



PROGRESSIONS DOCUMENTS

- What are they?
- Who uses them?
- When do I use them?
- Where can I find them?
- Why do I need them?

Progressions Documents

- Overview
- "K-7 foundations for functions" - Pages 3-4

Visual Patterns

► Determine the number of squares in the n^{th} step of this pattern using:

- Pictures
- Numbers
- Symbols
- Words

Step 1 Step 2 Step 3

Source: <http://visualpatterns.org/2012/12/26/pattern-4.aspx>

Visual Patterns

► Determine the number of squares in the n^{th} step of this pattern using:

- Pictures
- Numbers
- Symbols
- Words

Step 1 Step 2 Step 3 Step 4

Source: <http://visualpatterns.org/2012/12/27/patterns-18.aspx>

Visual Patterns

► Determine the number of squares in the n^{th} step of this pattern using:

- Pictures
- Numbers
- Symbols
- Words

Step 1 Step 2 Step 3 Step 4

Source: <http://visualpatterns.org/2012/12/27/pattern-16.aspx>

Progressions Documents

- Overview
- Building functions
 - "Define, evaluate, and compare functions" - Page 5
 - "Build a function that models a..." - Pages 11-12

Interpreting Functions

- Function to context
 - Preview / Warm up
 - Write a Story
- Context to function
 - Graphing Stories





Progressions Documents

- Overview
- Building functions
- Interpreting functions
 - "Use functions to model relationships..." - Page 6
 - "Interpret functions that arise in..." - Page 9

Partnership for Assessment of Readiness for College and Careers (PARCC) Task Types

- **Type I: Concepts, Skills, and Procedures**
 - Balance of conceptual understanding, fluency, and application.
 - May involve any or all mathematical practice standards.
 - Will be machine scored.
- **Type II: Expressing Mathematical Reasoning**
 - Includes:
 - Written arguments/justification
 - Critique of reasoning
 - Precision in mathematical statements
 - May be machine scored and/or hand scored.
- **Type III: Modeling / Applications**
 - Modeling/application in a real-world context or scenario.
 - May be machine scored and/or hand scored.

Review PARCC Examples

1. Go to <http://www.ccsstoolbox.com>
2. Click on "Resources for Implementation" on the top menu bar.
3. Click on "PARCC Prototyping Project" on the lower left menu bar.
4. Click on your grade level.
5. Browse the available tasks.

Domain and Conceptual Categories

	K	1	2	3	4	5	6	7	8	HS
Counting & Cardinality										
Number and Operations in Base Ten										
Number and Operations - Fractions										
Operations and Algebraic Thinking										
Measurement and Data										
Geometry										
Statistics and Probability										
Ratios and Proportional Relationships										
The Number System										
Expressions and Equations										
Algebra										
Functions										
Geometry										
Statistics & Probability										

Source: <http://www.ohio.gov/geteducation/curriculum/resources/implementing-indiana-common-core-standards>

HOME

- ILLUSTRATIONS
- K-4 STANDARDS
- HIGH SCHOOL STANDARDS
- PRACTICE STANDARDS
- FRACTIONS PROGRESSIONS
- FREQUENTLY ASKED QUESTIONS
- COMMUNITY
- ABOUT US
- TERMS OF USE

K-8 Standards

High School Standards

Practice Standards

Build on mathematics practice standards to create, assess, and refine conceptual, task, and performance standards. Illustrative Mathematics is facilitating the design and development of standards that align with the Common Core State Standards, and is seeking other tools that support implementation of the standards.

	K	1	2	3	4	5	6	7	8
Counting and Cardinality									
Measurement and Data									
Number and Operations in Base Ten									
Number and Operations - Fractions									
Operations and Algebraic Thinking									
Measurement and Data									
Geometry									
Statistics and Probability									
Ratios and Proportional Relationships									
The Number System									
Expressions and Equations									
Algebra									
Functions									

Show only illustrated standards [?]

Reveal standards automatically [?]

Number and Operations—Fractions

Grade 3 3.NF

A. Develop understanding of fractions as numbers.

1. Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$. (see illustrations)
2. Understand a fraction as a number on the number line; represent fractions on a number line diagram. (see illustrations)
 - Represent a fraction $1/b$ on a number line diagram by marking the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $1/b$ and that the endpoint of the part starting at 0 locates the number $1/b$ on the number line.
 - Represent a fraction a/b on a number line diagram by marking off a lengths $1/b$ from 0. Recognize that the resulting interval has size a/b and that its

Content Standards Review

- Read your course standards
 - What has changed?
 - What are they talking about?
- Reference standards on illustrativemathematics.org
- Review standards for one or more grade levels above and below

Planning Time

- What lessons could you incorporate multiple representations into?
 - Operations with rational numbers
 - Systems of equations
- Which concepts have you found students to be the most locking in?
 - Read the progression documents for that content area.
- CCSS Resources
 - How could I incorporate them?
- Figure out details such as:
 - When would I do this lesson?
 - What resources would I need?
 - What other teachers could I collaborate with?

NEXT STEPS

- Start with realistic goals:
 - At least one per semester
 - Perhaps one per unit
- Collaboration is key
- Standards for Mathematical Practice
 - Talking and writing about mathematics

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