

DMT INSTITUTE

Developing Mathematical Thinking Institute (DMTI)



Professional
Development



Curricular
Resources



Assessment

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DMTI Varied Practice Worksheets

This PowerPoint or PDF displays the worksheets that have varied situations (context, visual, equations, and other mathematical models) for children to work on. By completing these worksheets, children increase their foundational skills in the topic, which will help them with these standards and future mathematical topics.

1. If using a journal, have children present the worksheet and complete all the problems.
2. Or print the 'Varied Practice Worksheet Slides' for them to work on. Then, you can return to the PowerPoint or PDF to look at the keys to check their work.

Grade 3 – Problem Solving 1

ADDITION AND SUBTRACTION

Grade 3: Problem Solving – Part 1


Materials Needed

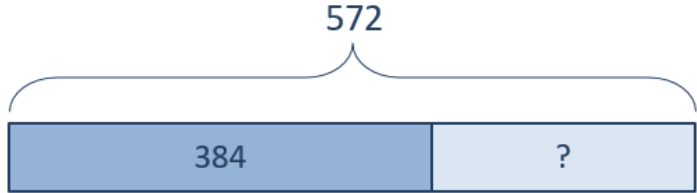
Printed copies of the Problem Solving: Addition and Subtraction worksheet.

Instructions

1. Using the **Problem Solving: Addition and Subtraction** worksheet, you will need to fill in all of the missing information.
2. Sometimes you will need to write your own story problem, in other cases you will need to draw a model and write an equation. If you need help thinking of a story problem, try to write a problem that is about students and school.
3. Solve each problem using your preferred method to add or subtraction. Some options include number lines, partial sums or differences and the standard algorithms.
4. A **Problem String template** is provided to create your own varied practice sheet.

Example:

Equation	Story Problem	Model of the Story	How I solved the problem...
$185 + 157 = ?$	There were 185 boys and 157 girls on the bus. How many children were on the bus?		<p><i>Methods and strategies may vary.</i></p> $185 + 157 = 342$

Equation	Story Problem	Model of the Story	How I solved the problem...
$185 + 157 = ?$	There were 385 students in the gym and 192 on the playground. How many children are there in all?		
	To get to school, 476 students rode the bus and 188 students walked. How many more students rode the bus than walked to school?		
			
$625 - 217 = ?$			

Problem String Template

Directions

1. Another way to practice your problem solving skills is to follow what is called a **problem string**. A problem string is a series of number sets that begin with numbers that are fairly easy to work with and gradually introduce new, and increasingly difficult number sets.
2. The **Problem String Template** gives you space to select an equation that you think is easy to solve, and then complete a **Story Problem**, **Model of the Story**, and **solve** the problem.
3. The next row on the **Problem String Template** is meant for slightly more difficult numbers, but every other part stays the same. You will restate the **Story Problem** with the new numbers, draw a **Model of the Story** that is similar to the first but with the correct numbers and relative sizes of the numbers, and then solve the more difficult problem.
4. Gradually increase the difficulty of the numbers sets until you get to a point where you feel you are solving the most difficult version of the problem you can.
5. To the right is an example for the different **Equations** that might work if you wanted to practice your addition skills. Remember that for each number set in the string you will write a story problem, draw a model, and solve.

Equation
$186 + 45 = \underline{\quad}$
$346 + 245 = \underline{\quad}$
$646 + 265 = \underline{\quad}$
$646 + 565 = \underline{\quad}$

Equation	Story Problem	Model of the Story	How I solved the problem...

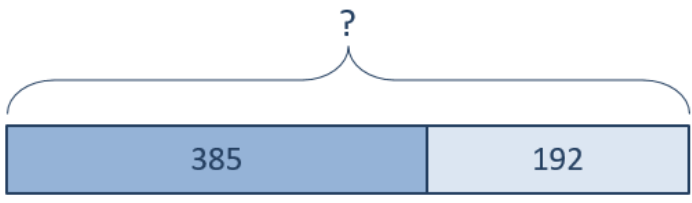
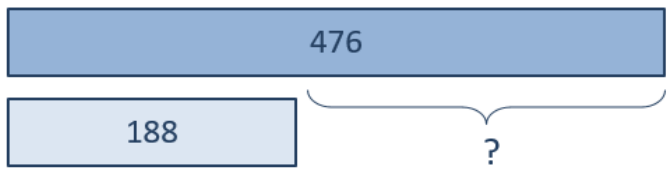
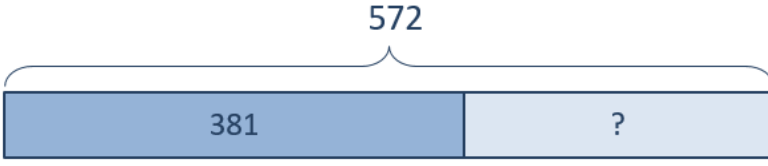
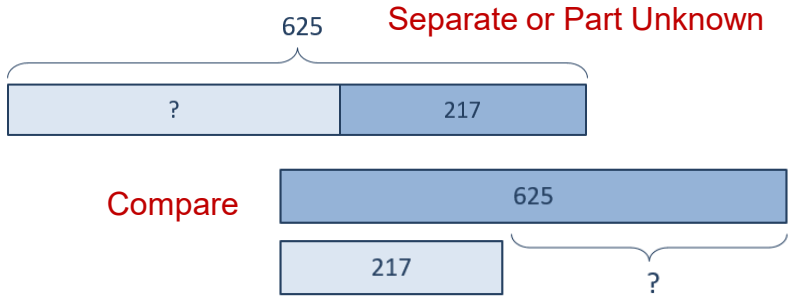


“The Developing Mathematical Thinking Institute (DMTI) is dedicated to enhancing students’ learning of mathematics by supporting educators in the implementation of research-based instructional strategies through high-quality professional development, curricular resources and assessments.”

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KEY

Equation	Story Problem	Model of the Story	How I solved the problem...
$385 + 192 = ?$	There were 385 students in the gym and 192 on the playground. How many children are there in all?		Methods and strategies may vary. $385 + 100 = 485$ $485 + 90 = 575$ $575 + 2 = 577$ $385 + 192 = 577$
$188 + ? = 476$ $476 - 188 = ?$ $476 - ? = 188$	To get to school, 476 students rode the bus and 188 students walked. How many more students rode the bus than walked to school?		Methods and strategies may vary. $? = 288$
$381 + ? = 572$ $572 - 381 = ?$ $572 - ? = 381$	<i>Answers will vary but must include a given total, a known part, and an unknown part.</i> Example: There were 572 students in the cafeteria. 381 of the students ate school lunch and the rest brought their lunch. How many students brought lunches?		Methods and strategies may vary. $? = 191$
$625 - 217 = ?$	<i>Answers will vary and can include a separating, part unknown, or compare situation.</i> Example: There were 625 students at the school. If 217 of the students left for a field trip, how many students are still at the school?		Methods and strategies may vary. $? = 408$