

DMT INSTITUTE

Developing Mathematical Thinking Institute (DMTI)



Professional
Development



Curricular
Resources



Assessment

Jonathan Brendefur, PhD

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.

K – Problem Solving

DMTI VARIED PRACTICE

Grade K: Problem Solving Mysteries

Materials Needed

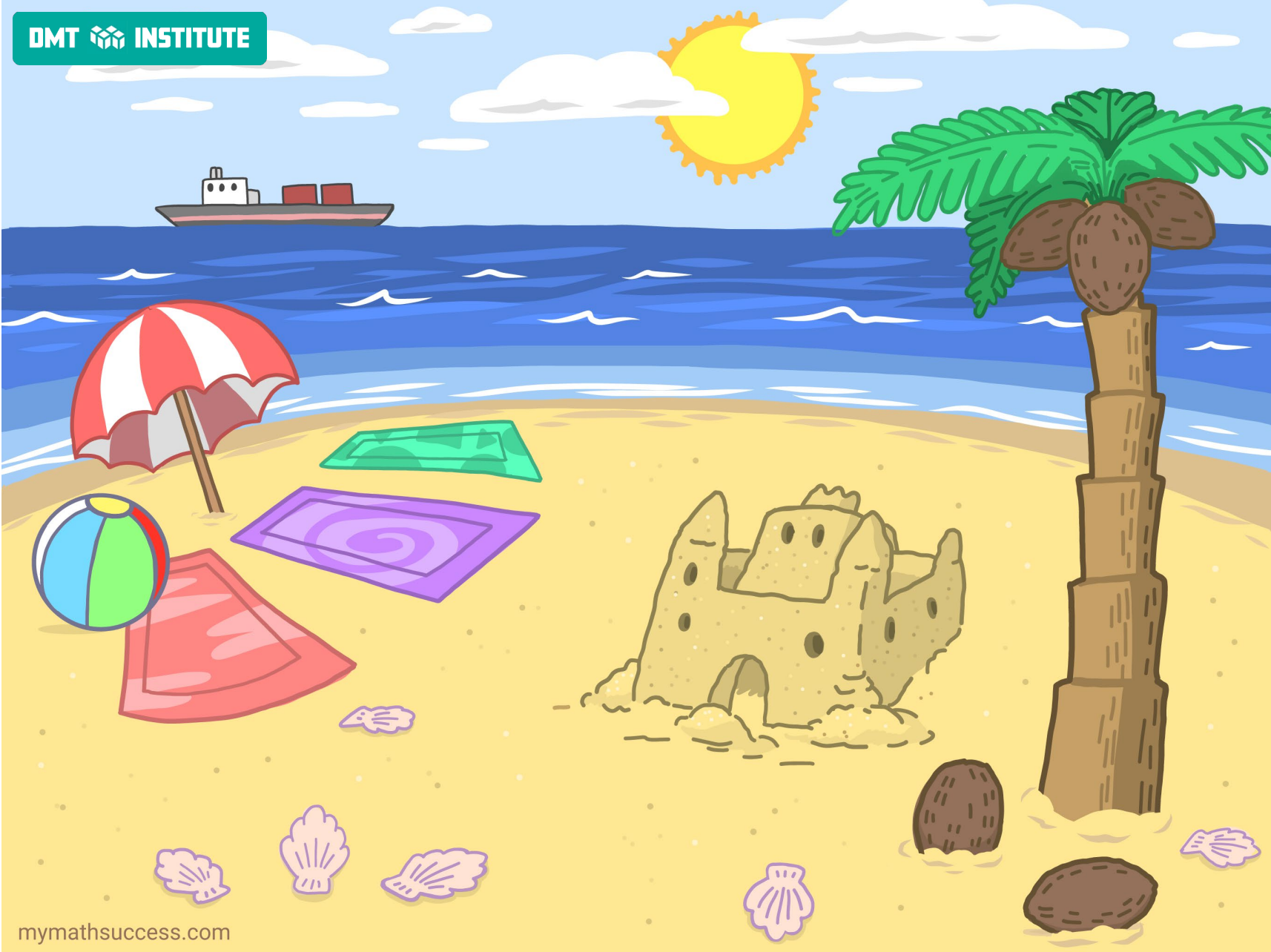
Print Beach Scene Template or view on screen

