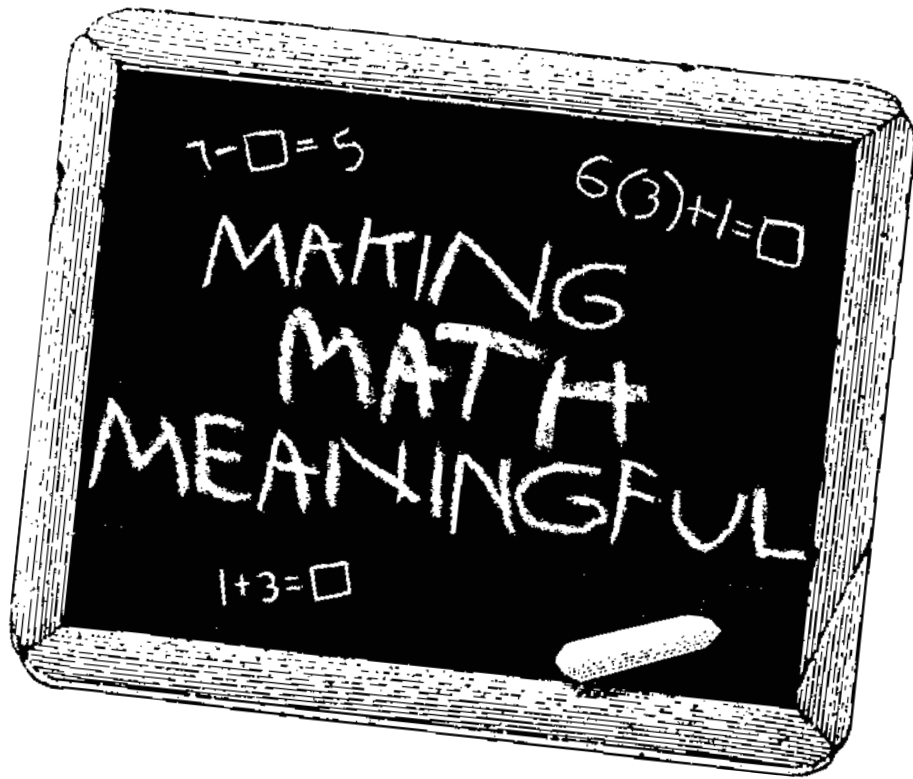


# Level 1 — Parent/Teacher Guide

## Revised Edition



by David Quine

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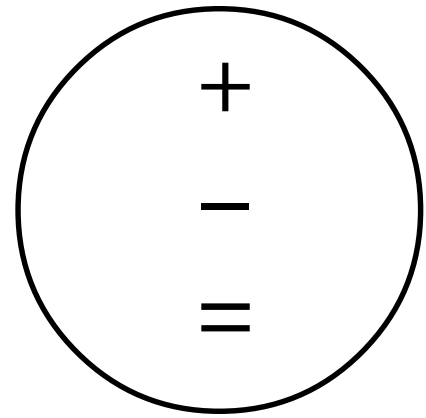
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# CHAPTER 3: EQUALIZING SENTENCES

making two groups equal

- 1 Given an open (unfinished) equalizing situation involving the numbers 0-20 in which the amount to be added on or taken away is unknown, writes a sentence which represents that situation (for example:  $5 + \square = 14$ ,  $13 - \square = 6$ ).
- 2 Given an open equalizing situation involving the numbers 0-20 in which the amount to be added on or taken away is unknown, chooses a sentence which represents that situation.



- 3 Given an open equalizing situation involving the numbers 0-20 in which one of the groups to be equalized is unknown, writes a sentence which represents the situation (for example,  $\square - 2 = 4$ ,  $5 = \square + 3$ ,  $2 + 6 = \square$ ,  $\square = 10 - 3$ ).
- 4 Given an open equalizing situation involving the numbers 0-20 in which one of the groups to be equalized is unknown, chooses a sentence which represents that situation.

