

Learning to Solve Math Word Problems in the Primary Grades



Includes an explanation of the procedure and 30 "ready to use" problem sheets of varying difficulty using a variety of operations, and a blank sheet for your own or your students' problems.

Problem number: 9
 Student name: Em Date: Jan 3

Problem: The principal bought 10 cookies. He gave 6 to people in his office. How many cookies did he have left for himself?

Equation: $10 - 6 = 4$
 + - x ÷ =

☒ I did this problem by myself
☐ I worked with a friend
☐ I got some help from an adult

A hand-drawn diagram showing 10 cookies. The first 6 cookies are each crossed out with a large 'X'. The remaining 4 cookies are grouped together and circled.

Problem number: 23
 Student name: Erica Date: Mar 6

Problem: Fred tells Lucy a secret. Lucy tells it to Betty and Paul. Betty and Paul each tell the secret to 2 of their friends. How many people know the secret now?

Equation: $1 + 1 + 2 + 2 + 2 = 8$
 + - x ÷ =

☐ I did this problem by myself
☐ I worked with a friend
☒ I got some help from an adult

A hand-drawn diagram showing the spread of a secret. Fred (F) tells Lucy (L). Lucy (L) tells Betty (B) and Paul (P). Betty (B) and Paul (P) each tell 2 more people, represented by small circles.

by Linda Picciotto

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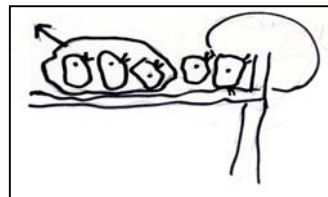
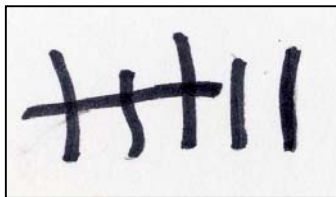
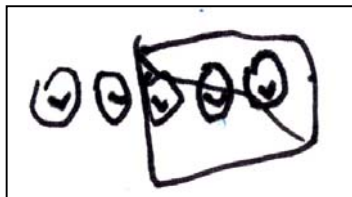
Here's an effective and enjoyable way to help your students develop a variety of techniques to solve word problems.

Group Work Introduction

First, I introduce the problem of the day. I start by telling the problem to the students. Let's use **"There were 5 birds in the tree. 3 flew away. How many were still in the tree?"**

This is an easy problem for most students, which is good. I want them to learn about making marks on their boards that will help them when the problems become harder, so starting with an easy problem will help them understand the concept.

I read the problem aloud and then ask the students if anyone has an idea of how to make marks on the board to help them solve it. A few students will probably want to come to the board to try it. One might draw 5 birds and then cross out 3. One might use lines to stand for the birds. One might start to draw birds, complete with feathers and feet, and soon realize that it was going to take too much time!



When the students have become more used to the format and understand how to make drawings that will help them to solve problems, I give them individual follow-up work. This way I can check to see that each of the students understands the process.



I developed a series of problems ready to photocopy so I can distribute the sheets to individual students after our group work.

I use the same "problem of the day" for both group work and individual work, but I change the numbers. For example, I'll decide to use Problem 4 in the set of problems ("4 children each brought home 3 pumpkins....")

For the group work I'll use different numbers: ***"4 children went to the pumpkin patch. Each bought 2 pumpkins. How many pumpkins did they buy altogether?"*** That way they'll have practice solving the problem with the class but will show that they can solve a similar one on their own.

Problems

number	operation	subject
1	-	Birds on a branch,
1a	-	Same as above, no numbers
2	-, +	Pigs, some left, then some came back
2a	-, +	Same as above, no numbers
3	-	Eggs broken when carton dropped
3a	-	Same as above, no numbers
4	x or +	Pumpkin patch trip
5	x or +	Snowballs to make snowmen
6	x or +	Green beans to cook
6a	x or +	Same as above, no numbers
7	- or ÷	Buying jelly beans
7a	- or ÷	Same as above, no numbers
8	+	Candles on a cake
9	-	Cookies to share
10	+	Inviting friends over to play
11	+	Adding nickels to the piggy bank
11a	+	Same as above, no numbers
12	-	Paintings sold
13	-	Pizza slice give away
14		Houses on the street
15	+	In line for the slide
16	÷, -	Borrowed crayons
17	÷, -	Borrowed crayons, more complicated
18	-	Trees for sale
19	+ or x	Beads to make necklaces
20	÷, +, or x	Fun fair tickets
21	+	Wheels to make bicycles
22	- or ÷	Sharing fish
23	- or ÷	Sharing fish, more complicated
24	÷ or -	Chair legs to make chairs
25	+	Telling secrets
26	-	Boots and mittens
27	-	Paintings sold and given away
28	+ or ÷	Juice
last page		Blank problem-solving sheet for your own or your students' problems

Problem number: 13

Student name: _____ Date _____

Problem: **Jean bought a pizza. She cut it into 12 pieces. She saved 2 pieces for herself and one for her brother and gave away the rest. How many pieces did she give away?**

Equation: _____
+ - \times \div =

- ☐ I did this problem by myself
- ☐ I worked with a friend
- ☐ I got some help from an adult
