





# NYS Next Generation Mathematics Learning

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**September 2017:** Adoption of Next Generation Mathematics Learning Standards

**Awareness Building 2017-2018 School Year:** Two-day assessments measuring the NYS P-12 CCLSM standards; professional development on Next Generation Standards;

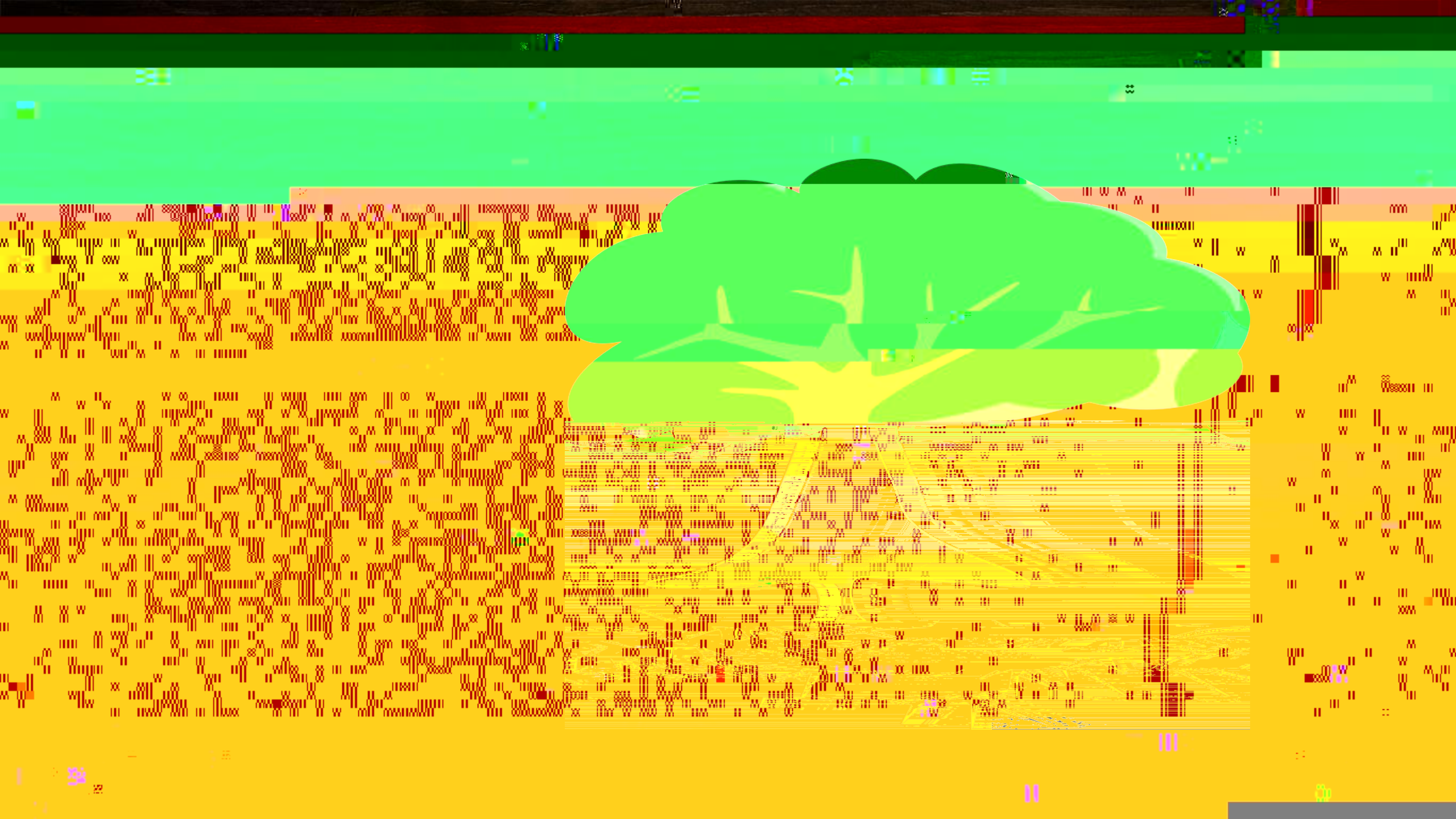
**Capacity Building 2018-2019 School Year:** Two-day assessments measuring the NYS P-12 CCLSM standards; professional development continuing on Next Generation Standards;

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**Spring 2021:** New grade 3-8 tests measuring the Next Generation Mathematics Learning Standards.

