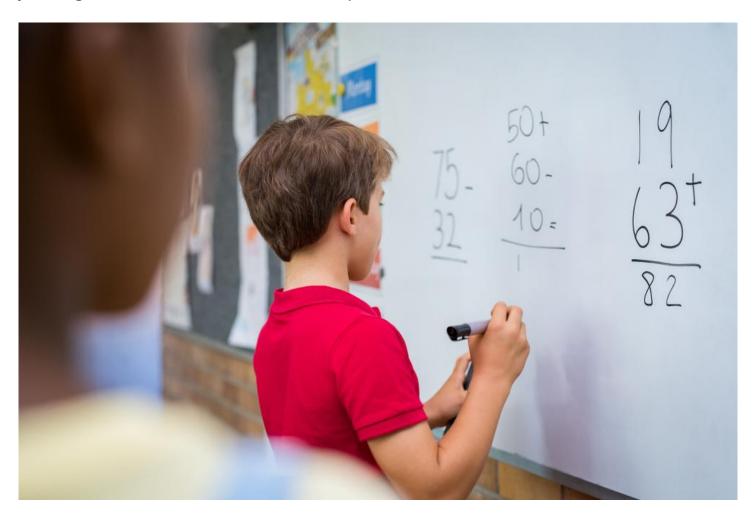


Numberless Word Problems: Elementary Math that Works

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When kids begin to learn early math operations like addition and subtraction, the focus revolves around solving each problem. Think about your own experience with math: many years ago, classrooms around the country drilled students with timed multiplication tests. The objective was to solve each problem accurately as quickly as possible. Even today, and without such an emphasis on drilling, kids are taught to solve a problem and move on to the next one to practice math skills in short order. The solution just might be to tackle numberless word problems!



It's no wonder, then, why math word problems continue to confuse little learners. Most often, a child will simply skim the problem, looking for the numbers and quickly attempt to solve the problem just to move on to the next one. Sometimes, when kids skim, but can't figure out what the question is asking quickly enough, students give up and become frustrated, claiming that word problems are too difficult.

At this point, you might be wondering how in the world word problems can exist without the main components: the numbers! Isn't the point of a word problem to solve it? While word problems aim to be solved, by removing the numbers, children can slow down and understand what the problem is asking the student to do. This helps kids understand the context and math processes it will take to solve it when the numbers are included.

For more practice with word problems and more, download our Talented and Gifted app for games, teacher-led videos and instruction tailored for early learners! Sign up for the first month of learning with Talented and Gifted!

If you're still on the fence, let's discover more about how numberless word problems work before exploring the steps parents and teachers can take to introduce this strategy to kids.

How do Numberless Word Problems Work?

Numberless word problems are exactly as they sound—numberless! That is to say that the numbers are temporarily removed from existing word problems that your child has not yet attempted to solve. Numberless problems can be prepared ahead of time and given to kids on worksheets or notecards. Kids will be asked to analyze the words in the problem to figure out what type of math operation might be used to solve it if there were numbers in the problem. To do this, the parent or teacher must follow several steps to introduce the concept, and to make sure the strategy helps kids slow down and understand what each problem is asking.

As a result, you'll find that your child might become more confident in solving word problems when the numbers are reintroduced. Because the numbers are taken out, so is the stress of trying to solve the problem. Kids are able to slow down and analyze the problem in a way that seeks to find meaning in the words rather than simply pulling out numbers to solve. This makes a child more flexible in their thinking because they are now analyzing it for which mathematical operation or process to use instead of simply getting it done. Instead of worrying about getting the answer wrong, kids are now thinking about the concept without fear of being incorrect.

Steps to Introduce Kids to Numberless Word Problems

Numberless word problems can turn the tables for a student struggling with word problems in math and can be introduced to kids as young as 1st through 3rd grade. To use this strategy effectively, you'll need to follow a few steps to ensure that its helpful for your child.



