

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 Slide' for them to work on. Then, you can return to the PowerPoint or PDF to look at the keys to check their work.

Grade 4 – Measurement 1

COMPOSING AND DECOMPOSING AREA

Grade 4: Measurement – Part 1

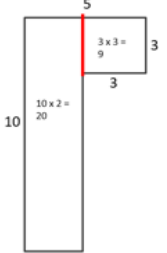
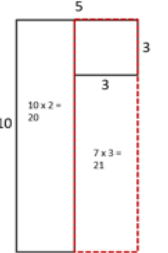
Materials Needed

Printed copies of the Area – Decomposing and Negative Space worksheet.

Instructions

1. **Decompose the first figure** into different rectangular arrays by drawing a line that shows where you “cut” the figure to decompose it.
2. Then, use the strategy of **negative space** to find a larger area model that you could then subtract area from to determine the total area of the original figure.
3. For each of your decomposing methods, label the rectangular array with measurements.
4. Write an equation to show both your **decomposing** and **negative space** strategies.

Example:

Decomposing	Negative Space
<p data-bbox="417 1011 519 1039">Figure 1</p>  <p data-bbox="708 1235 1172 1263">Equation: $A = (10 \times 2) + (3 \times 3) = 20 + 9 = 29$</p>	<p data-bbox="1340 1011 1442 1039">Figure 1</p>  <p data-bbox="1676 1235 2140 1263">Equation: $A = (10 \times 5) - (7 \times 3) = 50 - 21 = 29$</p>

Decomposing

Figure 1



Figure 2

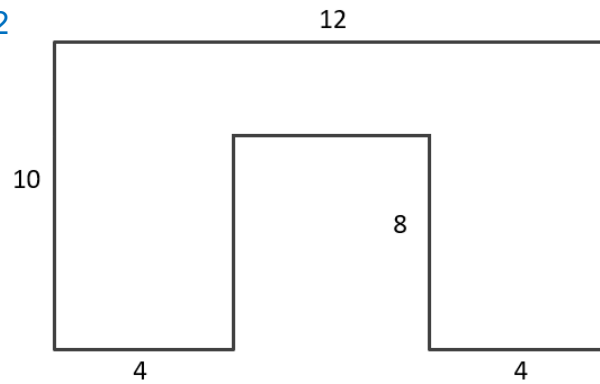


Figure 3



Negative Space

Figure 1



Figure 2

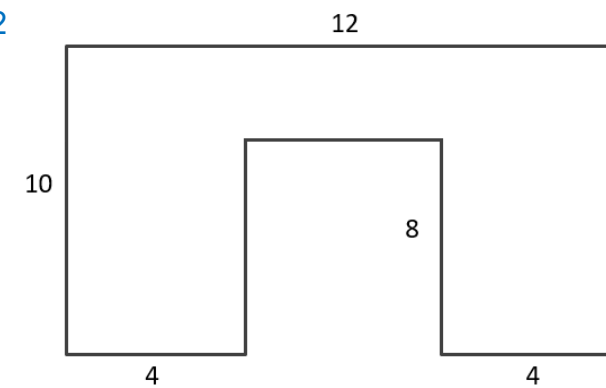


Figure 3





“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 – Just one example is provided for each model. Additional decomposing strategies may also be correct.

Decomposing

Negative Space

