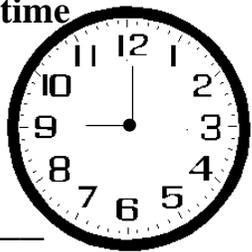
Find the sum.

6	5	4	3	4	2
<u>+2</u>	<u>+4</u>	<u>+3</u>	<u>+1</u>	<u>+4</u>	<u>+2</u>

Write the number that is two less than:

a) 17 _____ c) 31 _____ e) 50 _____
 b) 8 _____ d) 77 _____ f) 11 _____

Write the time two hours later.



_____ : _____

CRAYONS IN OUR DESKS

less than 5 //

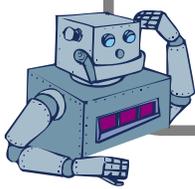
between 5 and 10 +++++ +++++ //

more than 10 +++++ /

Which amount was greatest?
 How many students had more than ten?
 How many had less than ten?

Write the total number of sides on one parallelogram and one square.

Journal: Explain in words and numbers how you got your answers to the graphing activity.



To the Teacher ..

Nifty Numbers:

One sheet of plastic needlepoint canvas can provide a great (and cheap) tool to give students practice in recognizing models of two-digit numbers. Cut the canvas into sections of 10's and 1's. They are tiny, but they show up wonderfully on the overhead! "Flash" samples of 10's and 1's, and have students name or write the 2-digit number it represents. These are also great for modeling 10 more/less (objective 1.20) and modeling 2-digit addition/subtraction with multiples of ten (objective 1.21) Go ahead and cut out sections of 100 in case you ever teach a higher grade. You will have plenty left over AND ask your local photograph developer for empty film containers. They give them away FREE! (1.01e)

Start with a sandwich bag of objects for each pair of children (pebbles, cereal, macaroni, blocks, centimeter cubes). Have children group, then count these by 1's, by 2's, by 5's and finally by 10's. Does the total stay the same? Draw a picture of your bag and tell how many objects are in it.

(1.02)

More Practice with 10's and 1's



Provide a place-value workmat (10's and 1's), one number cube, and base ten blocks. The first roll of the cube determines how many tens to place on the workmat. The second roll, determines the number of ones to place on the mat. The student then writes: ___ tens + ___ ones = ___. Students could also draw the base ten blocks. (Variation: use beansticks, or counters in small cups) (1.01e)

Problem-Solving Strategy: Working Backwards

What if you know the result of a situation, but you don't know the beginning? For example, you might know that you end up with thirteen baseball cards after doing a certain number of trades and you want to figure out how many cards you had before the trading started. In that case you need to work backwards; you have to think about your actions in reverse order. This strategy works for any sequence of actions when you know the end result rather than the starting place. Try working backwards to find the starting number on this flow chart:



Mental Math

1. What is two less than 11?
2. What comes next?
80, 85, 90, ___
3. What does the 8 mean in 48?
4. How many sides on two trapezoids?
5. The number between 19 and 21.
6. The number after 83.
7. What number minus three equals four?
8. What time is it two hours after 3:30?



Nifty Numbers

Prepare several baggies or small containers with 5-30 small objects. Give students Yes/No cards. Show class a bag and say "I estimate that there are ___ (name object) in the bag." Student holds up "Yes" card if he thinks the estimate is reasonable, "No" if not. If the estimate was not reasonable, the students will give a more reasonable number. (1.01f)



Look And See

(Measurement)

Have students cut a piece of yarn that they estimate is the length of their foot. Each student will attach a small name tag to the end of the yarn and place it on the appropriate sentence strip:

- My yarn is longer than my foot.
- My yarn is shorter than my foot.
- My yarn is equal to my foot.



