

DMT INSTITUTE

Developing Mathematical Thinking Institute (DMTI)



Professional
Development



Curricular
Resources



Assessment

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2: Relational Thinking - Dice

DMTI VARIED PRACTICE

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.

Grade 2: Relational Thinking - Dice

Materials Needed

Dice: [DMTI Math Pack] or regular dice

Blank paper for drawing models

Grade 2: Relational Thinking - Dice

Instructions



Part 1

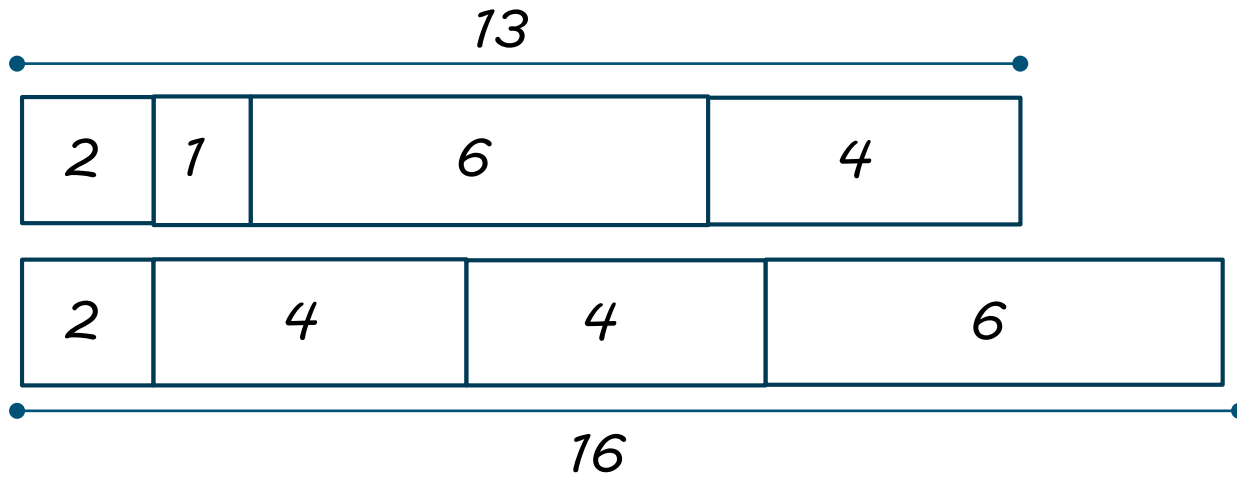
1. Roll dice to generate 8 numbers.
2. The child represents 4 of the numbers with a bar model and writes an equation.
3. Then create a bar model for the other 4 numbers below the first one and write an equation.
4. Next, the child describes the relationship of the combinations as equal, greater than or less than.

5. Write the symbolic number sentence: $\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} \square \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad}$

Example – Part 1



I rolled a two, a one, a six, a four, a two, a four, a four and a two.



$$2 + 1 + 6 + 4 = 13$$

$$2 + 4 + 4 + 6 = 16$$

$2 + 1 + 6 + 4$ is less than $2 + 4 + 4 + 6$

$$\underline{2} + \underline{1} + \underline{6} + \underline{4} \quad \boxed{<} \quad \underline{2} + \underline{4} + \underline{4} + \underline{6}$$

Note: Make sure to start each bar model at the same place to visually see the relationship of the models.

Grade 2: Relational Thinking - Dice

Instructions

Part 2



1. Roll dice to generate 8 numbers.
2. The child represents 4 of the numbers with a bar model.
3. Then create a bar model for the other 4 numbers below the first one.
4. Describe the relationship of the bar models. Are they equal or not equal? If the relationship is not equal, what could you do to make them equal?
6. Draw the bar models showing how to make them the same (see example).

Example – Part 2



I rolled a two, a one, a six, a four, a two, a four, a four and a six.

13



13 does not equal 16



16

To make them the same, add three to the thirteen, so $16 = 16$.

$$13+3=16$$



16

To make them the same, take three away from sixteen, so $13 = 13$.

13



$16-3=13$



“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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