## EQUALIZING

## SENTENCES

$$\square - 3 = 11$$

$$5 + \square = 17$$

# ACTIVITY 3A

## MAKING TWO GROUPS EQUAL

### MATERIALS

3 pairs of string (only one pair of equal length)

### EXPLORING THE CONCEPT – EQUALIZING SENTENCE

SYMBOLS: +, add on (plus)

-, take away (minus)

### LESSON

#### WHAT I AM TO DO

#### WHAT I AM TO SAY

---

1. Using an unequal pair of strings, say ...

“COMPARE THE TWO STRINGS.”

“ARE THEY THE SAME LENGTH OR IS ONE LONGER THAN THE OTHER?”

“WOULD YOU SAY THE TWO STRINGS ARE EQUAL OR UNEQUAL?”

“HOW COULD THE STRINGS BE MADE EQUAL?”

“WHAT ELSE COULD YOU DO TO MAKE THE TWO STRINGS EQUAL?”

---

2. Set the first pair of strings to the side and let your child observe another pair.

(USE THE SAME TYPE OF QUESTIONS AS LISTED FOR STEP 1. FOR THE EQUAL PAIR OF STRINGS OMIT THE LAST TWO QUESTIONS.)

---

3. Continue by letting your child observe the last pair.

(USE THE SAME TYPE OF QUESTIONS AS LISTED FOR STEP 1.)

# ACTIVITY 3B

## MAKING TWO GROUPS EQUAL

### MATERIALS

2 3x5 cards

### EXPLORING THE CONCEPT – EQUALIZING SENTENCE

### NAMING THE CONCEPT

SYMBOLS: +, add on (plus)

-, take away, (minus)

### LESSON

#### WHAT I AM TO DO

#### WHAT I AM TO SAY

---

1. Write the plus symbol (+) on one card and the minus symbol (-) on the other card. Introduce the symbol cards during the story at the appropriate time.
  2. Read the story.
-

# KING STEPHEN THE KINDHEARTED

Quite a few years ago lived a very kind king. Throughout the land the people all called him King Stephen the Kindhearted because of his many gracious deeds. King Stephen owned many farms, sheep folds and grain silos. The farms were run by subjects of the king who seldom complained because of his continuing generosity.

The land and farms had fallen to the king because the poor subjects did not know how to keep accurate records of their animals and crops. If a farmer wanted to have just as many hens as his neighbor, he did not know what to do to make them equal. Neither did he know how to make it known to anyone else what he had done. His brother might then come along and sell all he had so that there was nothing left.

But wise King Stephen realized what was causing his dear subjects to lose all they had. "They need to know when they **add on** and when they **take away** from what they have". He called his advisers to help him think over the problem.

When the advisers arrived they each offered their solutions. "Maybe the subjects could write down the words 'add on' or 'take away' to let others know," said Lance the Linguist. King Stephen reminded them that not many of the subjects with this problem could read or write. It must be easier than that. No one seemed to have a solution until Sire Symbol approached the throne.

"Your Highness. I believe perhaps I can help. If your subjects want to know when to add on to make the two groups equal and when to take away to make the two groups equal, it is a very simple matter. When they want to add on, show them this sign.

(POINT TO THE '+' SYMBOL)

This is called an add on or a plus sign. When they want to add on, then your subjects will make this sign and they will know just what to do."

"Splendid! Splendid! My good fellow. Continue on!" exclaimed the King.

"Then when they want to take away, show them this symbol.

(POINT TO THE '-' SYMBOL)

This is called a take away or a minus sign. When they want to take away, your subjects will make this sign and they will know just what to do.

King Stephen was deeply grateful to Sire Symbol. He soon taught every subject Sire Symbol's plus sign and minus sign. The subjects were soon equalizing beautifully and accurately. The King soon granted the return of their lands to every man.