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e.g.,

- If  $6 \times 4 = 24$  is known, then  $4 \times 6 = 24$  is also known. (Commutative property of multiplication.)

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se properties.

Note: Students need not use formal terms for the

es applying the properties of operations.

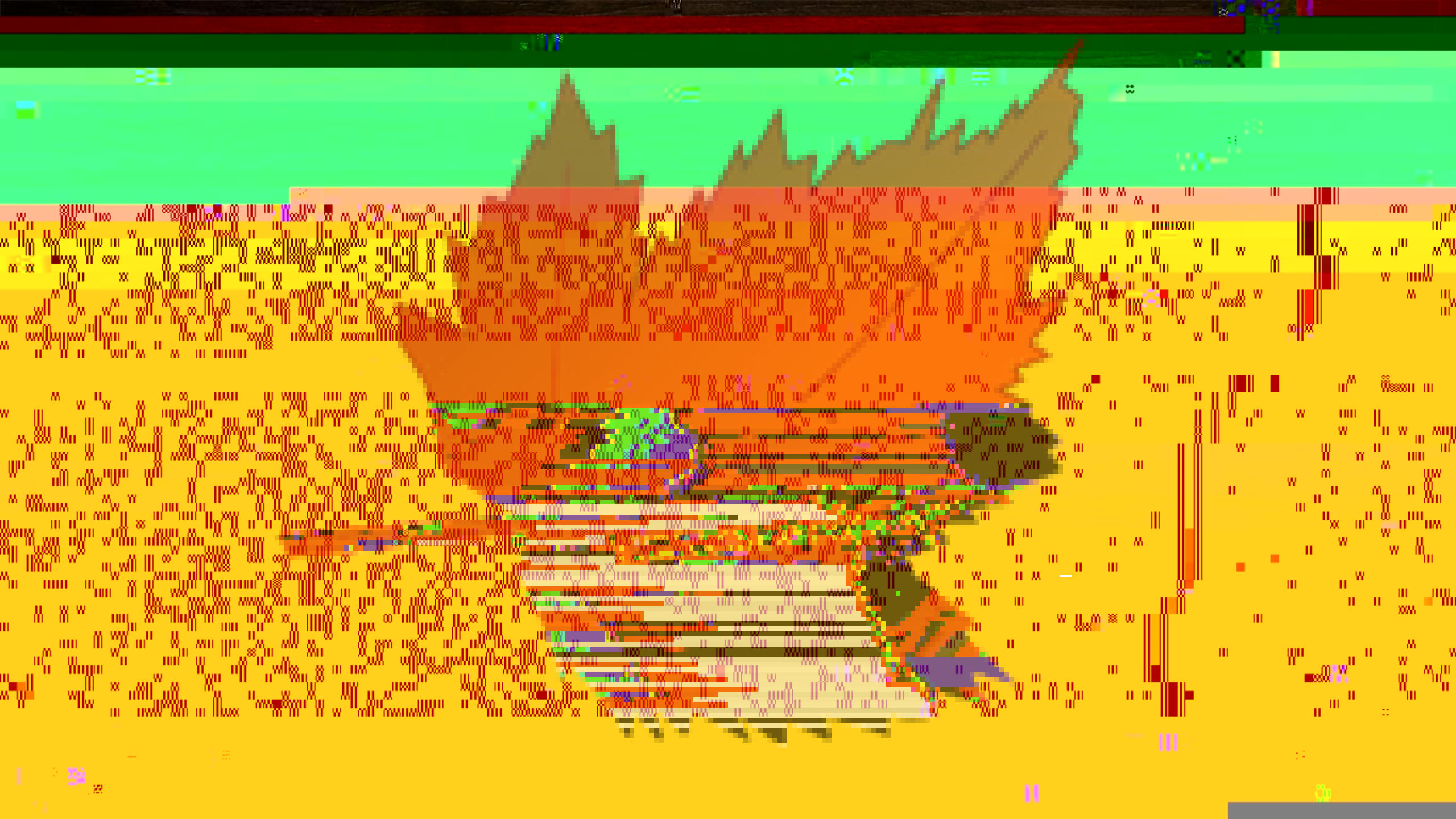
Note: A variety of representations can be used with

representations of operations. For example,  $4 \times 3$  can be represented











# Examples of Major Changes Grades 3-5

*This does not include all changes*

Expectations of Expanded Form at each grade level are now specified:

## Grade 3

Since angle measure is a 4<sup>th</sup> grade concept, Grade 3 now focuses on classifying polygons on number of sides and vertices (not angles)

## Grade 4

Focus of the standard is multiplying a whole number by a fraction ( $4 \times \frac{1}{3}$ ), whereas multiplying a fraction by a whole number ( $\frac{1}{3} \times 4$ ) is an expectation of grade 5 (NY-5.NF.4a)

Delayed the introduction of the Order of Operations until grade 5 (NY-5.OA.1), originally introduced in standard 3.OA.8.

