Foundational Lessons for Accelerating Math Education (FLAME)
Unit Assessments

Purpose

Foundational Lessons for Accelerating Math Education (FLAME) provides teachers with tools to build, track, and support the development of grade-level math fluency for students in grades K-5. Materials are organized into three units per grade level. Each unit provides teachers with various activities designed to support the development of the expected fluency skills at each grade level. Units also include guidance to help teachers identify students whose skills are fluent, progressing, or emerging. Each unit provides parent reports explaining how families can support their child's learning.

FLAME unit assessments provide opportunities for students to apply skills and fluency built throughout the use of FLAME lessons. These assessments also provide opportunities for students to explain their thinking and processes to give teachers a deeper understanding of the student's knowledge and more information to make informed decisions about next steps for the student. FLAME unit assessment items along with the formative assessments included in each unit, can be used to track students' progress toward fluency.

Teachers should anticipate that some of their students will need additional practice with the skills beyond what is provided through the activities. By using the data collected through daily formative assessments and unit assessments and growing understanding of fluency development, teachers have the power to ensure that their students will build grade-appropriate fluency skills.

Manipulatives

All students in kindergarten through Grade 1 should be allowed to use manipulatives on all FLAME unit assessments. Additionally, any student at any grade who has documented accommodations to use manipulatives should be allowed to use them on FLAME unit assessments. Beyond Grade 1, please see the rubric for the assigned question for guidance on manipulatives.
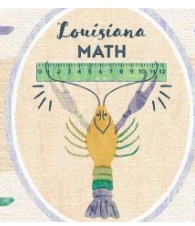
Scoring and Next Steps

If students score in the beginning range on any standard on the FLAME unit assessment please review FLAME activities for that standard with the students and readminister the FLAME unit assessment at the appropriate time for the student.

If you have additional questions or feedback on these assessments, please do not hesitate to contact the Louisiana Math team at STEM@la.gov.

Louisiana's Math Pillars

High-Quality, Grade-Level Math Instruction

Timely, Proactive Interventions

Ongoing Professional Learning

Families

FLAME Grade 1 Unit 1 Assessment
Teacher Answer Key

Item 1

T: I am going to show you three cards. Two of my cards are going to have numbers on them. One will be blank. You will read the cards and count out loud for me, including the number that should be on the blank card. You will then write the number on the blank card with your marker to complete the number sequence.   After writing your number, you will explain why you chose to write that number on the card. You're going to do great! Ready?

T: Use the number cards Item 1 Number Card Template to show the following sequences:

1. 5, 6, ☐

2. 3, ☐ , 5

3. 9, 8, ☐

Standard: 1.NBT.A.1
Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

Sample Correct Drawings

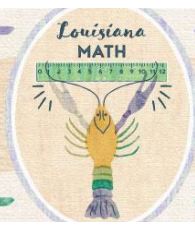| Sample 1	Sample 2

Sample Correct Explanations
The next number is one more. This number is 6. One more is 7.

I can count up or down by one to find the following number. One more than 3 is 4. One less than 5 is also 4. The number between 3 and 5 is always 4.

I can count down. Each number is one less. 9. One less is 8. One less is 7.
These are not the only acceptable drawings and explanations.

Rubric

Consistent - Student's performance demonstrates they are showing **consistent** understanding of the standard.
- The student accurately:
  - Continues counting sequences of consecutive numbers for all three number sentences
    AND
  - represents each number using a written numeral or a visual representation of the number using objects
    AND
  - connects conceptual and procedural understanding to an oral explanation.
    The conceptual component involves understanding numerals and the idea of the count sequence. Students use grade-level procedural skills when demonstrating knowledge of the count sequence.

Progressing - Student's performance demonstrates they are **progressing** toward understanding the standard.
- The student accurately:
  - Continues counting sequences of consecutive numbers for all three number sentences
    AND
  - represents each number using a written numeral or a visual representation of the number using objects
    BUT
  - connects only conceptual understanding to an oral explanation.

Beginning - Student's performance demonstrates that they are **beginning** to understand the standard.
- The student:
  - Is unable to continue the counting sequences of consecutive numbers for **ALL** three number sentences.
    OR
  - Is unable to represent each number using a written numeral or a visual representation of the number using objects.
    OR
  - Is unable to connect conceptual understanding to an oral explanation.
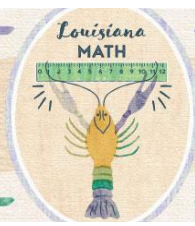
Item 2

Solve the number sentence. Pick the best way to solve. Use the number path to explain why.
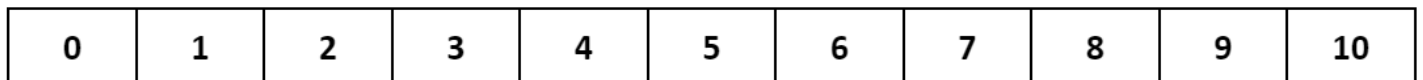 Item 2 Number Path Template

9 – 6 = _____   ➡ Count on   ⬅ Count back

0	1	2	3	4	5	6	7	8	9	10

Standard: 1.OA.C.5
Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
Sample Correct Answers

Sample 1	**Sample 2**

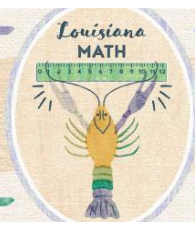I'll start at 6 and count on 3 hops to get to 9.