# ACTIVITY 3C

## MAKING TWO GROUPS EQUAL

### MATERIALS

10 red counting chips  
10 blue counting chips

### EXPLORING THE CONCEPT – EQUALIZING SENTENCE

### APPLYING THE CONCEPT

SYMBOLS: +, add on (plus)  
-, take away (minus)

### LESSON

#### WHAT I AM TO DO

1. Show your child two groups of counting chips:

5 red chips  
3 blue chips

$$\begin{array}{r} 5 \neq \textcircled{3} \\ + 2 \end{array}$$

2. Show your child two different groups:

7 blue chips  
4 red chips

#### WHAT I AM TO SAY

"WRITE AN ORDER SENTENCE FOR THE TWO GROUPS."

"TO MAKE THE TWO GROUPS EQUAL WHAT COULD YOU DO?"

"WHAT ELSE COULD YOU DO?"

"WHICH GROUP WOULD YOU HAVE TO ADD ON TO SO THAT THEY WOULD BE EQUAL?"

"IN THE ORDER SENTENCE THAT YOU WROTE, CIRCLE THE NUMBER THAT REPRESENTS THAT GROUP."

"WRITE THE SYMBOL THAT SHOWS **ADD ON**."

"HOW MANY BLUE CHIPS DO YOU NEED TO MAKE THEM EQUAL?"

"WRITE THAT NUMBER BEHIND THE PLUS SYMBOL."

"COMPARE THE TWO GROUPS."

"HOW ARE THEY DIFFERENT?"

"WRITE AN ORDER SENTENCE FOR THE TWO GROUPS."

"TO MAKE THE TWO GROUPS EQUAL WHAT COULD YOU DO?"

"WHAT ELSE COULD YOU DO?"

"WHICH GROUP WOULD YOU HAVE TO TAKE AWAY FROM SO THAT THEY WOULD BE EQUAL?"

"IN THE ORDER SENTENCE THAT YOU WROTE CIRCLE THE NUMBER THAT REPRESENTS THAT GROUP."

$$\begin{array}{r} \textcircled{7} \neq 4 \\ -3 \end{array}$$

"WRITE THE SYMBOL THAT SHOWS TAKE AWAY."

"HOW MANY BLUE CHIPS DO YOU NEED TO TAKE AWAY TO MAKE THEM EQUAL?"

"WRITE THAT NUMBER BEHIND THE MINUS SYMBOL."

3. Show your child two different groups:

10 red chips  
6 blue chips

"WRITE AN ORDER SENTENCE TO REPRESENT THE TWO GROUPS."

"CHOOSE A GROUP, EITHER THE RED GROUP OR THE BLUE GROUP, TO CHANGE SO THAT YOU COULD EQUALIZE THE GROUPS."

"CIRCLE THE NUMBER THAT REPRESENTS THAT GROUP."

"MUST YOU ADD ON OR TAKE AWAY FROM THAT GROUP TO MAKE THEM EQUAL?"

"WRITE THE SYMBOL THAT MEANS (ADD ON OR TAKE AWAY) UNDER THE ORDER SENTENCE."

"MAKE THE GROUPS EQUAL."

"HOW MANY DID YOU (ADD ON OR TAKE AWAY)?"

"WRITE THAT NUMBER BEHIND THE SYMBOL."

$$\begin{array}{r} \textcircled{10} \neq 6 \\ -4 \end{array} \text{ or } \begin{array}{r} 10 \neq \textcircled{6} \\ +4 \end{array}$$

4. Repeat Step 3 several times until your child is very familiar with the process. Keep changing the number of chips each time your child repeats the activity.

(USE THE SAME TYPE OF STATEMENTS AS LISTED FOR STEP 3.)

# ACTIVITY 3D

## MAKING TWO GROUPS EQUAL

### MATERIALS

Student pages 1-6

### EXPLORING THE CONCEPT – EQUALIZING SENTENCE

### APPLYING THE CONCEPT

SYMBOLS: +, add on, plus

-, take away, minus

### LESSON

#### WHAT I AM TO DO

1. Hand out Student pages 1 and 2.

#### WHAT I AM TO SAY

"LOOK AT THE PICTURES AND READ THE ORDER SENTENCE."

"WE WANT TO MAKE THE GROUPS EQUAL."

