

Title: Basic Vocabulary

Materials:

Teacher notes and script (*This page and next*)

Student note sheet (*Make a copy for each student*)

Word Sort Activity (*Make a copy for each student. Each student will also need a sheet of colored copy paper to make the foldable.*)

Overheads (*Make transparencies*)

Previous Knowledge Needed: Basic Mathematical Operations

Important Concepts/Methods:

To change words to the math they represent:

Step 1: Read the problem and answers

Step 2: Reread the problem and highlight or circle the key words.

Step 3: Now go back and cross out names, places, and other non-essential information.

Step 4: Change the key words to the symbols they represent, and decide what mathematical operations and procedures you need to use to solve the problem.

Script:

Today we're going to work on the vocabulary we find in word problems and changing the words to the symbols that represent them.

We are going to start by making a foldable to sort the most common words. You need to take your colored paper and fold it in half hamburger style. Unfold and fold each hamburger half in half again – to the middle fold line. Unfold and make a new fold hot dog style. Tear or cut at the fold lines on one half of the hotdog fold to make 4 flaps.

Label the 4 flaps with *Addition, Subtraction, Multiplication, and Division*. (*Hand out list of words to be sorted.*) This is a list of some of the most frequently used words that tell us to do specific operations. You need to sort these words by identifying the operations they represent. (*Have students write them on the inside of their foldables IN PENCIL so they can erase and move any they place incorrectly. Students can work with a partner or in small groups for this part.*)

After allowing some time for sorting and discussion (no more than 10 minutes), go over the correct placement with students.

Now turn your foldable over. We are going to put the words for equations and inequalities on the back. (*Walk students through placing =, <, >, ≤, and ≥ on the back, emphasizing that the word **is** will ALWAYS be part of the phrase. This word list is at the bottom of the previous word list.*)

Now let's practice with some word problems. (*Pass out the Student Note Sheet.*) Step 1 says, "Read the problem and answers." (*Put problem up on overhead and read.*)

Problem:

Patty had 100 boxes of cookies. She sold 24. How many does she have left?

- a) 76
- b) 86
- c) 124
- d) 240

Step 2 says, “Reread the problem and highlight or circle the key words.” Who can help me find the key words? (*Give students a chance to think, then help them come up with “how many left”. Circle the last sentence on the overhead. Make sure students do the same on their papers.*)

Step 3 says, “Now go back and cross out names, places, and other non-essential information.” What words can we cross out? (*Get students to cross out all but “had 100”, “sold 24”, “how many”, and “left”. Cross other words out on overhead making sure students do the same on their papers.*)

Step 4 says, “Change the key words to the symbols they represent, and decide what mathematical operations and procedures you need to use to solve the problem.” What operation do we need to do in this problem? (*Guide students to say subtraction.*) How should we set up our subtraction problem? (*Guide students to 100-24. Write the problem on the overhead and show solution is 76.*) So the answer is A.

Any questions? (*Answer any questions students have.*)

Common Mistakes:

Let’s see how they got their other answers.

- b) 86 is a subtraction error – they forgot they had to borrow.
- c) 124 is the answer for adding
- d) 240 is the answer for multiplying

Student Problems:

Try the next 3 problems on your own. (*Give students time to try problems.*)

(*Put overhead up and either work out problems or give students the opportunity to come up and explain them. Make sure they do all steps.*)

Answers: 1.) d. 2.) c. 3.) b.

Patty had 100 boxes of cookies. She sold 24.
How many does she have left?

- a) 76
- b) 86
- c) 124
- d) 240

Jerry set up 18 rows of chairs and put 9 chairs in
each row. How many chairs did he set up?

- a) 2
- b) 27
- c) 107
- d) 162

Kenya is reading a novel. She read 25 pages on Monday, 32 pages on Tuesday, and 15 pages on Wednesday. How many total pages did she read?

- a) 57
- b) 62
- c) 72
- d) 47

Mrs. Campbell's 5th grade class is going on a field trip. There are 32 children in the class. Parents are driving, and there will be 4 students per car. How many cars will they need?

- a) 36
- b) 8
- c) 9
- d) 28

Ideas that I'm going to study and learn.

To changes words to the math they represent:

Step 1: Read the problem and answers

Step 2: Reread the problem and highlight or circle the key words.

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Step 4: Change the key words to the symbols they represent, and decide what mathematical operations and procedures you need to use to solve the problem.

Example:

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- b) 86
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- d) 240

To try on my own:

Jerry set up 18 rows of chairs and put 9 chairs in each row. How many chairs did he set up?

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- b) 27
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Add	Each/each group	Have left	Decreased by	How much
Subtract	Minus	Times	Divided by	Half, third, fourth, etc.
Multiply	Difference	Product	How many left over	Shared equally
Divide	Less than	What's the change	Into	Sum
Fewer	In all	Double, triple, etc.	More than	How much/many more
And	How much left	By	Both	Quotient
Are not	Parts	Plus	As much	How many in each
How many	Of	Increased by	Each group has	Together
Separated/split into	Remain	Total	Per	Take away

Answers:

Addition	Subtraction	Multiplication	Division
Add	Subtract	Multiply	Divide
Plus	Minus	Times	Divided by
Sum	Difference	Product	Quotient
More than	Less than	Of	Into
Increased by	Decreased by	Double, triple, etc.	Half, third, fourth, etc.
Total	Take away	By	Shared equally
In all	Remain	Each/each group	As much
Together	Fewer	Per	Each group has
Both	What's the change		Parts
And	How many left over		Separated/split into
How many	How much left		How many in each
How much	How much/ many more		
	Have left		
	Are not		

=	<	>	≤	≥
Is	Is less than	Is greater than	Is less than or equal to	Is greater than or equal to
Equals	Is smaller than	Is more than	Is no greater than	Is no less than
Is equal to	Fewer than	Is bigger than	Is no more than	Is no smaller than
Totals		Exceeds	Is no bigger than	Is at least
			Is at most	

Worked-Out Problem Solutions

Example:

~~Patty had 100 boxes of cookies. She sold 24. How many does she have left?~~

- a) 76 ←
- b) 86
- c) 124
- d) 240

$$\begin{array}{r} 100 \\ -24 \\ \hline 76 \end{array}$$

To try on my own:

~~Jerry set up 18 rows of chairs and put 9 chairs in each row. How many chairs did he set up?~~

- a) 2
- b) 27
- c) 107
- d) 162 ←

$$\begin{array}{r} 18 \\ \times 9 \\ \hline 162 \end{array}$$

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- a) 57
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$$\begin{array}{r} 25 \\ 32 \\ +15 \\ \hline 72 \end{array}$$

~~Mrs. Campbell's 5th grade class is going on a field trip. There are 32 children in the class. Parents are driving, and there will be 4 students per car. How many cars will they need?~~

- a) 36
- b) 8 ←
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$$\begin{array}{r} 8 \\ 4 \overline{)32} \end{array}$$