# Examples of Major Changes Grades 6-8

*This does not include all changes*

Simple Probability has moved from 7<sup>th</sup>

# Examples of Major Changes Algebra I

*This does not include all changes*

Operations with Radicals were added.

Solving Linear/Quadratic Systems was added.

Expectation for factoring quadratics involves trinomials whose lead coefficient is 1 after a GCF has been factored.

Expectation for completing the square involves quadratics whose lead coefficient is 1 with an even linear term.

Residuals have been moved to the Plus Standards.

Sequences will be limited to explicit forms only and will be written in subscript notation.

# Examples of Major Changes Geometry

*This does not include all changes*

Completing the square to derive the center radius form of a circle will involve quadratics whose lead coefficient is 1 and the linear term is even, following from Algebra I.

Area formula  $A = \frac{1}{2}bh$  has been added.

Radian measure is now an expectation for Algebra II.

Cavalieri's Principle, dissection and informal limits are not an expectation but still can be used to develop area and volume formulas.

# Examples of Major Changes Algebra I

*This does not include all changes*

Proving Pythagorean Identities has been moved to the Plus Standards.

Solving 3x3 systems of equations has been moved to the Plus Standards.

Deriving the equation of a parabola given the focus and directrix has been moved to the Plus Standards.

Probability and Statistics standards have been consolidated.

Sequences will only be written in subscript notation.



Where are all of the changes highlighted?

Grade-



# The Snapshot

## New York State Next Generation Mathematics Learning Standards

This document is intended to help educators identify the key changes that have occurred to the content standards for this grade level/course and to assist with designing curriculum.

### Standards New to Grade 1

### Standards Moved from Grade 1

No standards moved.

1.OA.A.20 is no longer a standard. The standard can be represented using objects, drawings, and equations with a

NY 1.OA.A.1 Students are not to use lines and numbers to

represent the same number in different ways. For example, students should not be required to draw a number line to represent the number 5.