"CIRCLE THE GROUP IN THE PICTURE THAT YOU WOULD LIKE TO CHANGE TO MAKE THE GROUPS EQUAL. ALSO CIRCLE THE NUMBER THAT REPRESENTS THAT GROUP IN THE ORDER SENTENCE."

"WILL YOU NEED TO ADD TO OR TAKE AWAY FROM THAT GROUP IN ORDER TO MAKE THE TWO GROUPS EQUAL?"

"WRITE THE (ADD ON, PLUS SIGN/TAKE AWAY, MINUS SIGN) IN THE BOX UNDER THE ORDER SENTENCE. THIS SYMBOL WILL SHOW HOW TO MAKE THE GROUPS EQUAL."

2. Hand out Student pages 3 and 4.

"LOOK AT THE PICTURES AND READ THE ORDER SENTENCE FOR EACH PICTURE."

"ONE OF THE GROUPS HAS BEEN CIRCLED."

"CIRCLE THE NUMBER IN THE ORDER SENTENCE THAT REPRESENTS THAT GROUP. "

"WRITE THE SYMBOL IN THE BOX THAT SHOWS HOW TO MAKE THE GROUPS EQUAL."

3. Hand out Student pages 5 and 6.

"WE ARE GOING TO EQUALIZE THESE GROUPS."

"THE SYMBOL HAS BEEN WRITTEN TO SHOW HOW THE EQUALIZING IS TO BE DONE."

"WHICH GROUP IS TO BE CHANGED?"

"CIRCLE BOTH THE GROUP AND THE NUMBER THAT REPRESENTS THAT GROUP IN THE ORDER SENTENCE."



**ANSWER KEY:**

Student page 1  
Answers will vary

Student page 2  
Answers will vary

Student page 3

1. -
2. +
3. +
4. +

Student page 4

1. +
2. +
3. +
4. +

Student page 5

1. 7
2. 1
3. 5
4. 3

Student page 6

1. 8
2. 4
3. 6
4. 1

# ACTIVITY 3M

## MAKING TWO GROUPS EQUAL

### MATERIALS

Student pages 24-31

### APPLYING THE CONCEPT – EQUALIZING SENTENCE

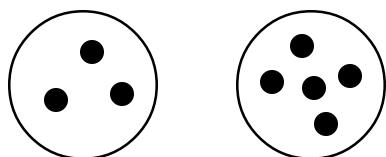
SYMBOLS: +, add on, plus

-, take away, minus

### LESSON

#### WHAT I AM TO DO

1. Draw the diagram of the two groups:



#### WHAT I AM TO SAY

"COMPARE THE TWO GROUPS."

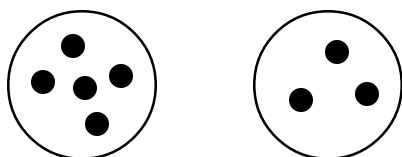
"HOW COULD YOU EQUALIZE THE GROUPS?"

"WRITE TWO EQUALIZING SENTENCES: ONE REPRESENTING AN ADD-ON SENTENCE AND THE OTHER A TAKE-AWAY SENTENCE."

(ANSWER:  $3 + \square = 5$ , OR  $3 = 5 - \square$ )

"THESE TWO SENTENCES TELL OF TWO DIFFERENT WAYS OF EQUALIZING THE GROUPS."

2. Draw the following diagram under the previous one:



"HOW IS THIS PICTURE ALIKE/DIFFERENT FROM THE FIRST I DREW?"

"WRITE TWO EQUALIZING SENTENCES: ONE REPRESENTING AN ADD ON SENTENCE AND THE OTHER A TAKE AWAY SENTENCE."

(ANSWER:  $5 = 3 + \square$ , OR  $5 - \square = 3$ )

"THESE FOUR SENTENCES REPRESENT FOUR DIFFERENT WAYS TO SHOW HOW TO EQUALIZE THE GROUPS."

3. Hand out Student pages 24 and 25. Read (or have your child read) each story. Use these pages to begin evaluating your child's understanding.

"CIRCLE THE SENTENCE OR SENTENCES THAT CORRECTLY REPRESENT THE STORY."