Print Varied Practice Worksheet 1.1-1.2 or complete on blank paper

Instructions

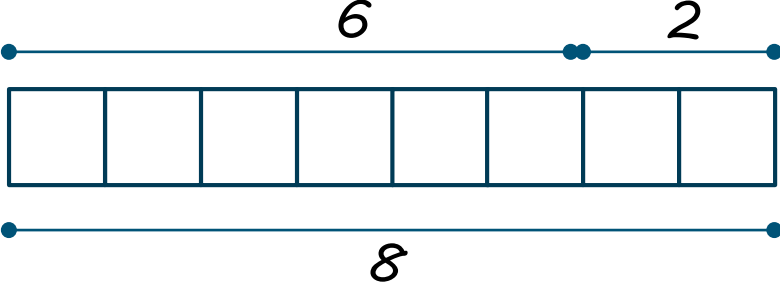
Have the child use the Beach Scene to figure out the mystery problems and complete the missing boxes on Varied Practice Worksheet 1.1-1.2.

Template: Beach Scene



EXAMPLE

Mystery Problem: I grow in sections on the trunk of the tree. 6 of me are growing above ground and 2 are underneath the ground. What might be my story?

Story	Model	Equation
There are 6 sections on the trunk of the tree growing above the ground 2 sections growing underneath the ground. There are 8 sections of the tree trunk.	 <p>The diagram shows a horizontal number line with 8 equal segments. The first 6 segments are above a horizontal line representing the ground, and the last 2 segments are below it. A bracket above the first 6 segments is labeled '6'. A bracket above the last 2 segments is labeled '2'. A bracket below the entire 8 segments is labeled '8'.</p>	$6 + 2 = 8$

Notes for facilitator:

1. Answers may vary depending on what the child finds in the scene. The important part is the story, model and equation all match.

2. Our interpretation of some of the items: openings on the sandcastle are windows and doors, waves counted are the ones in the water (not the ones crashing onto the beach), one big cloud behind the DMT logo, etc.

Grade K: Problem Solving Mysteries

1. We grow in the tree and contain milk. Some of us have fallen to the ground. What might be our story?
2. We are openings in the sandcastle. One of us is a door. What might be our story?
3. People enjoy collecting us at the beach. Four of us are in a bucket out of sight and the rest of us are pink lying on the sand. What might be our story?
4. You can take me anywhere to provide shade. I have two colors of stripes. What might be my story?
5. We come in many colors for each person to sit on at the beach. If there are 6 people in the group, how many more of us are needed? What might be our story?
6. We float in the sky. Three of us are bigger and the rest of us are smaller. What might be our story?

Story	Model	Equation
1.		
2.		
3.		

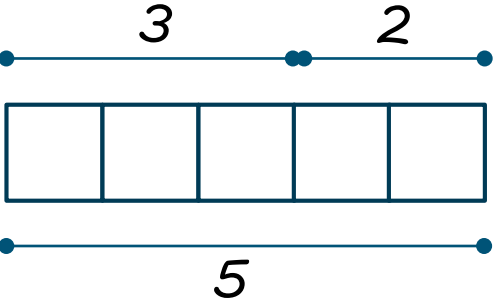
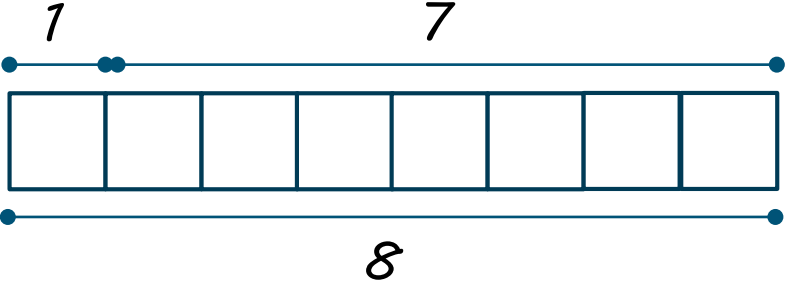
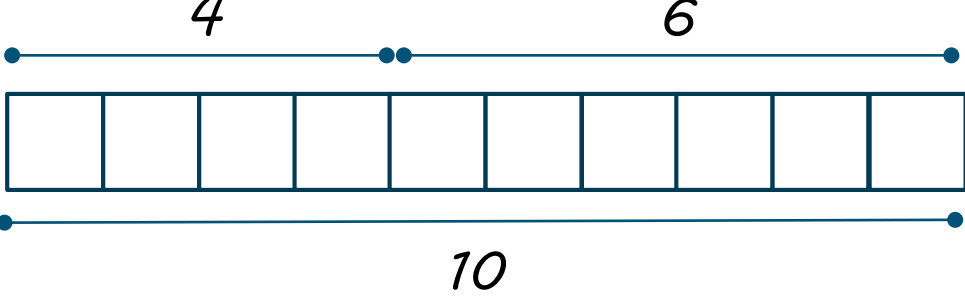
Story	Model	Equation
4.		
5.		
6.		

