



stage 1: number sequence

Big Idea: Quantity

Quantity is the big idea that describes amounts, or sizes. It is a fundamental idea that refers to quantitative properties; the size of things (magnitude), and the number of things (multitude).

Why is Quantity Important?

Quantity means that numbers represent amounts. If students do not possess an understanding of Quantity, their knowledge of foundational mathematics will be undermined. Understanding Quantity helps students develop number conceptualization. In order for children to understand quantity, they need foundational experiences with counting, identifying numbers, sequencing, and comparing. Counting, and using numerals to quantify collections, form the developmental progression of experiences in Stage 1.

Children who understand number concepts know that numbers are used to describe quantities and relationships' between quantities. For example, the sequence of numbers is determined by each number's magnitude, a concept that not all children understand. Without this underpinning of understanding, a child may perform rote responses, which will not stand the test of further, rigorous application. The developmental progression of experiences in Stage 1 help students actively grow a strong number knowledge base.

Stage 1 Learning Progression

Concept	Standard	Example	Description
1.1: Sequencing	K.CC.2	1, 2, 3, 4, ?	Children complete short sequences of visual displays of quantities beginning with 1. Subsequently, the sequence shows gaps which the students need to fill in. The sequencing tasks ask students to show that they have quantity and number names in order of magnitude and to associate quantities with numerals.
1.2: Identifying Number	K.CC.3	Find the number '3'	Students see the visual tool with a numeral beneath it. Students match the displayed quantity with its corresponding numeral. Then they see a visual tool with a quantity, and choose the numeral that matches the displayed amount.
1.3: Count Forward	K.CC.2	4, 5, 6, 7, ?	The student sees the initial position in a sequence missing, then the last. He progresses to visual sequential displays which contain 2 missing amounts, which he fills in further showing his understanding of order.
1.4: Count Backward	K.CC.2	9, 8, 7, 6, ?	Count backward in the same progression of tasks as 1.3, again using numbers



Using the Guided Practice Materials

When students struggle with a concept, you will see suggested Guided Practice materials in your HELP data view of your Symphony Math Dashboard. These materials provide extended practice using the Multiples Ways of Knowing from the Symphony Math program:

Worksheet	Purpose	Instructions
Manipulatives	Use a visual model to represent the concept.	Create bars, dot cards, or number lines for each item.
Bridge	Connect symbols to their visual representations.	Create objects, numbers, and symbols to complete each item.
Symbols	Understand the concept at the abstract level.	Create numbers and symbols to complete each item.
Apply	Extend understanding to real-life problem solving.	1) Read the story presented at the top of the page. 2) Create a number model of the full solution. 3) Write the number sentence that matches the model.

Group Learning

The Symphony Math Extra Practice materials are designed to promote a conversation about the Big Ideas in math. One-on-one or small group instruction with the materials is recommended for students who need more time to make connections between the mathematical concepts in the Stage and the application of those concepts in their math curriculum.

Stage Checkpoint

When students complete a Stage, they come to a Checkpoint. Checkpoints provide students an opportunity to draw and create models in their offline journals. When they are done, you can evaluate their work and make sure they are ready to move on in the Symphony Math curriculum. Here is a short checklist to guide your evaluation:

- All Checkpoint steps have been attempted
- Student demonstrates understanding of models
- Solutions are correct, or intervention has led to self-correction
- Student can talk about their work using mathematical language

Students' math understanding is evolving. Their work at Checkpoints gives them a chance to transfer their new skills to another context (an offline journal). It is also an opportunity for reflection. Be sure to allow students to create more pages if they need it. When you are confident they are ready, accept the student checkpoint from your Symphony Dashboard.