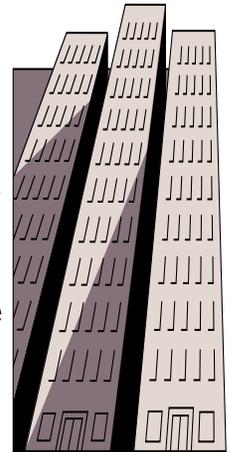
Patterns Galore

Give each child a hundred board and counters or buttons to mark their response to questions. Randomly call numbers of a specific rule or count such as 22, 18, 24, 8, 16, 26, 20 etc. (The child will recognize a pattern of every other number or counting by twos developing.) Have children cover their answer. When someone recognizes the pattern that is developing, have them stand behind their seat. Allow child to identify the pattern. Continue. (5.03)



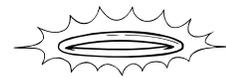
Brain Teaser

Billy lives on the 10th floor of a tall building. He is going to play checkers with his friend Kevin. He gets on the elevator and goes down three floors. He stops there to get his game from Bobby. Then he gets back on the elevator and goes down four more floors to where Kevin lives. What floor is Billy on now? (3.04)



Let's Explore

Have students help to create a line plot showing the number of teeth they have lost. Discuss the results. (4.01)



Have students discuss, in pairs, who is more likely to lose a tooth next. (4.02)



Writing About Math

Write another story about Kevin and the elevator. See if a friend can figure out the answer. (3.04)

Finish the pattern

• • • •
 • • • • • • _____

1	6	9	4	0	10
$\square \frac{2}{3}$	$\square \frac{2}{4}$	$\square \frac{2}{7}$	$\square \frac{4}{8}$	$\square \frac{2}{2}$	$\square \frac{2}{8}$

Color the first one red. Add hair to the fifth. Color the third one green. Add ears to the eighth.

Make both clocks show two-thirty.

:
 •

FAMILY PETS

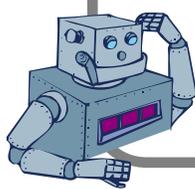
cats
 X X
 X
 X X
 X X

dogs
 X X X
 X X X
 X X
 X

1. How many people have cats? _____
2. How many people have dogs? _____
3. How many people have both cats and dogs? _____

Draw a triangle inside a trapezoid.

Journal: In your journal, list your pets and tell how you take care of them. If you do not have a pet, choose one you would like to have and tell how to take care of it.



To the Teacher ..

Grade 1

WEEK
26

Look and See

Measure with string or yarn.

1. Give each student a long piece of string and a large sheet of construction paper.
2. Have the students work in pairs to measure their head, knee, wrist, ankle, and big toe with the string. Measure by wrapping the string around each of these parts.
3. Have students compare the measurement of their body parts with other students.
4. Glue the string on the paper and label each measurement.
5. Glue large, like beans onto adding machine tape and use as a nonstandard ruler to measure. (Example; one pencil equals five beans).



Problem-Solving Strategy: Make A Simpler Problem

What do you do if you have a problem that seems to be very complicated? It may have lots of large numbers, too much information, or multiple conditions. One approach is to create a simpler problem like the one you need to solve. As you solve the easier problem, you may see the way to solve the more difficult one. Or you may discover a different process that will work with the harder problem. The trick is to be sure that your simpler problem is enough like the original one that the patterns or process you use will help you with the harder situation. **Make a simpler problem** first as you solve this:

Six soccer players will shake hands before the game begins. How many handshakes will there be? (Suppose there are only three players, four players.)

Use Unifix cubes and the hundreds board for both teaching and assessing activities. As children cover answers, make notes of specific errors to use for planning further instruction.

Mental Math

1. Susan has four sweaters. She has one more jacket than sweaters. How many jackets does she have?
2. What number comes after 37?
3. What number is one less than 40?
4. How many socks do four children have?
5. Two more than 12.
6. What number minus six equals four?
7. What number is missing? 88, ____, 90.
8. What comes next?
40, 45, 50.



Nifty Numbers

Provide small paper cups and ten counters for pairs of children. One child takes any number of the counters, and secretly hides some under the cup. The first child states how many counters he had in all, the second child determines how many are under the cup.

(1.03, 1.04)



Brain Teaser

A colony of ants carried off crackers from a picnic. It takes four ants to carry one cracker. If there were 16 ants in the colony, how many crackers did they get? Tell how you found out.



