

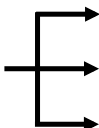
**EDITABLE**

*Common  
Core Aligned*



# MATH ASSESSMENTS

*Operations &  
Algebraic Thinking*

**3 ASSESSMENTS  
PER STANDARD**  **PRE-ASSESSMENT  
MEETS THE STANDARD  
EXCEEDS THE STANDARD**

*BY: Teaching and Tapes*

# 4TH GRADE COMMON CORE MATH ASSESSMENTS

*Operations &  
Algebraic Thinking*

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## **INTRODUCTION TO THIS ASSESSMENT TOOL**

This packet includes materials that match the Common Core standards. Each standard is written at the top of the page. There are three assessments for each standard.

**"Pre-Assessment"** = Meets the Common Core standard at a basic or medium level of rigor. Can also be used as a mid unit formative assessment.

**"Meets the Standard"** = Meets the Common Core standard at a medium or high level of rigor or D.O.K. (Depth of Knowledge)

**"Exceeds the Standard"** – Exceeds the grade level Common Core standard and completes higher level of rigor problems from one full grade level beyond the standard.

**you  
choose:**

# PDF

This product comes with a PDF file and an editable file for every Common Core strand. For most of the assessments you will just print and go with the PDF version included in this pack. It is my **best seller** and has successfully been used in thousands of classrooms by oodles of happy teachers!

**or** **editable**

## How do I edit the assessments?

Simple! If you have PowerPoint 2004 or newer (.ppt or .pptx) just open the editable version of the file and click inside the text boxes and change the text however you like.

## Two reasons this is an awesome feature:

1. **Data tracking and multiple assessments:** You can easily change a question slightly so that you can retest with your students as many times as you need!
2. If you use different terminology than me (i.e. "number sentence" vs. "equation") you can **easily change** it to your liking.

## What you cannot do:

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## Operations and Algebraic Thinking

Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms increase by a constant between odd and even numbers. Explain informally why the pattern continues to alternate in this way.

### CCSS 4.OA.5 Pre-Assessment

Evidence of standard  
mastery on this  
assessment?

If the shapes below follow the repeating pattern, what will the 12<sup>th</sup> shape be?



How do you know?

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If the numbers below follow the repeating pattern, what will the 12<sup>th</sup> number in this pattern be?

5, 8, 11, 15, 20

How do you know?

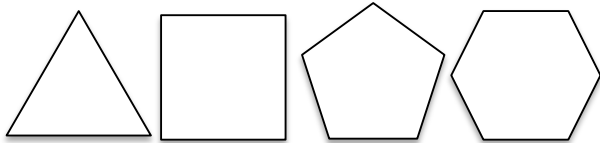
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How many sides will the 8<sup>th</sup> shape have?




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What will be the next two numbers in this pattern?

8, 9, 12, 13, 16, 17, \_\_\_\_, \_\_\_\_

How do you know?

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---

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Name: \_\_\_\_\_

## Operations and Algebraic Thinking

Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.

**CCSS 4.OA.4**  
**Meets the Standard**

Evidence of standard  
mastery on this  
assessment?

The Common Core standard is  
clearly marked on each  
assessment.

The area of a rug in Mr. Steven's house is 24 square yards. List all possible whole-number dimensions the rug can have.

?

Area = 24 square yards

?

Possible dimensions:

Teachers are setting up 35 chairs for a 4th grade spelling bee. How many different ways can they arrange the chairs? List all of the possible number of rows and members in each row.

What is a factor?

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What are all the factors of 12?

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Michaela says that number 93 is a prime number. Is she correct?

Use what you know about factors to explain your answer.

---

---

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---

---

Name:

## Operations and Algebraic Thinking

Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.

**Exceeds the Standard:** 5<sup>th</sup> Grade Common Core Standard - 5.OA.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane.

CCSS 4.OA.5

Exceeds the Standard

Evidence of standard mastery on this assessment?

Sergio and Isaac run each day. Sergio runs 3 miles each day. Isaac runs 2 miles each day. How many miles have each run after five days?

Day	Sergio	Isaac
0	0	0
1	3	2
2	6	4
3	9	6
4	12	8
5	15	10

If they continue following this same pattern everyday, how many miles will Sergio have run after 23 days?

\_\_\_\_\_

If they continue following this pattern everyday, after how many days of running will Isaac have run 10 miles more than Sergio?

\_\_\_\_\_

On a piece of graph paper, plot the points on a coordinate plane and make a line graph.

To be "exceeding", the student must meet the related 5<sup>th</sup> grade standard when applicable. If there is not a matching 5<sup>th</sup> grade standard, they must complete a challenge problem. There is an exceeding assessment for every 4<sup>th</sup> grade standard!

Name: \_\_\_\_\_

## 4.OA.5

Complete Understanding	<p>Student can generate or continue a number or shape pattern that follows a given rule. It is expected that the student can identify apparent features of the pattern that were not explicit in the rule itself.</p> <p>After a student has identified a rule for a pattern, they can continue the pattern using the given rule.</p>
Developing Understanding	<p>Students can continue a pattern if they are explicitly given the rule but they may struggle to identify the rule independently.</p> <p>Or the student may be able to identify a rule, but struggle to continue a pattern and may get lost in the numbers.</p>
Does Not Meet	<p>Student is not able to generate a number or shape pattern that follows a given rule and they are not able to identify the apparent features of the pattern that were not explicit in the rule itself.</p>

An answer key is included, but the scoring rubric is also helpful for keeping yourself consistent with your definition of "meeting" the standard.





# Answer keys

## Operations and Algebraic Thinking

Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.

CCSS 4.OA.4

Meets the Standard

Evidence of standard  
mastery on this  
assessment?

The area of a rug in Mr. Steven's house is 24 square yards. List all possible whole-number dimensions the rug can have.

?

Area = 24 square yards

?

Possible dimensions:

1 × 24

2 × 12

3 × 8

4 × 6

Detailed answer keys for every assessment!

The teachers are setting up 35 chairs for the 4<sup>th</sup> grade spelling bee. How many different ways can they arrange the seating? List all of the possibilities for the number of rows and the number of students in each row.

For example, \_\_\_ rows of \_\_\_ students

What is a factor?

**A factor is a number that you multiply by another to get the original number**

What are all the factors of 12?

1, 2, 3, 4, 6, 12

Michaela says that number 93 is a prime number. Is she correct?

**She is not correct.**

Use what you know about factors to explain your answer.

**93 is a composite number because it has the factors of 1, 3, 31, and 93. A prime number only has factors of 1 and itself.**

Name: \_\_\_\_\_

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