



ADMINISTRATION AND SCORING GUIDE

Early Numeracy

Kindergarten and Grade 1

Introduction

Levels	Kindergarten and Grade 1
Administration	Individual Paper presentation of student test forms
Duration	Screening: From 10 to 15 minutes, depending on grade and season Progress monitoring: 1 minute per measure
Responses	Recorded using a digital record form (DRF) via computer
Scores	Automatically calculated when responses are submitted via a DRF

aimswebPlus® Early Numeracy is a set of brief, individually administered, standardized measures for children in Kindergarten and Grade 1. These measures are designed for the universal screening (or, benchmarking) of entire student classrooms at the beginning, middle, and end of the school year. In addition, most of the measures can also be used for the frequent progress monitoring of students identified as at risk. For each measure, there are up to 23 different test forms provided for screening and progress monitoring (number of forms varies by measure, depending on seasons administered and corresponding PM periods available).

The Early Numeracy measures for Kindergarten are Number Naming Fluency (NNF), Quantity Total Fluency (QTF), Quantity Difference Fluency (QDF), and Concepts & Applications (CA). The Grade 1 Early Numeracy measures are Number Comparison Fluency–Pairs (NCF–P), Math Facts Fluency–1 Digit (MFF–1D), Math Facts Fluency–Tens (MFF–T), and Concepts & Applications (CA). The tasks, scoring criteria, and administration times for these measures are found in Table 1.

Table 1 Measure Descriptions

Measure	What students do	Score	Admin time
Number Naming Fluency (NNF)	Verbally name numbers up to 20.	Number of items correctly answered	1 minute
Quantity Total Fluency (QTF)	Boxes containing blue dots are presented. Students state the total number of dots within each box or each pair of boxes.	Number of items correctly answered	1 minute
Quantity Difference Fluency (QDF)	Pairs of boxes containing dots (one with blue dots, one with red dots) are presented. Students state how many more blue dots are needed to match the number of red dots.	Number of items correctly answered	1 minute
Concepts & Applications (CA)	Mentally solve various types of math problems and state the correct answers.	Number of items correctly answered	~7–12 minutes
Number Comparison Fluency–Pairs (NCF–P)	Pairs of numbers are presented. Students identify which of two numbers is larger for each pair.	Number of items correctly answered	1 minute

Table 1 Measure Descriptions *cont.*

Measure	What students do	Score	Admin time
Math Facts Fluency–1 Digit (MFF–1D)	Mentally solve simple addition and subtraction problems involving numbers 0 through 10 and state the correct answers.	Number of items correctly answered	1 minute
Math Facts Fluency–Tens (MFF–T)	Mentally add or subtract 10 to/from given numbers and state the correct answers.	Number of items correctly answered	1 minute

Testing time is brief—approximately 10–15 minutes for screening, depending on season and grade—so all measures should be administered to a student in a single testing session. For progress monitoring, testing time is even briefer: approximately 1–3 minutes, depending on which measure(s) are being monitored for a given student. The following table (see Table 2) provides an overview of the measures given during each screening season, as well as the measures available for progress monitoring.

Table 2 Measures by Grade, Season, and Progress Monitoring Availability

Measure	Grade	Fall	Winter	Spring	PM
Number Naming Fluency (NNF)	K	x	x	x	x
Quantity Total Fluency (QTF)	K	x	x	x	x
Quantity Difference Fluency (QDF)	K		x	x	x
Concepts & Applications (CA)	K, 1	x	x	x	
Number Comparison Fluency–Pairs (NCF–P)	1	x	x	x	x
Math Facts Fluency–1 Digit (MFF–1D)	1	x	x	x	x
Math Facts Fluency–Tens (MFF–T)	1		x	x	x

You must follow all directions carefully to be able to make decisions or draw conclusions about a student’s performance from the normative data (national, state, or district). Altering the instructions or the presentation of the test forms, providing hints, giving corrective feedback, or using test forms as teaching tools will invalidate any norms-based decisions. It is important that all examiners become familiar with these administration directions prior to administering any of the Early Numeracy measures.

In the following sections, testing conditions, aimswebPlus Early Numeracy test materials, and test accommodations are discussed. Next, administration procedures for each Early Numeracy measure are presented. Finally, a summary table of timing guidelines and discontinue rules is provided in the appendix.

Testing Conditions

To ensure the most accurate results, students should be tested in a quiet room or area that is free from distractions. Conduct testing while seated with the student at a small table or at the corner of a larger table. If multiple examiners are testing at the same time in the same area, it is important that there be ample distance between student/examiner pairs to ensure that students cannot hear or be distracted by each other.