6 + 3 = 9 and/or 9 - 6 = 3.

I'll start at 9 and count back 6 hops. I get to 3.

9 - 6 = 3.

*These **are not** the only acceptable explanations.*

Rubric

Consistent - Student's performance demonstrates they are showing **consistent** understanding of the standard.
- The student accurately:
  - Identifies a start number

    AND
  - counts on or back on the number path as a means of solving the subtraction problem

    AND
  - connects counting and number sequences to addition and subtraction understanding in an oral explanation.

Progressing - Student's performance demonstrates they are **progressing** toward understanding the standard.
- The student accurately:
  - Identifies a start number

    AND
  - attempts to count on or back on the number path as a means of solving the subtraction problem

    BUT
  - is unable to connect counting and number sequences to addition and subtraction understanding in an oral explanation.

Beginning - Student's performance demonstrates that they are **beginning** to understand the standard.
- The student:
  - Can identify a start number

    BUT
  - is unable to count on or back on the number path as a means of solving the subtraction problems

    OR
  - is unable to connect counting and number sequences to addition and subtraction understanding in an oral explanation.
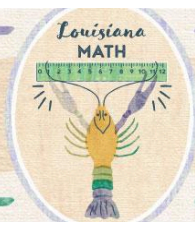
Item 3

(Show the student the Unit 1 Item 3 Number Bond Template.) Complete the number bond.

```
    9
   / \
  3
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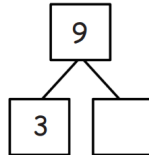
What is a related addition sentence for the number bond?

What is a related subtraction sentence for the number bond?

Are there more number sentences we can make using the same parts and total? What are they? Explain your thinking.

Standard: 1.OA.C.6
Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).

Sample Correct Answers

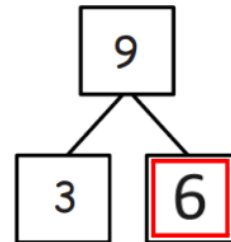| Sample 1	Sample 2

Student orally identifies that 6 will complete the number bond and states a combination of the following represented number sentences.

Sample 1	Sample 2
$3 + 6 = 9$ $6 + 3 = 9$	$9 = 3 + 6$ $9 = 6 + 3$
$9 - 3 = 6$ $9 - 6 = 3$	$6 = 9 - 3$ $3 = 9 - 6$
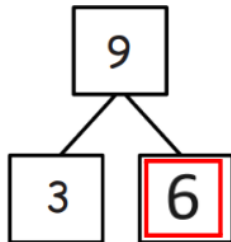
For both sentences, the parts are 6 and 3, and the total is 9. The order of the parts does not matter when I solve.

Since 9 is the total and one part is 3, I know the other part must be 6. When I find my partners to 10, I can add them in any order: $3 + 6 = 9$ or $6 + 3 = 9$.
In the number bond, I showed 9 as the total. The part that I know is 3. The part missing part is 6. $9 - 3 = 6$.
These <u>are not</u> the only acceptable explanations.
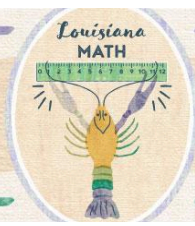
Rubric

Consistent - Student's performance demonstrates they are showing **consistent** understanding of the standard.
- The student accurately:
    - Identifies the missing addend to complete the number bond

        AND
    - expresses a related addition and subtraction sentence

        AND
    - creates additional number sentences using the same parts and total

        AND
    - connects creating additional number sentences to knowledge of addition and subtraction facts in an oral explanation.

Progressing - Student's performance demonstrates they are **progressing** toward understanding the standard.
- The student accurately:
    - Identifies the missing addend to complete the number bond

        AND
    - expresses a related addition and subtraction sentence

        BUT
    - is unable to create additional number sentences using the same parts and total.

Beginning - Student's performance demonstrates that they are **beginning** to understand the standard.
- The student:
    - Identifies the missing addend to complete the number bond

        BUT
    - only expresses one related addition **OR** subtraction sentence

        AND
    - is unable to create additional number sentences using the same parts and total.