

# DMT INSTITUTE

Developing Mathematical Thinking Institute (DMTI)



Professional  
Development



Curricular  
Resources



Assessment

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# DMTI Varied Practice Worksheets

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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.

# 1 – Problem Solving

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DMTI VARIED PRACTICE

# Grade 1: Problem Solving Mysteries

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## Materials Needed

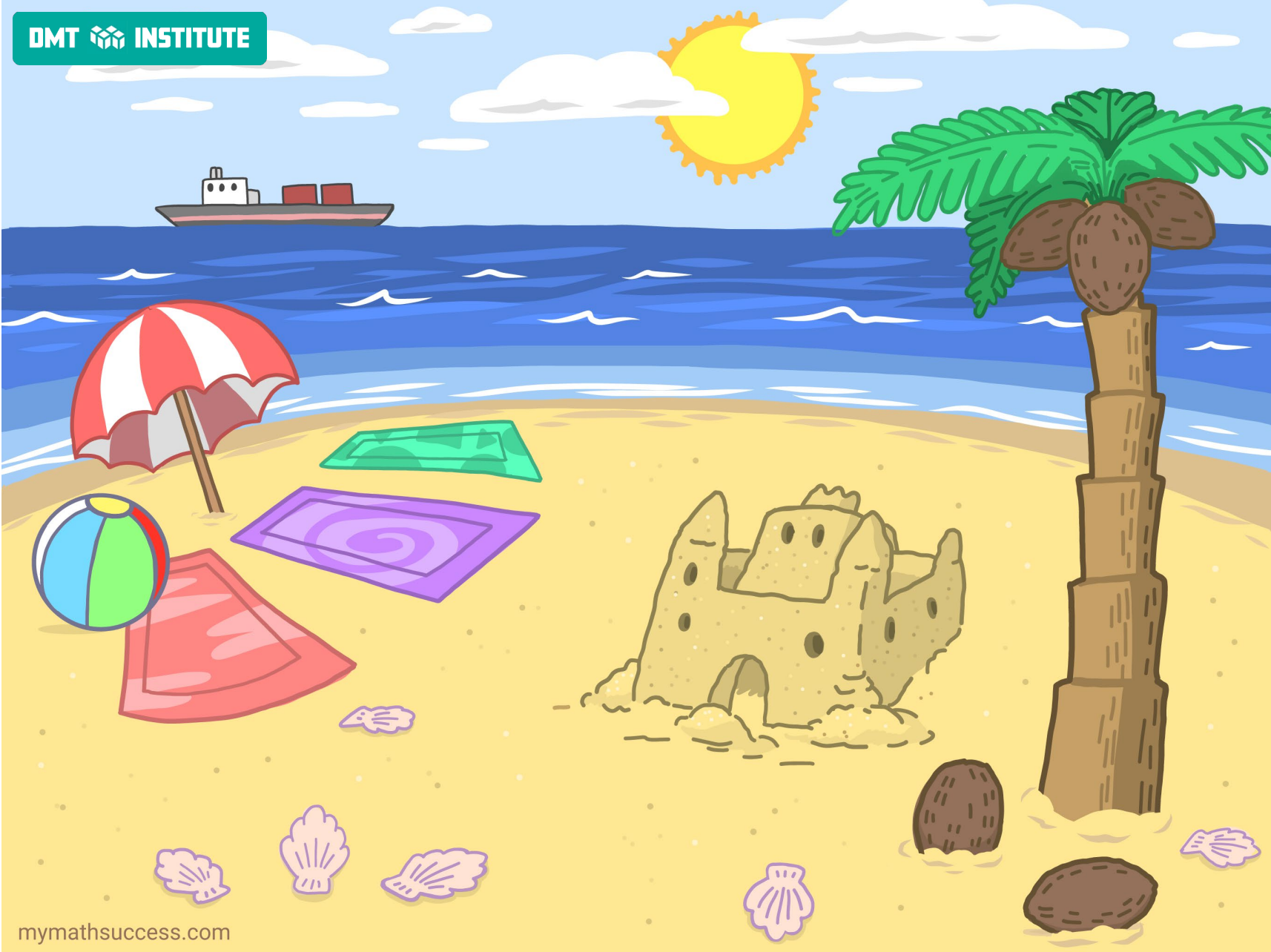
Print Beach Scene Template or view on screen

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

## Instructions

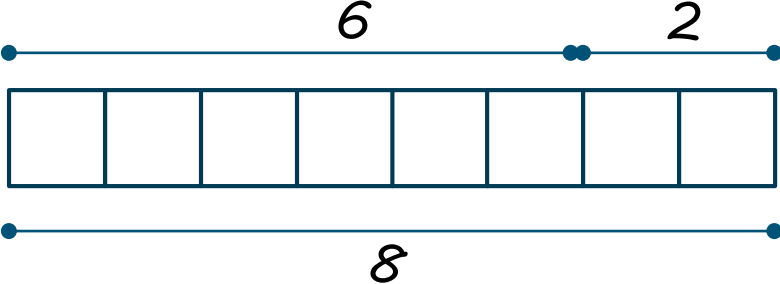
Have the child use the Beach Scene to figure out the mystery problems and complete the missing boxes on Varied Practice Worksheet 1.1-1.2.