(1.04)



Look And See

Show a container full of beans. Have students predict how many smaller containers (of equal size) it will take to empty out the beans. Check estimates. Variation: Show a small container of rice. Ask students how many it will take to fill a larger container. After students write their estimates, fill the larger container and record the number of “scoops” using tally marks.

(1.01f, 2.01a)

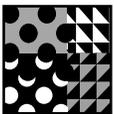


Let's Explore

In pairs, give students a blank calendar sheet. See Blackline Master. Have students start the month with their favorite day and complete the calendar. Give this new month a name and tally the number of Fridays. Students can share their calendars and see if other groups have the same number of Fridays.



(1.04)



Patterns Galore

Use four trapezoids and six parallelograms to create a pattern. Use all of the pieces. What is your pattern unit?

(5.03)



Writing About Math

If the answer is seven, what is the question? Think of as many questions as you can.

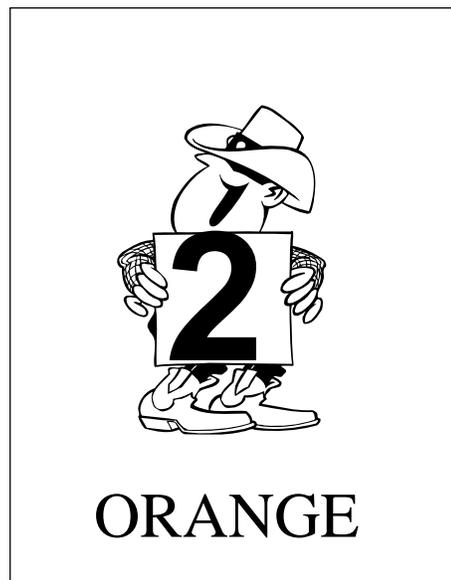
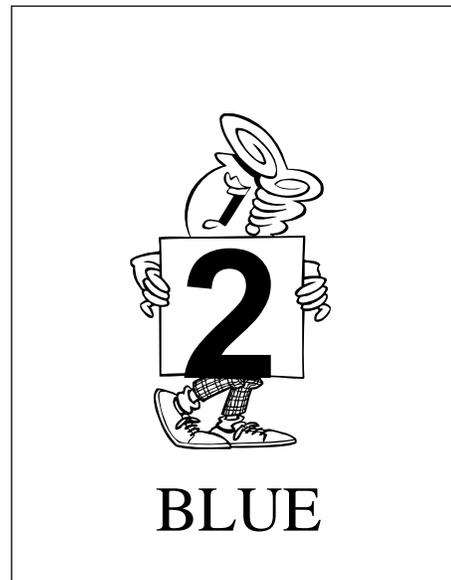
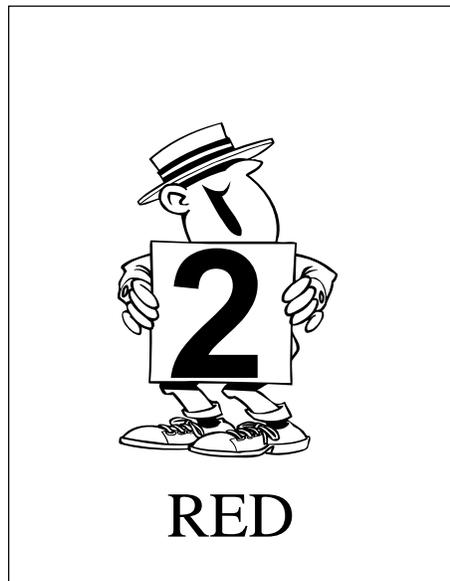
(1.04)

2 Up

Materials: Gameboard, four sets of cards printed, 2, 4, 6, 8, 10, 12, 14, 16, 18 and 20. Print a set in each of the following colors: red, blue, green, orange. See Blackline Master.

