# 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.

# 2 – Problem Solving

## DMTI VARIED PRACTICE

# Grade 2: 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

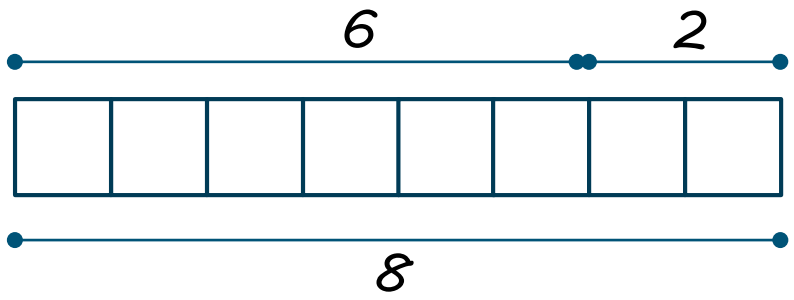
## Part A Instructions

1. 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 2: Problem Solving Mysteries

1. People pick us up off of the sand.  6 of us are on top of the sand.  15 of us are hidden in the sand.  What might be our story?

2. I carry cargo from one place to another.  I can carry 12 large containers.  There are three of us in our fleet.  What might be our story?

3. I provide shade and have stripes.  What if there are 50 stripes?  How many of me would be at the beach?  What might be my story?