4. Hand out Student pages 26-31. Use these pages to begin evaluating your child's understanding.

"LOOK AT EACH PICTURE AND AT EACH SENTENCE. CHOOSE AND CIRCLE ANY SENTENCES THAT DESCRIBE THE PICTURES CORRECTLY."

**ANSWER KEY:**

**Student page 24**

1.  $8 = 13 - \square$
2.  $S - \square = M$  and  $M = S - \square$
3.  $B - \square = G$
4.  $9 + \square = 12$

**Student page 25**

1.  $3 - \square = 1$
2.  $4 + \square = 10$  and  $10 = 4 + \square$
3.  $9 = 2 + \square$

**Student page 26**

1.  $7 = 8 - \square$
2.  $12 = 5 + \square$  and  $5 = 12 - \square$
3.  $10 = 14 - \square$  and  $14 = 10 + \square$

**Student page 27**

1.  $B + \square = W$
2.  $Q - \square = L$
3.  $F + \square = N$  and  $F = N - \square$

**Student page 28**

1.  $10 - \square = 1$
2.  $S = B - \square$
3.  $10 + \square = 18$  and  $10 = 18 - \square$
4.  $8 - \square = 5$

**Student page 29**

1.  $L = S + \square$
2.  $R - \square = B$
3.  $6 = 7 - \square$  and  $6 + \square = 7$
4.  $B = E + \square$  and  $E = B - \square$

**Student page 30**

1.  $F - \square = M$
2.  $A = B - \square$
3.  $P = S + \square$
4.  $6 = 9 - \square$  and  $6 + \square = 9$

**Student page 31**

1.  $L - \square = H$
2.  $7 = 0 + \square$  and  $7 - \square = 0$
3.  $Y = M - \square$  and  $Y + \square = M$
4.  $S = G - \square$  and  $S + \square = G$

# ACTIVITY 3Q

## MAKING TWO GROUPS EQUAL

### MATERIALS

connecting cubes  
20 counting chips  
Student pages 48-58

### APPLYING THE CONCEPT – EQUALIZING SENTENCE

### LESSON

#### WHAT I AM TO DO

#### WHAT I AM TO SAY

---

NOTE: IF YOUR CHILD HAS DIFFICULTY WITH THIS ACTIVITY SKIP TO ACTIVITY 4A AND COMPLETE SECTION 9 BEFORE COMPLETING 3Q AND 3R.

---

1. Give your child 5 counting chips. You keep 10 but do not tell your child how many you have.

"HOW MANY COUNTING CHIPS DO YOU HAVE?"

"HOW MANY DO I HAVE?"

"THAT'S RIGHT. YOU CAN NOT TELL HOW MANY I HAVE."

"I WANT TO MAKE MY GROUP OF COUNTING CHIPS EQUAL TO YOURS."

"TO DO THAT YOU WILL NEED TO HAVE SOME MORE CHIPS. DO YOU THINK THAT I HAVE MORE OR LESS THAN YOU HAVE? WHY DO YOU THINK SO?"

"TO HAVE AS MANY AS I HAVE YOU NEED TO GET FIVE MORE COUNTING CHIPS."

2. If your child does not write the sentence then you need to do so.:

$$5 + 5 = \square$$

"LET'S WRITE A MATH SENTENCE ABOUT THE COUNTING CHIPS. HOW MANY DID YOU START WITH? I HAD SOME BUT YOU DID NOT KNOW HOW MANY. TO MAKE YOUR GROUP EQUAL TO MINE YOU ADDED FIVE TO YOUR GROUP. NOW WRITE A MATH SENTENCE ABOUT OUR PROBLEM."

3. Give your child 5 more counting chips.

"NOW HOW MANY COUNTING CHIPS DO YOU HAVE? NOW YOU HAVE THE SAME AMOUNT AS I HAVE. HOW MANY DO I HAVE?"

"THAT'S RIGHT, I HAVE TEN. WRITE THAT NUMBER IN THE BOX."