Number of Players: Two - four players

Directions: Shuffle and deal all cards to the players. The player who has the red 2 begins play by placing the card on the gameboard. Play continues clockwise. The next player must place a red 4 on top of the red 2, place a 2 of another color on the gameboard, or pass. Play continues until one player plays all the cards in his/her hand.



(1.02, 5.03)

Name _____

Finish the pattern.

Add or subtract.

3	5	10 - 3 = ____	9 - 3 = ____	6	7
+ 4	+ 2			+ 1	+ 0

Fill in the missing numbers:

a. ____, 17, 19, 21 c. 78, ____, 82, ____

b. 26, 31, 36, ____ d. 90, 80, ____, 60

Which clock hand shows the hour?

Which clock hand shows the minute?

Which is heavier?

Circle the answer.

a. a feather or a pencil

b. a brick or a pebble

c. a raisin or an apple

d. a paper clip or scissors

FAVORITE FRUIT SNACKS

PEARS + + +

ORANGES + + + + / / / /

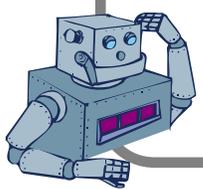
APPLES / / / /

What is the favorite fruit snack?

What is the least favorite fruit snack?

Do more people like apples or pears?

Journal: Write a riddle describing your favorite fruit. Be sure to use size, color, weight as attributes.



To the Teacher ..

Grade 1

WEEK
27

Look and See

Show students two containers. Ask them whether one holds more, less, or the same amount of beans (Unifix cubes, rice...) than the other. Check guesses by filling and recording the number of units of measure using tally marks. This type of activity as well as the activity in “What do you see” would make a greater center activity. Provide a large plastic container full of sand, rice, cornmeal, etc. for children to experience capacity. Children need time to experiment, question, and make conclusions on their own as they conceptualize capacity.

(Measurement)



Problem-Solving Strategy: Change Your Point of View

You have tried many ways to solve problems this year. Already you know that when one strategy does not lead you to a solution, you back up and try something else. Sometimes you can find a smaller problem inside the larger one that must be solved first.

Sometimes you need to think about the information that is missing rather than what is there. Sometimes you need to read the problem again and look for a different point of view. Sometimes you need to tell your brain to try to think about the problem in an entirely different way -- perhaps a way you have never used before. Looking for different ways to solve problems is like brainstorming. Try to solve this problem. You may need to *change your point of view*.

Mrs. Gomez is planning a party. She needs seating for 26 people. She can use hexagon tables for six guests and square tables for four guests. She would like to use more hexagon tables than square tables. How many of each does she need?

Mental Math

1. Six snowmen were built. Two melted. How many were left?
2. The number between 37 and 39.
3. Which is greater, 12 or 21?
4. The number of sides on five squares.
5. One less than fifteen.
6. I had ten pennies and lost four. How many pennies do I have left?
7. Ten more than 36.
8. What comes next? 26, 25, 24, _____.



Nifty Numbers

Have students model a two-digit number using Unifix cubes, bean sticks, or beans in small containers. Instruct students to write the number then add a given multiple of ten. After determining the new number, the students will write it under the first. Discuss how the numbers are the same and different and why.

(1.01e)



Brain Teaser

Write the numbers 1-10. Cross out all of the numbers less than 3. Cross out the numbers that are greater than $2 + 4$. Cross out the number of wheels on a tricycle. Cross out the numbers you say when you are counting by twos. What number is left?



(riddles)



Look And See

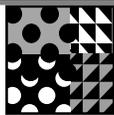
Using a unit of nonstandard measure, challenge students to find objects within the classroom that have equal measures of length.

(2.01b)



Let's Explore

Demonstrate typical times that make up a first grader's day, by using a large clock. Show the time to the hour. Include: "What time do you get up? What time do you eat lunch? What time do you get home from school? What time do you go to bed?" Each child will need one sheet of construction paper (12 x 18). Direct each child to fold the paper in half, matching the shorter end. Crease the fold well. Now fold in half again, creasing well. Open the paper to show four equal sections. After the child traces over the creases with a crayon, have them to stamp a blank clock face on the right corner of each section. Review again the four times of day discussed earlier and have children draw the hands on the clock and a picture of what happens at that time. (2.02)



Patterns Galore

Use 6 trapezoids, 3 hexagons, and 3 triangles to create a pattern. Use all of the shapes. Name your pattern unit.