Name: _____ Date: _____

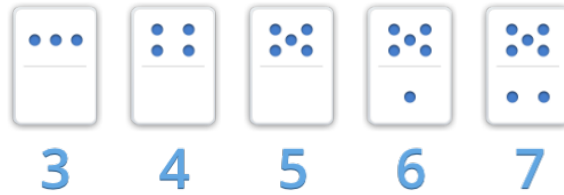


Stage I: Teacher Reference

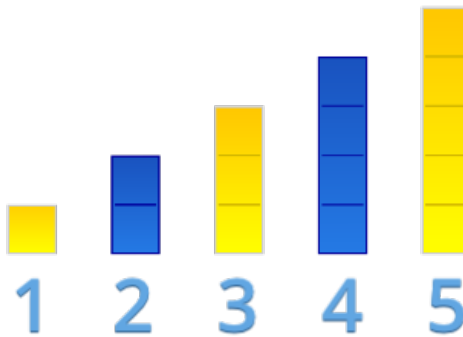
Number Line:



Dot Cards:



Number Bars:



Create Your Own:

My number is ____ .

My number on a number line:

Dot card:

Number bar:



Name: _____ Date: _____

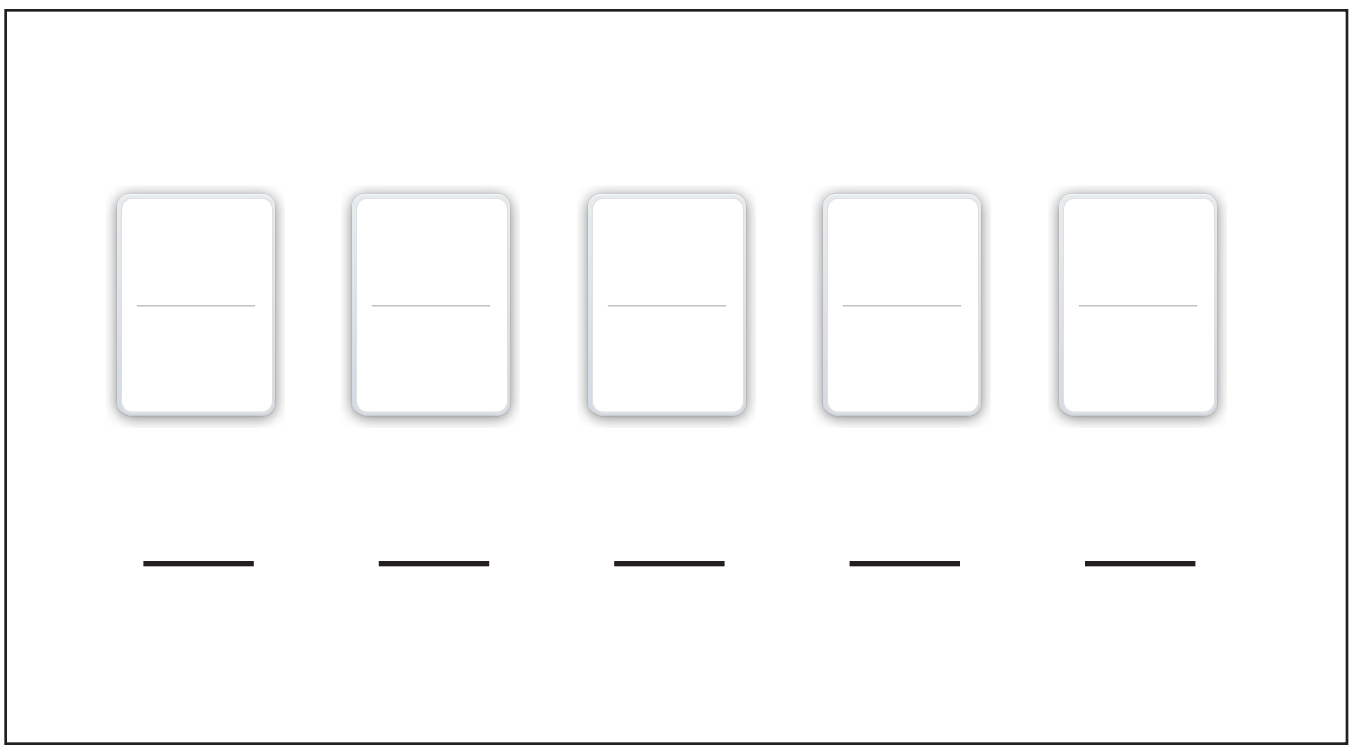


Stage I: The Number Sequence

Number Line:



Dot Cards:



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Name: _____ Date: _____



Number Bars:

_____	_____	_____	_____	_____

MY OWN:

My number is ____.

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