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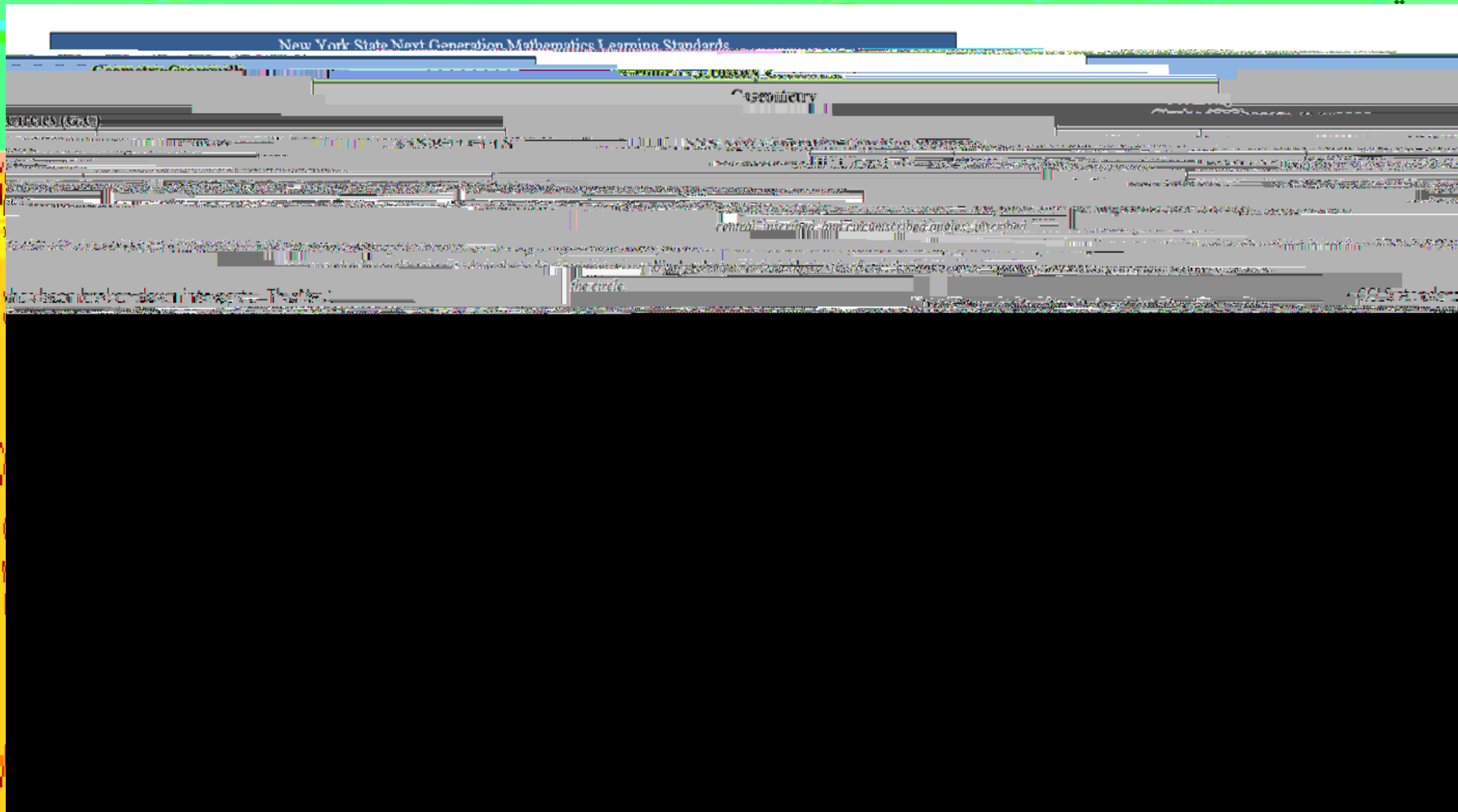
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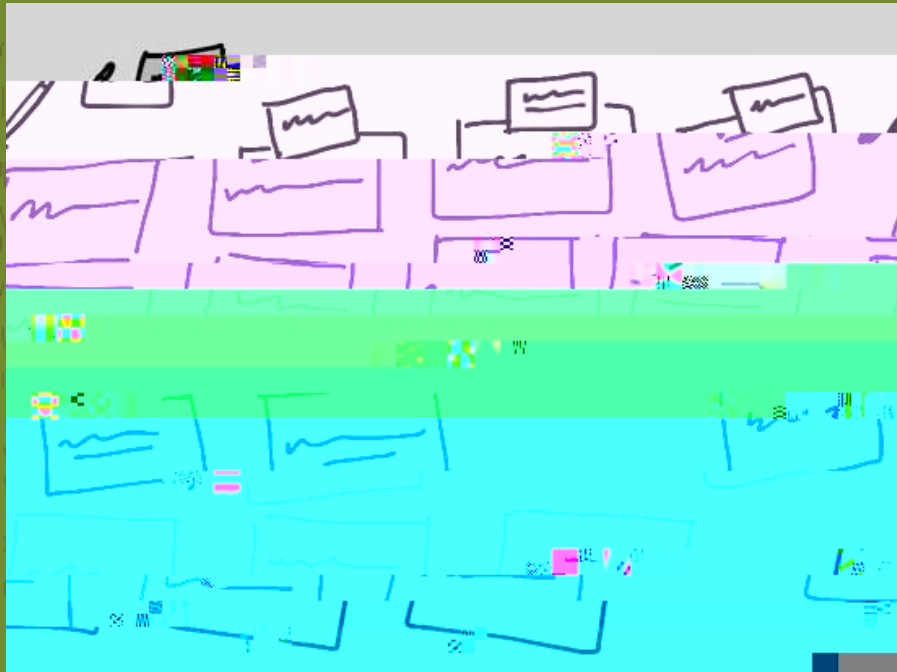
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Two  
column  
side by  
side



Two  
column  
side by  
side

# @Yh8 ] [ ] b hc the Crosswalk Documents



## Card Sort

Sort the cards into the categories based on the TYPES OF CHANGES

Clarification (standard was split up into sub-standards)

