

Name _____ Date _____

Materials: a 5-hole by 5-hole pegboard
jumbo pegs
a pencil
six sheets of 2 rows 5-hole by 5-hole pegboard paper
3" by 5" index cards
a broad-tipped marker for the front of the flashcards

1.) Put five red pegs in the first row.

Put five blue pegs in the second row.

Copy onto "2 rows of 5-hole by 5-hole pegboard paper."

How many red pegs? _____

How many blue pegs? _____

How many pegs altogether are on the pegboard? _____

On the pegboard paper, write the addition number sentence for the total number of pegs on the pegboard in this form.

$$\# \text{ of red pegs} + \# \text{ of blue pegs} = 10$$

You should have written

$$5 + 5 = 10$$

This equation has a plus sign. So this equation shows the arithmetic operation of _____ .

The inverse operation of addition is _____ .

Now you are going to write the subtraction equation related to this addition equation.

How many pegs altogether? _____

How many blue pegs? _____

How many red pegs? _____

Fold the pegboard paper longitudinally in half.

Next to $5 + 5 = 10$

write the subtraction equation in this form

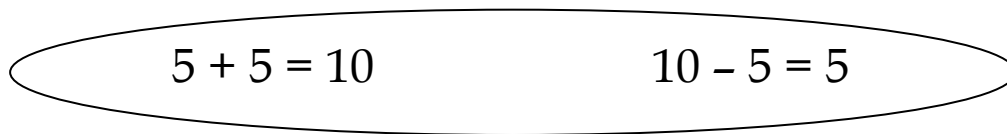
$$\text{total \# of pegs} - \text{\# of blue pegs} = \text{\# of red pegs}$$

You should have on the pegboard paper

$$5 + 5 = 10$$

$$10 - 5 = 5$$

Put a loop around this addition/subtraction fact family.


$$5 + 5 = 10 \qquad 10 - 5 = 5$$

Now back to the pegboard.

- 2.) Replace the first blue peg in the second row with a red peg.

Copy onto another sheet of "2 rows of 5-hole by 5-hole pegboard paper."

How many red pegs? _____

How many blue pegs? _____

How many pegs altogether are on the pegboard? _____

On the pegboard paper, write the addition number sentence for the total number of pegs on the pegboard in this form.

$$\# \text{ of red pegs} + \# \text{ of blue pegs} = 10$$

You should have written

$$6 + 4 = 10$$

The numbers being added are the **addends**.
6 and 4 are the addends.

The result of addition is the **sum**. 10 is the sum.

How many blue pegs? _____

How many red pegs? _____

How many pegs altogether are on the pegboard? _____

Beneath $6 + 4 = 10$ write the addition number sentence for the total number of pegs on the pegboard in this form.

$$\# \text{ of blue pegs} + \# \text{ of red pegs} = 10$$

You should have written

$$4 + 6 = 10$$

$4 + 6 = 10$ is the **commute** of $6 + 4 = 10$ because the order of the addends are switched but the sum is the same.

These two equation have a plus sign. So these equations show the arithmetic operation of _____ .

The inverse operation of addition is _____ .

Now you are going to write the subtraction equations related to this addition equations.

How many pegs altogether? _____

How many blue pegs? _____

How many red pegs? _____

Fold the pegboard paper longitudinally in half.

Next to $6 + 4 = 10$
write the subtraction equation in this form

$$\text{total \# of pegs} - \# \text{ of blue pegs} = \# \text{ of red pegs}$$

You should have on the pegboard paper

$$6 + 4 = 10$$

$$10 - 4 = 6$$

Next to $4 + 6 = 10$

write the subtraction equation in this form

$$\text{total \# of pegs} - \text{\# of red pegs} = \text{\# of blue pegs}$$

Now all the equations you should have on the pegboard paper are

$$6 + 4 = 10$$

$$10 - 4 = 6$$

$$4 + 6 = 10$$

$$10 - 6 = 4$$

The two arithmetic operations shown here are

_____ and _____.

So this is an addition/subtraction fact family.

Put a loop around this addition/subtraction fact family

$$6 + 4 = 10$$

$$10 - 4 = 6$$

$$4 + 6 = 10$$

$$10 - 6 = 4$$

Now back to the pegboard.

- 3.) Replace the blue peg in the second hole in the second row with a red peg.

Copy onto another sheet of "2 rows of 5-hole by 5-hole pegboard paper."

How many red pegs? _____

How many blue pegs? _____

How many pegs altogether are on the pegboard? _____

Write the addition/subtraction fact family related to this situation on the pegboard and put a loop around it.

$$7 + 3 = 10$$

$$10 - 3 = 7$$

$$3 + 7 = 10$$

$$10 - 7 = 3$$

- 4.) Replace the blue peg in the third hole in the second row with a red peg.

Copy onto another sheet of "2 rows of 5-hole by 5-hole pegboard paper."

Write the addition/subtraction fact family related to this situation on the pegboard and put a loop around it.

$$8 + 2 = 10$$

$$10 - 2 = 8$$

$$2 + 8 = 10$$

$$10 - 8 = 2$$

- 5.) Replace the blue peg in the fourth hole in the second row with a red peg.

Copy onto another sheet of "2 rows of 5-hole by 5-hole pegboard paper."

Write the addition/subtraction fact family related to this situation on the pegboard and put a loop around it.

$$9 + 1 = 10$$

$$10 - 1 = 9$$

$$1 + 9 = 10$$

$$10 - 9 = 1$$

- 6.) Replace the blue peg in the last hole in the second row with a red peg.

Copy onto another sheet of "2 rows of 5-hole by 5-hole pegboard paper."

Write the addition/subtraction fact family related to this situation on the pegboard and put a loop around it.

$$10 + 0 = 10$$

$$10 - 0 = 10$$

$$0 + 10 = 10$$

$$10 - 10 = 0$$

- 7.) Make the addition and subtraction flash cards for the facts you have written on these six sheets of pegboard paper.
- 8.) There is one more equation related to this situation you may write. On the first page of the pegboard paper you have written

$$5 + 5 = 10$$

$$10 - 5 = 5$$

In $5 + 5 = 10$, notice that you are **using 5 as an addend two times**. So you may write

$$2 (5) = 10$$

which is read "Two times five equals ten."