4. Give your child 7 connecting cubes and you take 5 but do not tell your child how many you have.

"HOW MANY CONNECTING CUBES DO YOU HAVE?"

"HOW MANY DO I HAVE?"

"THAT'S RIGHT. YOU CAN NOT TELL HOW MANY I HAVE."

"I WANT TO MAKE MY GROUP OF CUBES EQUAL TO YOURS."

"TO DO THAT YOU WILL NEED TO TAKE AWAY SOME OF YOURS. DO YOU THINK THAT I HAVE MORE OR LESS THAN YOU HAVE? WHY DO YOU THINK SO?"

"TO HAVE AS MANY AS I HAVE YOU NEED TO TAKE AWAY TWO CUBES."

- 
5. If your child does not write the sentence then you need to do so.:

$$7 - 2 = \square$$

"LET'S WRITE A MATH SENTENCE ABOUT THE CUBES. HOW MANY DID YOU START WITH? I HAD SOME BUT YOU DID NOT KNOW HOW MANY. TO MAKE YOUR GROUP EQUAL TO MINE YOU NEED TO TAKE AWAY TWO OF YOURS. NOW WRITE A MATH SENTENCE ABOUT OUR PROBLEM."

- 
6. Take away two connecting cubes from your child and set them on the table.

"NOW HOW MANY CONNECTING CUBES DO YOU HAVE? NOW I HAVE THE SAME NUMBER AS YOU HAVE. HOW MANY DO I HAVE?"

"THAT'S RIGHT, I HAVE FIVE. WRITE THAT NUMBER IN THE BOX."

- 
7. Give your child 3 counting chips. Keep 7 chips for yourself. Do not let your child know how many you have.

"I AM GIVING YOU THREE COUNTING CHIPS AND I AM GOING TO KEEP SOME. I WANT YOU TO FIND OUT HOW MANY COUNTING CHIPS I HAVE IN MY HAND."

" I WILL GIVE YOU A CLUE."

"IF I TAKE AWAY SOME OF THE COUNTING CHIPS FROM MY HAND, THEN MY GROUP WILL BE EQUAL TO YOURS. DO I HAVE MORE OR LESS THAN YOU HAVE?"

- 
8. Take 4 counting chips from your hand and set them on the table in front of you.

"LET ME GIVE YOU ANOTHER CLUE. I NEED TO TAKE AWAY FOUR OF MY COUNTING CHIPS."

"NOW I HAVE AS MANY COUNTING CHIPS AS YOU HAVE. HOW MANY DO YOU HAVE? SO HOW MANY DO I HAVE?"

"THAT'S RIGHT. NOW I HAVE 3 ALSO. I MADE MY GROUP EQUAL TO YOURS BY TAKING AWAY FOUR OF MINE."

- 
9. Write the math sentence if your child does not know what to write.

"HOW CAN WE PUT THIS NEW INFORMATION INTO A MATH SENTENCE?"

(ANSWER:  $3 = \square - 4$  OR  $\square - 4 = 3$ )

"READ THE SENTENCE. WHAT DOES IT MEAN?"

"YES, IT MEANS THAT YOU HAVE THREE COUNTING CHIPS AND I HAVE SOME COUNTING CHIPS. I CAN MAKE MY GROUP OF COUNTING CHIPS EQUAL TO YOURS IF I TAKE AWAY FOUR OF MINE."

"HOW MANY COUNTING CHIPS DO YOU THINK I HAVE? WHY DO YOU THINK SO?"

"THAT'S RIGHT. I HAD SEVEN COUNTING CHIPS TO BEGIN WITH. WRITE THAT NUMBER IN THE BOX."

- 
10. Give your child 10 counting chips. Keep 7 chips for yourself. Do not let your child know how many you have.

"I AM GIVING YOU TEN COUNTING CHIPS AND I AM GOING TO KEEP SOME. I WANT YOU TO FIND OUT HOW MANY COUNTING CHIPS I HAVE IN MY HAND."

" I WILL GIVE YOU A CLUE."