New

Removed/moved

191 d`cfYi

Notes

Examples/Illustrations

# Card Sort Share Out PK - 5

## Clarifications/Split up

- | NY-4.NBT.2a, 2b
- | NY-3.MD.8a, 8b
- | NY-2.OA.1a, 1b
- | NY-2.OA.3a, 3b

## Notes

- | NY-K.OA.5
- | NY-1.NBT.4
- | NY-2.MD.8
- | NY-3.NF.1

## 19 | d | cf | Y |

- | NY-PK.CG.3b
- | NY-PK.OA.1
- | NY-K.MD.4

## Examples/Illustrations

- | NY-4.MD.1
- | NY-5.NF.4b
- | NY-5.NF.5a

# Card Sort Share Out MS/HS

## Clarifications/Split up

- ↳ AI-N.O.1
- ↳ AI-A.REI.4b
- ↳ AII-F.LE.2

## Moved/Removed

- ↳ 8.SP.4
- ↳ G.GPE.2
- ↳ 7.SP.5, 6
- ↳ 9|d|cf|Y|
- ↳ AI-F.BF.3a
- ↳ Geo-G.GPE.5
- ↳ AII-N.RN.1
- ↳ AII-F.BF.7

## Notes

- ↳ NY-6.RP.3d
- ↳ NY-7.EE.4a, 4b
- ↳ NY-8.G.3

## Examples/Illustrations

- ↳ NY-6.NS.7d
- ↳ Geo-G.CO.10

## New

- ↳ NY-6.G.5
- ↳ AI-A.REI.7a
- ↳ Geo-G.SRT.9

# Stop and Process Ì Talking Pens

Each member of your team will use their pen or pencil

Ì You may share one thought you have about the question posed below

Ì Once you have shared your thought, place your pen or pencil in the center of the table

Ì You may take your pen or pencil back after you share your second thought. members share their thoughts until each person has shared twice





Where do we begin??????

Snapshots

Crosswalk

The Next Generation  
Math Learning  
Standards

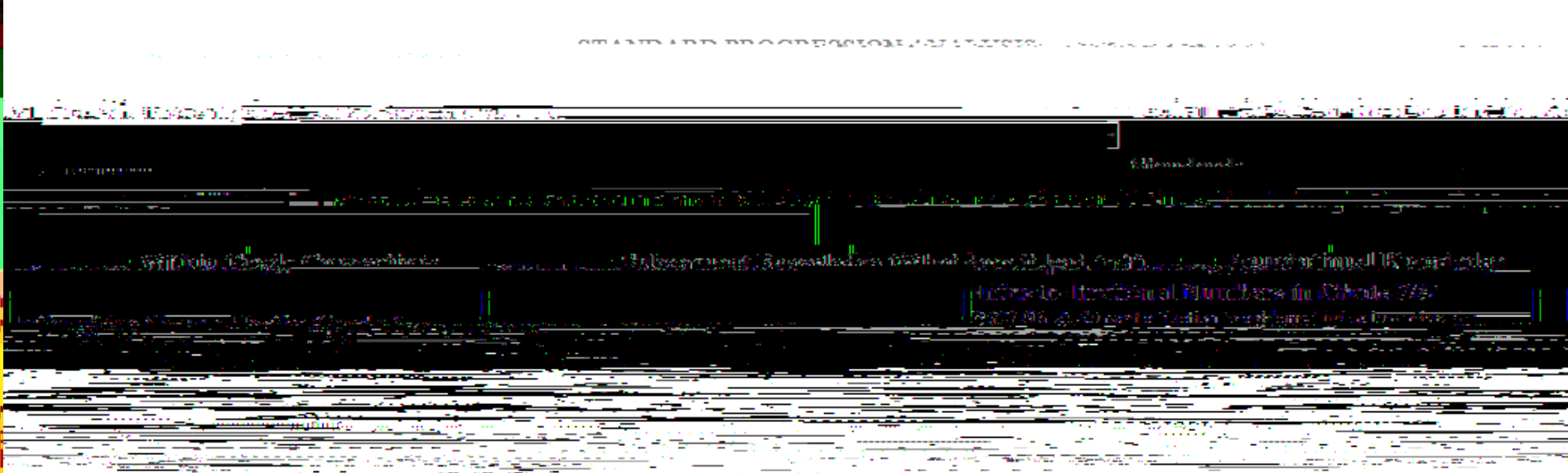
How impactful is the new standard/change with respect to our current curriculum?

What foundational knowledge do students have?

What connections can we make within our grade level? Have we been making these connections already?

How does this standard/skill support student learning of mathematical concepts at future grade levels?

Will there be any learning gaps that will need to be addressed?



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Where can I find the snapshot  
and crosswalk documents?

[HTTP://WWW.WNYS.ED.GOV/](http://www.wnysed.gov/)