Try to administer the test when students are rested and able to pay attention, so they can give their best effort. Younger students often are easily distracted and tend to perform better with a familiar examiner. As such, try to have the same examiner test the student at each administration during a given school year.

If a test session is spoiled (e.g., testing is interrupted during the administration of any of the timed fluency measures), examiners may readminister the same test form to the student. It is suggested that examiners wait a few days before readministering a form to minimize the potential for practice effects.

Student Test Materials and Digital Record Forms

Student test materials are required for *all* measures. Stimulus books (for screening) and booklets (for progress monitoring) can be downloaded from the aimswebPlus system and printed; in addition, print editions of all digital materials are available at an additional cost for customers who prefer that option (please visit aimsweb.com for more information about printing alternatives). Once a test form is printed, it may be used as a master that can be photocopied as needed. *Note. Please be sure to keep masters and all copies in a secure place before and after use.*

With aimswebPlus, each student's performance is recorded on a digital record form (DRF) using a computer. The DRFs include all the instructions you'll need for administering the measures to students—including what to say to the student and correct/incorrect response information. Figure 1 shows an example of a Concepts & Applications DRF screen. Aside from the printed stimulus pages for the student, examiners will not need any printed materials or a stopwatch to administer and record a test session.

Figure 1 Concepts & Applications DRF Screen

aimsweb PLUS		Sammy Jones	CA, Grade K, Form 1, Fall '17		
1	Point to each circle and count out loud how many circles in all.	Counts aloud from 1 to 6, pointing to a different circle for each number	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2	Which tree is the tallest?	B (states or points to correct option)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Throughout each testing session, the aimswebPlus DRF will guide examiners through the appropriate screens via computer. After administering each measure, examiners will be able to review student responses and make any changes needed before submitting the responses (e.g., due to self-corrections). Each measure's score is then automatically generated when the student's responses are submitted to aimswebPlus via the DRF.

Examiners must familiarize themselves with the administration, scoring, and recording procedures detailed in this guide and practice each aspect of test administration—giving directions, presenting and turning student test pages, and recording responses—prior to administering Early Numeracy measures to students. It is very important to administer each measure using the digital record form **at least once** to an appropriately aged child to ensure you are comfortable with all aspects of testing.

Test Accommodations

While similar in their intent, test accommodations and test modifications differ in their impact on test scores. *Accommodations* are changes made in the test setting, timing, presentation format, or response format that minimize obstacles to perceiving or responding to test content *without* changing the test content itself. As such, the meaning of test scores and the valid application of norms is preserved. *Modifications*, on the other hand, are changes made to the testing process or content or provisions made for certain adaptive technologies or services that change the meaning of test scores. Modifications invalidate norms and are *not* permitted with the aimswebPlus Early Numeracy measures.

Testing accommodations that are documented in a student's Individual Education Plan (IEP) or 504 plan are permitted with aimswebPlus. However, not all measures allow for accommodations; these exceptions depend on whether a measure is timed (e.g., Number Naming Fluency) and whether it is being used for screening or progress monitoring. While corrective feedback is allowed for each measure's *practice* items, hints and corrective feedback are *never* permitted for test items.

The aimswebPlus measure Concepts & Applications (CA) is an individually administered, *untimed* test in which students respond orally or, in some cases, by pointing to an answer choice. This untimed measure is used only for screening. Any test accommodations allowed in statewide testing programs (e.g., using large print, using sign language to administer and respond to items, eliminating answer options for multiple choice items by covering them) and documented in the student's IEP or 504 plan are permitted.

Like CA, the fluency measures used in screening are individually administered. However, unlike CA, these fluency measures employ strict time limits that are designed to keep testing brief and to generate rate-based scores (e.g., numbers named per minute). As such, valid interpretation of national norms, which are an essential aspect of decision-making during benchmark testing, depend on adherence to the standard administration procedures.

The following accommodations are allowed for all Early Numeracy fluency (i.e., timed) measures:

- Enlarging test forms
- Modifying the environment (e.g., special lighting, adaptive furniture)

Note that because speed plays an important role in the timed fluency measures, certain typical accommodations cannot be used without invalidating the norms. For example, a valid accommodation may not be possible for a student who is unable to orally respond to test items that require an oral response. If a student uses sign language or adaptive technology, his or her response rate will be slowed and comparison to the national norms would not be appropriate.