"IF I ADD SOME MORE TO WHAT I ALREADY HAVE, THEN MY GROUP WILL BE EQUAL TO YOURS. DO I HAVE MORE OR LESS THAN YOU HAVE?"

- 
11. Take 3 counting chips and set them on the table in front of you.

"LET ME GIVE YOU ANOTHER CLUE. I NEED THREE MORE COUNTING CHIPS."

"NOW I HAVE AS MANY COUNTING CHIPS AS YOU HAVE. HOW MANY DO YOU HAVE? SO HOW MANY DO I HAVE?"

"THAT'S RIGHT. NOW I ALSO HAVE TEN. I MADE MY GROUP EQUAL TO YOURS BY ADDING THREE TO MINE."

- 
12. Write the math sentence if your child does not know what to write.

"HOW CAN WE PUT THIS NEW INFORMATION INTO A MATH SENTENCE?"

(ANSWER:  $10 = \square + 3$  OR  $\square + 3 = 10$ )

"READ THE SENTENCE. WHAT DOES IT MEAN?"

"YES, IT MEANS THAT YOU HAVE TEN COUNTING CHIPS AND I HAVE SOME COUNTING CHIPS. I CAN MAKE MY GROUP OF COUNTING CHIPS EQUAL TO YOURS IF I ADD THREE TO MINE."

"HOW MANY COUNTING CHIPS DO YOU THINK I HAD TO START WITH? WHY DO YOU THINK SO?"

"THAT'S RIGHT. I HAD SEVEN COUNTING CHIPS TO BEGIN WITH. WRITE THAT NUMBER IN THE BOX."

- 
13. Give your child Student pages 48-58. Provide as much assistance as your child needs to write these math sentences. You will need to represent the pictures with objects as is presented in Steps 1-12. Be patient with your child. He is actually gaining the concrete experiences necessary to solve some simple algebraic equations.

This is the dialogue you should have with your child on Student page 48.

"LET'S LOOK AT THE FIRST PROBLEM TOGETHER."

"HOW MANY PICTURES OF DOGS ARE IN THE CIRCLE ON THE RIGHT?"

"HOW MANY PICTURES OF DOGS ARE IN THE CIRCLE ON THE LEFT?"

"THAT'S RIGHT. THERE ARE FIVE DOGS IN THE RIGHT CIRCLE AND WE CANNOT TELL HOW MANY ARE IN THE LEFT CIRCLE."

"LET'S USE CUBES TO REPRESENT THE STORY."

Give your child 5 cubes and you take 3 cubes. Do not tell your child how many cubes you have.

I WILL GIVE YOU FIVE CUBES TO REPRESENT THE FIVE DOGS IN THE RIGHT CIRCLE AND I WILL TAKE SOME CUBES TO REPRESENT THE DOGS IN THE LEFT CIRCLE."

Take 2 more cubes and set them beside you on the table.

If your child cannot explain what the story means then you need to explain it to him.

If your child cannot write the sentence then you must.

$$\square + 2 = 5$$

If your child cannot tell you the meaning then you should ask these questions.

"I WANT MY GROUP TO BE EQUAL TO YOUR GROUP. WHAT DOES IT SAY THAT I NEED TO DO TO MY GROUP?"

"THAT'S RIGHT. WHAT DOES THE PICTURE STORY MEAN?"

"THERE ARE SOME PICTURES OF DOGS IN THE LEFT CIRCLE AND FIVE PICTURES IN THE RIGHT CIRCLE. TO MAKE THE TWO GROUPS EQUAL IT SAYS THAT WE MUST ADD TWO DRAWINGS TO THE LEFT CIRCLE."

"CAN YOU WRITE A MATH SENTENCE TO DESCRIBE THIS STORY?"

"READ THE MATH SENTENCE TO ME."

"AT THIS POINT ALL WE ARE TO DO IS WRITE THE MATH SENTENCE WITH A BOX. AFTER WE FINISH ACTIVITY 3R WE CAN COME BACK AND FIND THE NUMBERS THAT GO IN THE BOX."

"NOW LET'S LOOK AT PROBLEM NUMBER TWO."