(5.03)



Writing About Math

Use three numbers less than 10. Write a subtraction sentence. Write a story about your number sentence.

(1.04)

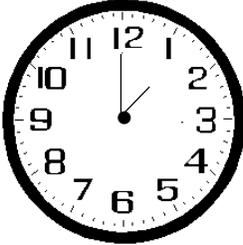
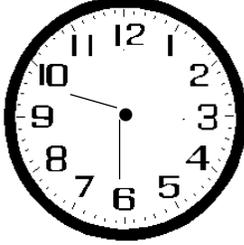
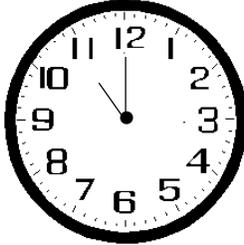
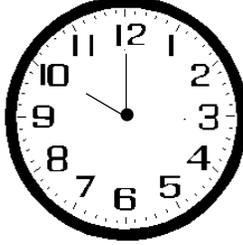
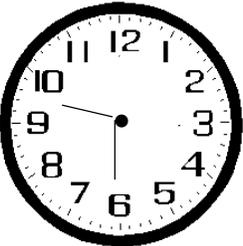
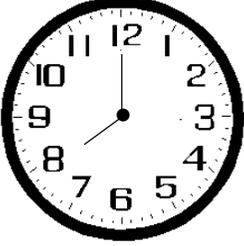
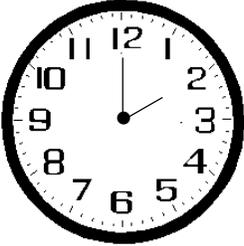
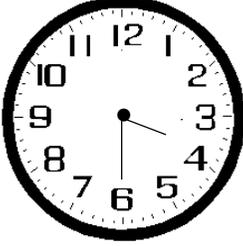
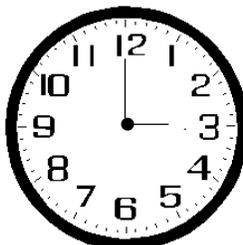
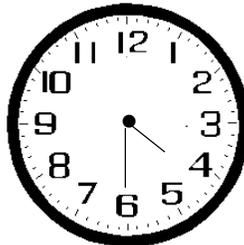
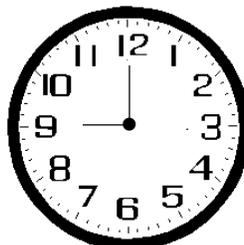
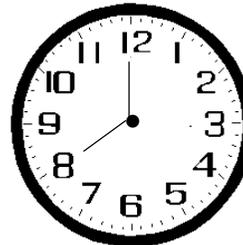
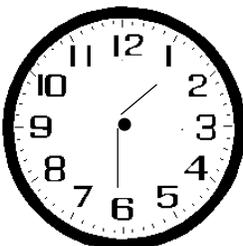
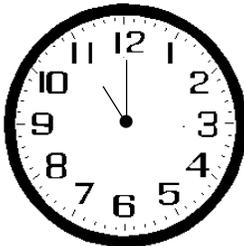
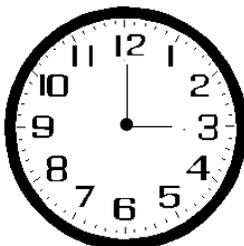
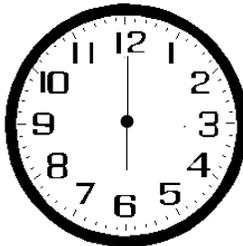
Tick Tock Clock 3-In-A-Row



Materials: Two sets of time cards and ten markers of one color for each player.

Number of players: Two

Directions: Two students take turns drawing a time card from the deck and covering that time on the gameboard with a marker. If no clock with that time is available, the player loses a turn. The winner is the first to get three markers in a row.