# 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?

Context/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.		$6 + 2 = 8$

*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 1: Problem Solving Mysteries

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1. There are 6 of me on the sphere, but you can only see 4 of me. What might be my story?
2. I am seen on the top of the water. There is another set of me rolling in. What might be my story?
3. I provide shade and have stripes. What if there are 3 of me at the beach? What might be my story?
4. People enjoy collecting us at the beach. What if you made two equal groups with us? What might be our story?
5. We belong on the cargo ship. There are 2 of us on deck and 10 below deck. What might be our story?
6. People make me out of sand. I have 15 openings (all sides). I have 2 doors. What might be my 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  
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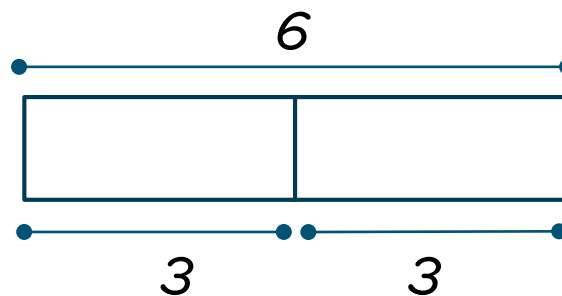
Story	Model	Equation
<p>1. There are 6 stripes on the ball. You can see 4 stripes and 2 stripes are hidden.</p>		$6=4+2$
<p>2. We can see 9 waves. Another set of 9 waves are rolling in. There are a total of 18 waves.</p>		$9+9=18$
<p>3. There are 3 umbrellas at the beach. Each umbrella has 10 stripes. There are 30 stripes all together.</p>		$10+10+10=30$

Story

Model

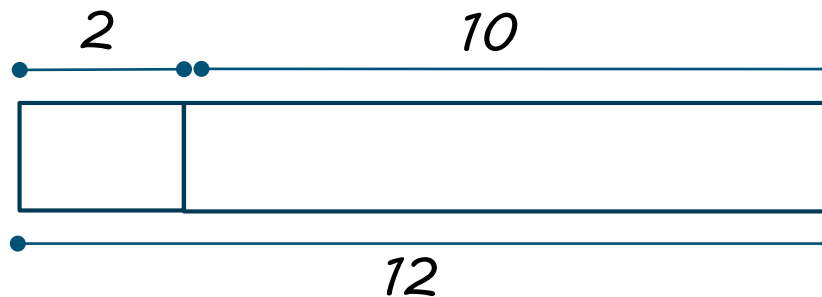
Equation

4. 6 seashells are gathered from the beach. If they are put into 2 equal groups, there are 3 seashells in each group.



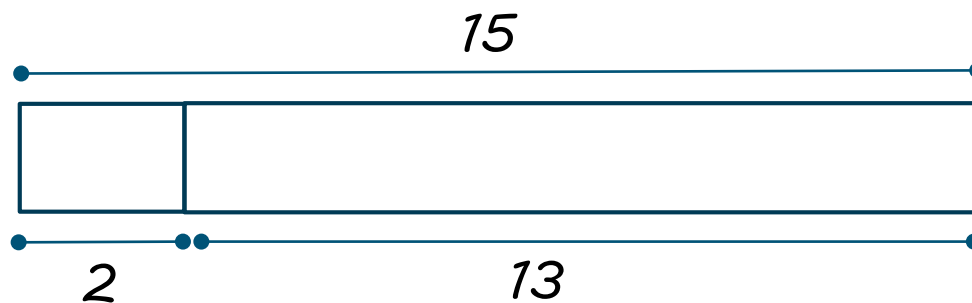
$$6 = 3 + 3$$

5. There are 2 cargo containers on the top deck and 10 containers below deck. There are 12 cargo containers on the ship.



$$2 + 10 = 12$$

6. There are 15 openings in the sandcastle. 2 of the openings are doors and 13 openings are windows.



$$15 = 2 + 13$$