Lastly, note that examiners are given flexibility in determining when to have a student move on to the next item during the timed fluency measures. Students can become frustrated when pushed too quickly through items; conversely, students who are struggling can become discouraged when stuck on a difficult item. Furthermore, some tasks lend themselves to faster response rates (e.g., Number Naming Fluency) while others average slower response rates due to the task's cognitive load (e.g., Quantity Difference Fluency). An examiner who is familiar with the student is in the best position to determine whether he/she understands the task and is reasoning through an answer or the student is struggling and should move on. In general, unless otherwise noted, waiting about 3 to 5 seconds for an answer is appropriate in most situations. Examiners are encouraged to use their professional judgement on a case-by-case basis.

Number Naming Fluency

Overview

Level: Kindergarten (Fall, Winter, Spring)

Use: Benchmarking and progress monitoring

Number Naming Fluency assesses a student's ability to accurately and rapidly recognize and name numbers from 0 through 20. Automatic recognition of Arabic numerals is an important first step in the symbolic representation of quantity. Because it is a timed measure, Number Naming Fluency can also measure the level of automaticity of these skills.

The student sees rows of numbers on each test page. Starting with the first row, the student points to and names each number in each row. The student names as many numbers as possible in 1 minute. Figure 2 shows a sample student test page.

Figure 2 Number Naming Fluency Student Test Page

2	5	7	8	1	9	6	0
4	3	5	0	9	2	7	1
3	8	6	14	4	11	5	2
16	1	3	10	12	4	15	18
0	13	19	17	20	16	8	11

Before you begin, be sure the testing area is reasonably quiet and free from distractions. Each test form is different, so be sure to use the appropriate form for a given student's testing session (e.g., the stimulus book for the current benchmark season or the required form from the PM stimulus booklet for progress monitoring purposes).

Materials Needed

For the student, you will need:

- a printout of the appropriate test form.

To record student responses, you will need:

- the corresponding aimswebPlus DRF on a computer that is connected to the internet.

Note. Each Number Naming Fluency test form contains 2 pages.

Administration Directions

During testing, please keep in mind:

- As needed, remind the student of the task. For example, by saying: **What number is this?**
- If the student becomes stuck on an item, wait about 3 to 5 seconds for an answer before having him/her move on to the next number.
- If the student is having trouble staying on track, point to each number for him/her.
- If the student is unable to correctly name the first 5 numbers, discontinue administration.

Place the Number Naming Fluency practice page in front of the student. Point to the 3 and say:

What number is this?

If correct, say: **That's right! This number is 3.**

If incorrect, say: **This number is 3.** (Pause.) **What number is this?** (Wait for student to repeat correct answer.)

Point to the 6 and say:

What number is this?

If correct, say: **That's right! This number is 6.**

If incorrect, say: **This number is 6.** (Pause.) **What number is this?** (Wait for student to repeat correct answer.)

Place the student test pages in front of the student in order and so that only the first page is visible.

Then, point to the box in the upper-left corner and move your finger along the rows as you say:

Here are some more numbers. Start here, point to each number, and tell me what it is. Keep going until I tell you to stop. Ready? Begin.

Click Begin on the DRF screen when you say Begin.

Follow along on the DRF, clicking on any incorrectly named or skipped numbers.

If the student finishes the items on the first page, turn to the second page and tell him/her to keep going.

At 1 minute, say:

Stop.

Follow the directions on the DRF screen to click on the last number named by the student and score student responses.

Note. Very occasionally, a student will finish in less than 1 minute. If this occurs, click on the pause icon (■) and select Student Finished Form from the pop-up menu. Then, follow the directions on the DRF screen to score student responses.

Discontinue Rule: If the student is unable to correctly name the first 5 numbers, discontinue administration of this form. Click on the pause icon (■) and select Discontinue Form from the pop-up menu.

Scoring Rules

Students receive 1 point for each correctly named number. The maximum total score for Number Naming Fluency is 80 points.