6 : 00

9 : 30

2 : 00

3 : 00

1 : 00

3 : 30

8 : 00

5 : 00

4 : 30

10 : 00

3 : 00

8 : 00

6 : 00

2 : 00

4 : 00

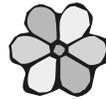
10 : 30

1 : 30

5 : 00

9 : 00

11 : 00



Potpourri...

Name _____

Finish the pattern:

75, 70, 65, _____, _____, _____, _____, _____

Add or subtract:

$6 + 3$ _____

$9 - 6$ _____

$10 - 7$ _____

$3 + 6$ _____

$9 - 3$ _____

$10 - 5$ _____

Write the number that is 10 less than:

a. 64, _____

c. 49, _____

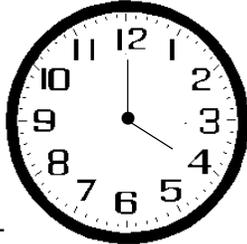
e. 21, _____

b. 18, _____

d. 77, _____

f. 59, _____

Write the time.



____ : ____

Number of Letters In Our First Names



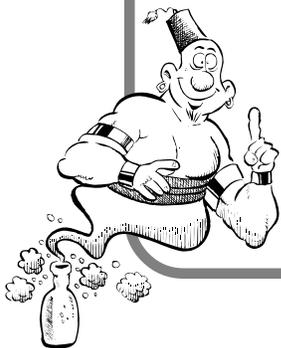
2 3 4 5 6 7 8 9 10

Complete the graph

Look at the calendar and answer the questions.

- a) What is the date of the third Tuesday? _____
- b) How many Sundays in this month? _____
- c) What day of the week is the last day? _____

Journal: How would you share equally with 9 friends? You have 27 stickers. Write about how you solve this problem.



To the Teacher ..



There are 66 basic addition facts to learn (only 33 if you count commutative facts only once). This can seem overwhelming to students. To help them see the progress they are making, and to help them key in on the facts they need to practice more, let students mark off facts as they become proficient with them.

$0 + 0 \quad 0 + 1 \quad 0 + 2 \quad 0 + 3 \quad 0 + 4 \quad 0 + 5 \quad 0 + 6 \quad 0 + 7 \quad 0 + 8 \quad 0 + 9 \quad 0 + 10$

$1 + 0 \quad 1 + 1 \quad 1 + 2 \quad 1 + 3 \quad 1 + 4 \quad 1 + 5 \quad 1 + 6 \quad 1 + 7 \quad 1 + 8 \quad 1 - 9$

$2 + 0 \quad 2 + 1 \quad 2 + 2 \quad 2 + 3 \quad 2 + 4 \quad 2 + 5 \quad 2 + 6 \quad 2 + 7 \quad 2 + 8$

$3 + 0 \quad 3 + 1 \quad 3 + 2 \quad 3 + 3 \quad 3 + 4 \quad 3 + 5 \quad 3 + 6 \quad 3 + 7$

$4 + 0 \quad 4 + 1 \quad 4 + 2 \quad 4 + 3 \quad 4 + 4 \quad 4 + 5 \quad 4 + 6$

$5 + 0 \quad 5 + 1 \quad 5 + 2 \quad 5 + 3 \quad 5 + 4 \quad 5 + 5$

$6 + 0 \quad 6 + 1 \quad 6 + 2 \quad 6 + 3 \quad 6 + 4$

$7 + 0 \quad 7 + 1 \quad 7 + 2 \quad 7 + 3$

$8 + 0 \quad 8 + 1 \quad 8 + 2$

$9 + 0 \quad 9 + 1$

$10 + 0$

Mental Math

- You have 10 peanuts. You eat 5. How many do you have left?
- What number comes before 43?
- What is 2 more than 7?
- Which is greater, 46 or 38?
- How many sides do a triangle and a square have all together?
- Finish the pattern:
5 - 5, 5 - 4, 5 - 3, 5 - 2, _____.
- 9 - 4.
- What number is between 52 and 54?