

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.

1 – Problem Solving

DMTI VARIED PRACTICE

Grade 1: Problem Solving Mysteries

Materials Needed

Print Underwater Scene Template or view on screen

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

Part A Instructions

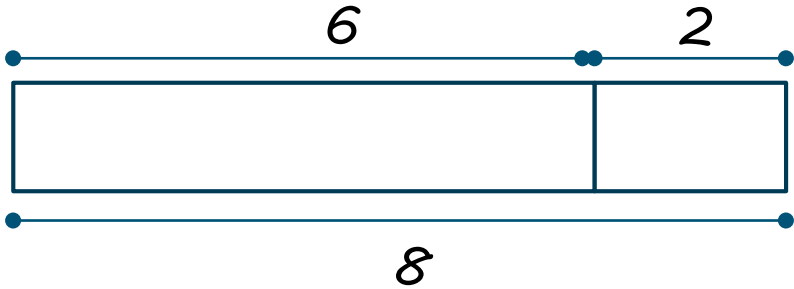
Have the child use the Underwater Scene to figure out the mystery problems and complete the missing boxes on Varied Practice Worksheet 1.1-1.2.

Template: Underwater Scene



EXAMPLE

Mystery Problem: There are 8 of us growing on the ocean floor. 6 of us are green. What might be our story?

Story	Model	Equation
There are 8 plants growing on the ocean floor. 6 of them are green and 2 are not green.	 <p>The diagram shows a horizontal number line with tick marks at 0, 6, and 8. A bracket above the line from 0 to 6 is labeled '6'. A bracket above the line from 6 to 8 is labeled '2'. A larger bracket below the line from 0 to 8 is labeled '8'. A vertical line is drawn at the number 6, extending from the top to the bottom of the number line.</p>	$8 = 6 + 2$

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: 2 separate plants behind the treasure chest for a total of 8, crabs have 8 walking legs and 2 claws, the 7 fish are the different colored fish (not the small fish in the schools), etc.

Grade 1: Problem Solving Mysteries

1. I have 8 tentacles. I am joined by another one. What might be my story?
2. I go “pinch, pinch, pinch!” If you count me, there is a total of 6 of me. What might be my story?
3. I have 4 legs. How many of me would there be if there were 12 legs? What might be my story?
4. We are a colorful group of 7. Another group joins us. What might be our story?
5. We are crawling on the ocean floor. There are 10 of us hiding. What might be our story?
6. We are round and hard. We are in groups of 2. You can see 2 groups and there are 4 groups behind the plants. 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
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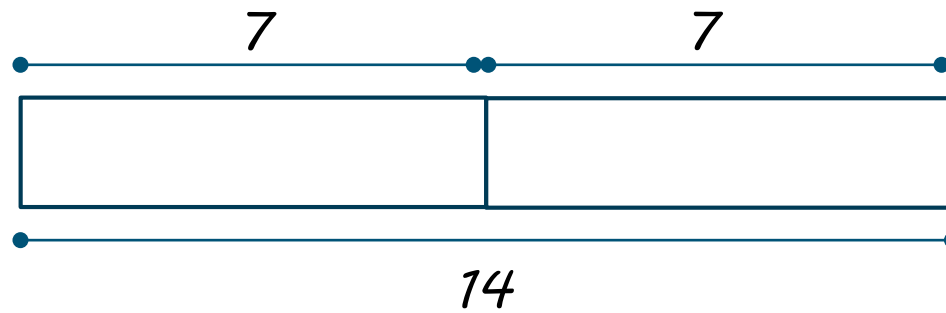
Story	Model	Equation
<p>1. There is 1 octopus with 8 tentacles and another octopus with 8 tentacles. That makes 16 tentacles.</p>		$8 + 8 = 16$
<p>2. Each crab has two claws that pinch. There are 3 crabs. There are 6 claws all together.</p>		$2 + 2 + 2 = 6$
<p>3. A turtle has 4 legs. If there are 12 turtle legs, there would be 3 turtles.</p>		$12 = 4 + 4 + 4$

Story

Model

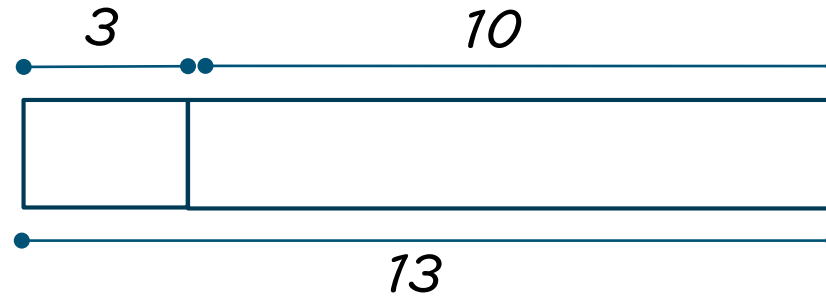
Equation

4. There are 7 colorful fish. Another group of 7 colorful fish joins the first group. Now there are 14 colorful fish all together.



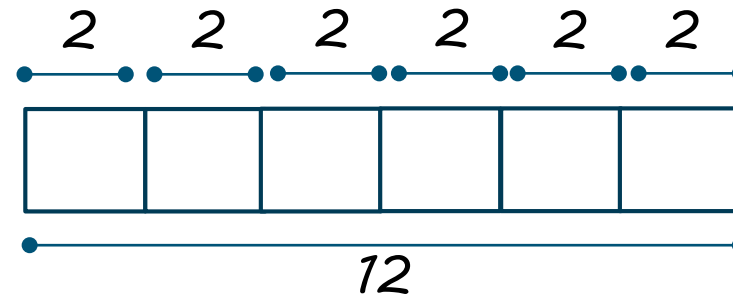
$$7 + 7 = 14$$

5. There are 3 crabs crawling on the ocean floor. 10 crabs are hiding. There are a total of 13 crabs.



$$3 + 10 = 13$$

6. There are rocks in groups of 2. There are 6 groups of rocks. There are 12 rocks all together.



$$2+2+2+2+2+2=12$$