Step 1- Select word problems and remove the numbers

Feel free to browse the internet for word problems that are grade appropriate for your little learner, or purchase pre-made numberless word problems from online resources like Teachers Pay Teachers, or through educators or teaching supply stores. You can even make word problems yourself without ever including the numbers to make them sound seamless as your child reads.

Before presenting the problem to your child, also remove the final question below the story that sets up the problem. This is important because your child will soon make a prediction as to what the potential question may be.

Step 2- After reading through the problem, ask your child what he or she notices about it

Tell your child that he or she is going to be a question "detective"! It's his or her job to read through the problem and figure out what information is already given and known. For instance, find all the facts contained within the problem and write them down. Make a simple chart that lists attributes about facts from the problem as opposed to ideas of what type of math they see or predict based upon what information is given in the problem.



Watch on YouTube

Step 3- It's time to brainstorm! Make a prediction of what question will be asked

Don't be surprised if your little mathematician is stumped at first! You might be faced with a blank stare or confused look on your child's face when you first ask what question will be asked following the word problem they just read. Remind them that the final math question was removed or is missing, and it's their job as a detective to figure it out. Encourage your child to look back through the problem and the chart to come to a conclusion. Based upon the facts of the problem, steer your child to forming an idea of what type of problem might be asked based on the data collected.

After brainstorming a few possibilities and writing down the potential questions on paper, reveal the actual question to see if your child had gotten it correct! Help your child restate the problem and write it down on the paper.

Step 4- Identify the information needed to make the problem solvable

Obviously, numberless problems leave out the necessary ingredients needed to solve the problem. Using critical thinking skills, your child can figure this information out individually by analyzing the word problem and choosing numbers for the problem. Don't worry if the numbers he or she chooses aren't the original numbers from the problem! Simply let your child choose and solve the problem.

Let's use the following word numberless word problem as an example:

There were many students in Ms. Smith's class.

A few more students joined her class in spring. Now there were <u>a lot of kids</u> in Ms. Smith's Class.

How many students were added to Ms. Smith's class?

After the question is revealed to students, the next step is to determine which words in the problem need to be replaced by numbers. Using the example above, ask your child to determine the first piece of information that would make the problem solvable. If your child struggles, start from the first sentence, "There were many students in Ms. Smith's class". Point out to your child that we don't know how many students were in her class; we only know that there were "many". In order to make the problem solvable, we would need to replace the word many with a number. We then would have something more like, "There were 21 students in Ms. Smith's class"

After this first tidbit of information, it might be easier for your child to fill in the blanks. The next step would be to determine how many students were in Ms. Smith's class after more students enrolled. If there were 26 students in Ms. Smith's class after more students joined, the problem would task children with solving the number of kids that were added to the class.

The final problem would look something like this:

There were 21 students in Ms. Smith's class.

A few more students joined her class in spring. Now there were $\underline{26 \text{ kids}}$ in Ms. Smith's Class.

How many students were added to Ms. Smith's class?

Step 5- Solve the problem using a strategy of your child's choosing

Encourage your child to solve the problem using a self-selected strategy that he or she is familiar with and is comfortable in using. Some ideas include writing the problem down on a small white board with a dry erase marker, using fingers, or counters. Try not to solve the problem for your child, but rather direct your child to choose a technique to solve the problem on their own. Watch as your child gets to work! Once your child is ready with an answer, ask him or her to reveal the answer to you and to explain the strategy used to solve it.

At first glance, many parents and teachers would look at numberless word problems and think that they're impossible or unhelpful as a strategy to help struggling students solve word problems. But given more thought, numberless problems can help kids understand

the math processes at work behind the scenes of a word problem. By slowing kids down and directing their attention to the words on the page, instead of merely pulling out the numbers to solve quickly, we can help kids look at word problems in a whole new light. When kids are taught to understand the math rather than simply solving it, they boost overall math skills and gain confidence in their work!

For more practice with word problems, early math, and even skills found across the curriculum, be sure to check out our <u>ample collection of math worksheets</u> your child's continued success in problem solving and beyond!