Quantity Total Fluency

Overview

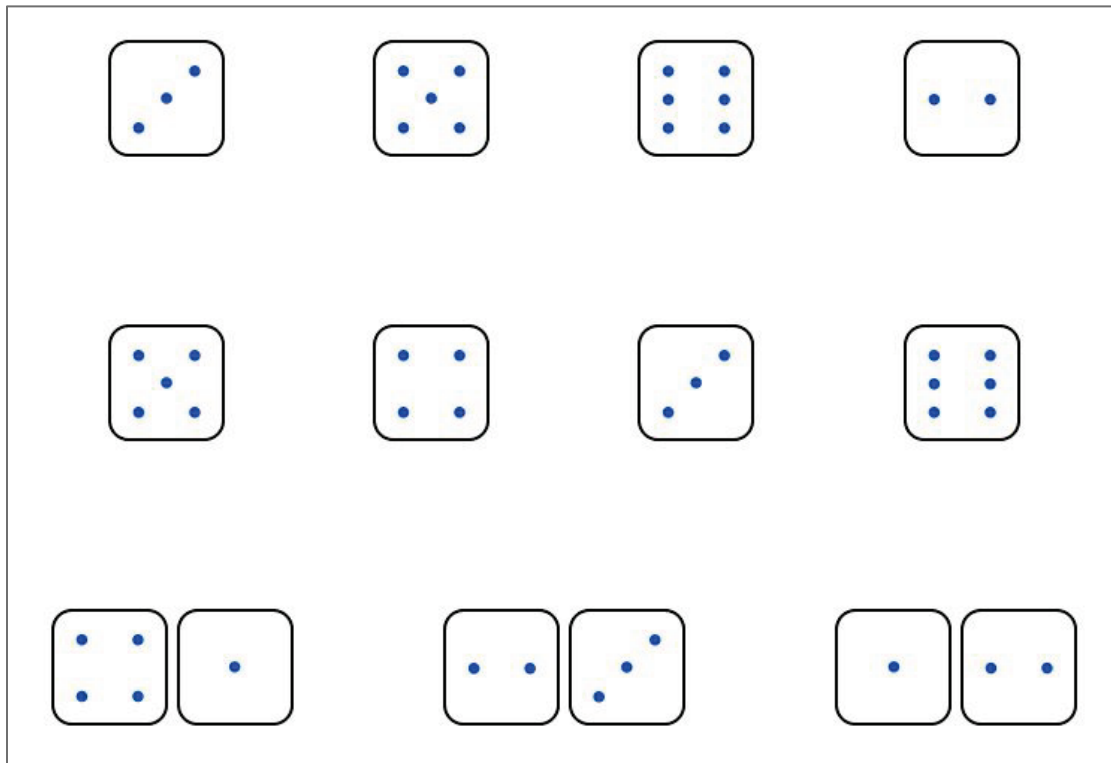
Level: Kindergarten (Fall, Winter, Spring)

Use: Benchmarking and progress monitoring

Quantity Total Fluency assesses a student's understanding of the relationship between numbers and quantities and his/her ability to accurately and rapidly enumerate the number of objects in a set of up to 10 dots. Accurate and rapid enumeration of small sets is a foundational numeracy skill. Because it is a timed measure, Quantity Total Fluency can also measure the level of automaticity of these skills.

The student sees rows of boxes with blue dots on each test page. Starting with the first row, the student states the total number of dots in each box or pair of boxes. The student attempts as many items as possible in 1 minute. Figure 3 shows a sample student test page.

Figure 3 Quantity Total Fluency Student Test Page



Before you begin, be sure the testing area is reasonably quiet and free from distractions. Each test form is different, so be sure to use the appropriate form for a given student's testing session (e.g., the stimulus book for the current benchmark season or the required form from the PM stimulus booklet for progress monitoring purposes).

Materials Needed

For the student, you will need:

- a printout of the appropriate test form.

To record student responses, you will need:

- the corresponding aimswebPlus DRF on a computer that is connected to the internet.

Note. Each Quantity Total Fluency test form contains 4 pages.

Administration Directions

During testing, please keep in mind:

- As needed, remind the student of the task. For example, by saying: **How many dots are in the box? Or, How many dots are there in all?**
- If the student becomes stuck on an item, wait about 3 to 5 seconds for an answer before having him/her move on to the next item.
- If the student is having trouble staying on track, point to each item for him/her.
- If the student is unable to correctly answer the first 5 items, discontinue administration.

Place the Quantity Total Fluency practice page in front of the student. Point to the top box and say:

Look at this box. How many dots are in the box?

If correct (3), say: **That's right! There are three dots in the box.**

If incorrect, say: **There are three dots in the box.**

Point to the pair of boxes and say:

Now there are two boxes. How many dots are there in all?

If correct (2), say: **That's right! There are two dots in all.**

If incorrect, say: **There are two dots in all.**

Place the student test pages in front of the student in order and so that only the first page is visible.

Then, point to the box in the upper-left corner and move your finger along the rows as you say:

Here are some more boxes with dots. Start here and tell me how many dots are in each box. When there are two boxes together, tell me how many dots there are in all. Keep going until I tell you to stop. Ready? Begin.

Click Begin on the DRF screen when you say Begin.