"WHAT DOES THIS STORY MEAN?"

"HOW MANY DOGS ARE DRAWN IN THE LEFT CIRCLE?"

"CAN WE SEE HOW MANY ARE DRAWN ON THE RIGHT CIRCLE?"

"THAT'S RIGHT. WE ARE NOT ABLE TO SEE HOW MANY ARE IN THE RIGHT CIRCLE."

"WHAT DOES IT SAY WE NEED TO DO TO THE RIGHT CIRCLE IN ORDER TO MAKE THE TWO GROUPS EQUAL?"

"DO YOU THINK THAT THERE ARE MORE DRAWING OF DOGS IN THE LEFT CIRCLE OR THE RIGHT CIRCLE? WHY DO YOU THINK SO?"

"IF WE TAKE AWAY FOUR FROM THE RIGHT CIRCLE THEN THERE WILL BE THE SAME NUMBER OF DOGS IN THE RIGHT CIRCLE AS THERE ARE IN THE LEFT CIRCLE."

"WRITE A SENTENCE WITH A BOX TO REPRESENT THIS PICTURE PROBLEM."

(ANSWER:  $3 = \square - 4$ )

"LET'S LOOK AT THE LAST PROBLEM."

"DO WE KNOW HOW MANY DRAWINGS ARE IN THE CIRCLE ON THE LEFT? THE CIRCLE ON THE RIGHT?"

"TO MAKE THE TWO GROUPS EQUAL WHAT DOES IT SAY NEEDS TO HAPPEN?"

YES, IF WE TAKE AWAY THREE DRAWINGS FROM THE LEFT CIRCLE THEN WE WILL HAVE THE SAME NUMBER OF DRAWINGS IN BOTH CIRCLES."

"WRITE A SENTENCE WITH A BOX TO REPRESENT THIS PICTURE PROBLEM."

(ANSWER:  $\square - 3 = 1$ )

"YOU TRY TO COMPLETE THE PROBLEMS ON THE OTHER PAGES. IF YOU NEED HELP WRITING THE MATH SENTENCES, I WILL HELP YOU."

**ANSWER KEY:**

**Student page 48**

1.  $\square + 2 = 5$
2.  $3 = \square - 4$
3.  $\square - 3 = 1$

**Student page 49**

1.  $\square = 7 - 5$
2.  $5 + 2 = \square$
3.  $3 + 6 = \square$

**Student page 50**

1.  $\square = 3 + 6$
2.  $11 - 4 = \square$
3.  $\square - 9 = 3$

**Student page 51**

1.  $\square = 7 + 5$
2.  $4 + 13 = \square$
3.  $\square - 12 = 2$

**Student page 52**

1.  $\square = 14 - 4$
2.  $11 = \square - 4$
3.  $\square = 6 + 6$
4.  $15 = \square + 3$
5.  $9 - 2 = \square$

**Student page 53**

1.  $10 = \square + 2$
2.  $\square = 13 + 5$
3.  $3 + 5 = \square$
4.  $\square - 10 = 4$

**Student page 54**

1.  $9 = \square + 3$
2.  $\square + 11 = 15$
3.  $\square - 2 = 4$

4.  $18 = \square + 9$

5.  $5 = \square + 2$

6.  $\square = 17 - 5$

**Student page 55**

7.  $4 - 1 = \square$

8.  $\square - 2 = 7$

9.  $\square - 9 = 1$

10.  $\square - 2 = 7$

11.  $\square - 6 = 14$

12.  $0 + 3 = \square$

13.  $6 + 3 = \square$

**Student page 56**

1.  $\square + 3 = 7$

2.  $10 = \square - 7$

3.  $9 = \square + 4$

4.  $3 - 2 = \square$

**Student page 57**

1.  $\square = 1 + 6$

2.  $12 - \square = 7$

3.  $\square - 4 = 0$

4.  $13 + 5 = \square$

**Student page 58**

1.  $\square + 4 = 17$

2.  $\square = 15 - 6$

3.  $6 + \square = 7$

4.  $4 + \square = 8$