4.  People build me out of sand.  I have 15 openings (all sides).  What if there are 4 of me.  What might be my story?

5.  I am a sphere with 6 stripes.  How many of me would there be if there were 18 stripes?  What might be my story?

6.  Each tree grows 5 of me.  What if there are 5 trees at the beach?  What might be my story?

**Varied Practice Worksheet 1.1** **Problem Solving**

| Story | Model | Equation |
|---|---|---|
| 1. | | |
| 2. | | |
| 3. | | |

| Story | Model | Equation |
|---|---|---|
| 4. | | |
| 5. | | |
| 6. | | |

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"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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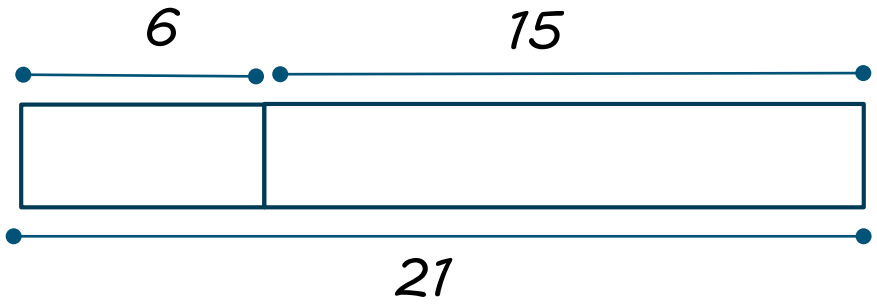
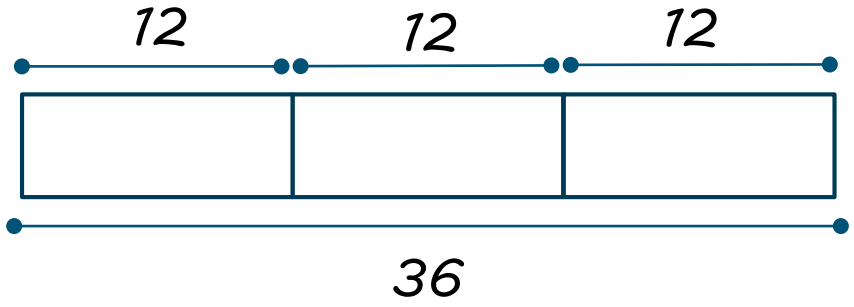
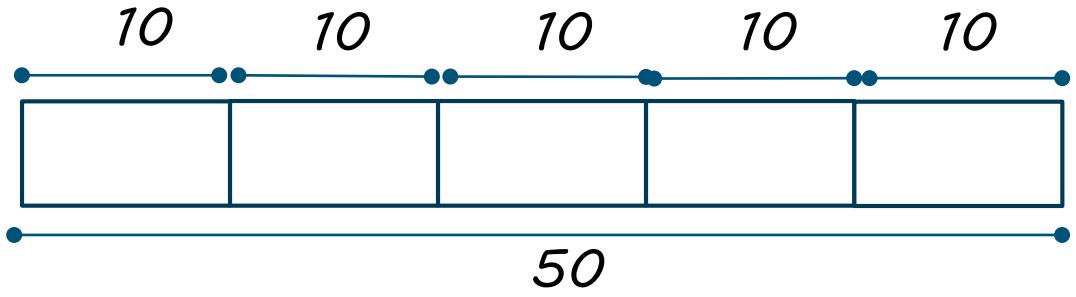
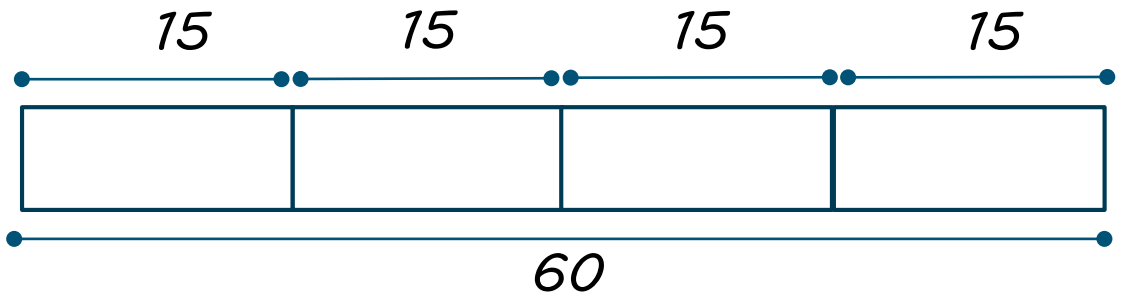
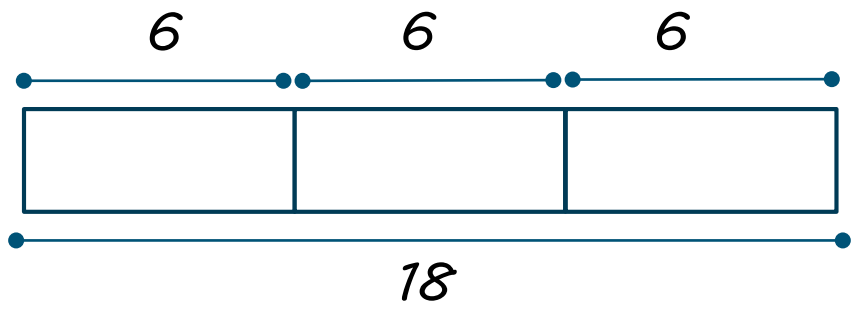
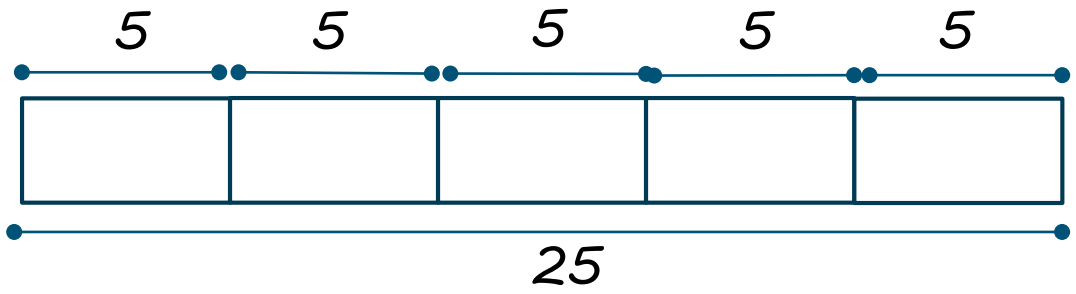
**Varied Practice Worksheet 1.1** **Problem Solving** **KEY**

| Story | Model | Equation |
|---|---|---|
| 1. There are 6 seashells on top of the sand and 15 seashells hidden in the sand. There are 21 seashells all together. |   | 6+15=21 |
| 2. Each cargo ship carries 12 large containers. There are 3 ships in the fleet. The ships can carry a total of 36 large containers. |   | 12+12+12=36 |
| 3. Each umbrella has 10 stripes. 50 stripes can be counted on the umbrellas. There are 5 umbrellas at the beach. |   | 50=10+10+10+10+10 |

**Varied Practice Worksheet 1.2** **Problem Solving** **KEY**

| Story | Model | Equation |
|---|---|---|
| 4. There are 4 sandcastles at the beach. Each sandcastle has 15 openings. There are 60 openings all together in the sandcastles. |  | 15+15+15+15=60 |
| 5. Each beach ball has 6 stripes. 18 stripes are counted. There are 3 balls at the beach. |  | 18=6+6+6 |
| 6. There are 5 coconuts on each tree. There are 5 trees at the beach. There are 25 coconuts all together. |  | 5+5+5+5+5=25 |