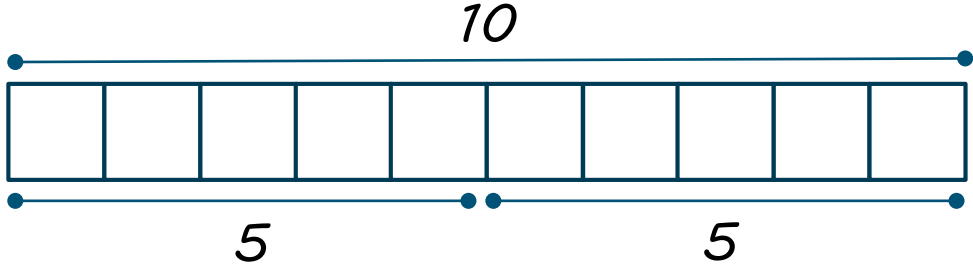
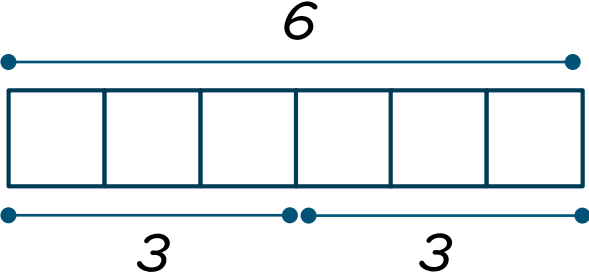
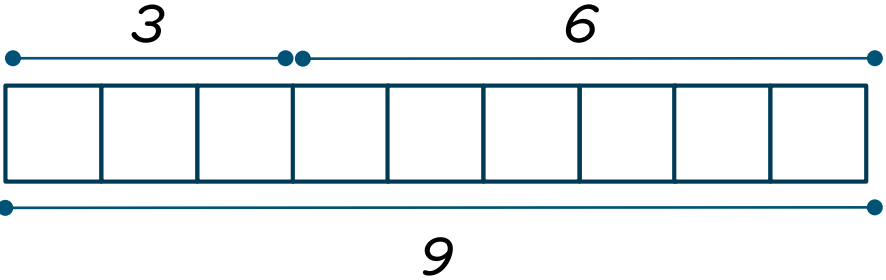


“The Developing Mathematical Thinking Institute (DMTI) is dedicated to enhancing students’ learning of mathematics by supporting educators in the implementation of research-based instructional strategies through high-quality professional development, curricular resources and assessments.”

For more information contact
Dr. Brendefur at jbrendefur@dmtinstitute.com



Story	Model	Equation
<p>1. There are 3 coconuts growing in the tree. 2 coconuts have fallen to the ground. There are 5 coconuts all together.</p>		$3 + 2 = 5$
<p>2. There are 8 openings in the sandcastle. There is 1 door and 7 windows.</p>		$8 = 1 + 7$
<p>3. People are collecting seashells at the beach. There are 4 seashells in a bucket and 6 pink seashells on the sand. There are 10 seashells in all.</p>		$4 + 6 = 10$

Story	Model	Equation
<p>4. There 10 stripes on the umbrella. There are 5 red stripes and 5 white stripes.</p>		$10 = 5 + 5$
<p>5. There are 6 people in our group at the beach. There are 3 beach towels on the sand. 3 more beach towels will be put on the sand.</p>		$6 = 3 + 3$
<p>6. There are 3 bigger clouds in the sky. There are 6 smaller clouds in the sky. There are 9 clouds all together in the sky.</p>		$3 + 6 = 9$