Follow along on the DRF, clicking on items that were incorrectly answered or skipped.

If the student finishes the items on the first page, turn to the second page and tell him/her to keep going.

Repeat for each page the student finishes.

At 1 minute, say:

Stop.

Follow the directions on the DRF screen to click on the last item answered by the student and score student responses.

Note. Very occasionally, a student will finish in less than 1 minute. If this occurs, click on the pause icon (■) and select Student Finished Form from the pop-up menu. Then, follow the directions on the DRF screen to score student responses.

Discontinue Rule: If the student is unable to correctly answer the first 5 items, discontinue administration of this form. Click on the pause icon (■) and select Discontinue Form from the pop-up menu.

Scoring Rules

Students receive 1 point for each correctly answered item. The maximum total score for Quantity Total Fluency is 38 points.

Quantity Difference Fluency

Overview

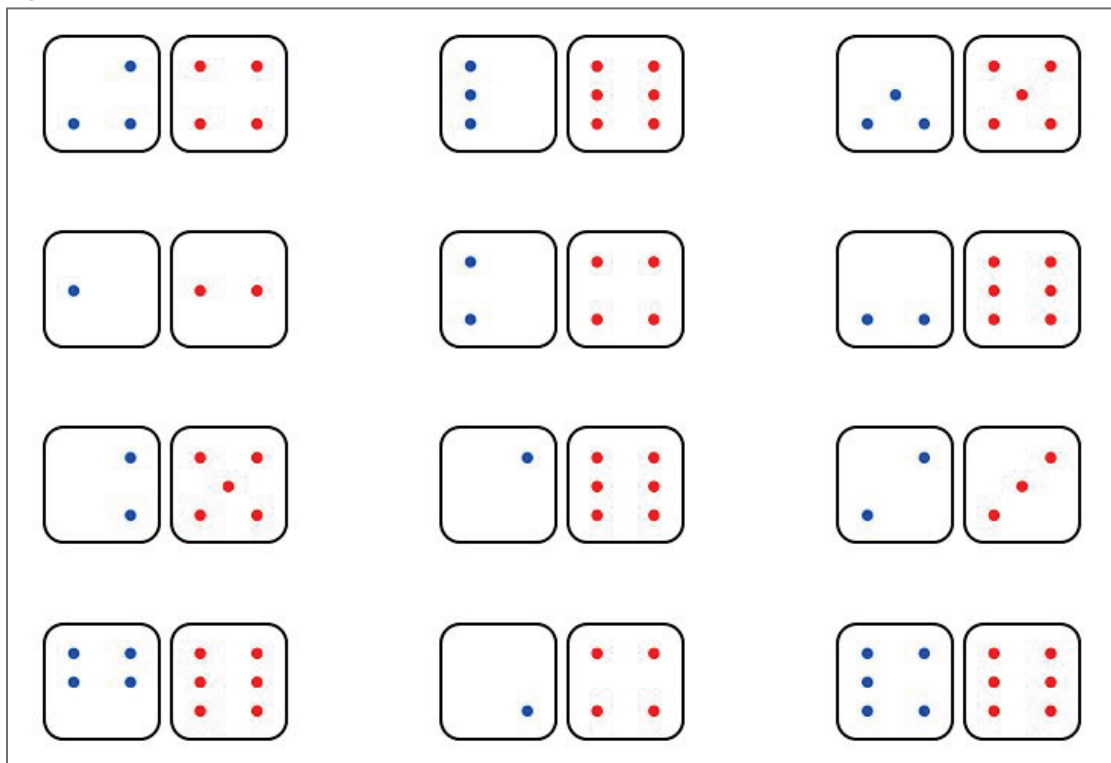
Level: Kindergarten (Winter, Spring)

Use: Benchmarking and progress monitoring

Quantity Difference Fluency assesses a student's ability to compare quantities and use counting strategies to determine the difference between two sets of up to six dots. Efficiency in counting and comparing small sets is an important step to becoming fluent with addition and subtraction. Because it is a timed measure, Quantity Difference Fluency can also measure the level of automaticity of these skills.

The student sees rows of boxes with blue and red dots on each test page. Starting with the first row, the student states how many more blue dots are needed to match the number of red dots for each box pair. The student attempts as many items as possible in 1 minute. Figure 4 shows a sample student test page.

Figure 4 Quantity Difference Fluency Student Test Page



Before you begin, be sure the testing area is reasonably quiet and free from distractions. Each test form is different, so be sure to use the appropriate form for a given student's testing session (e.g., the stimulus book for the current benchmark season or the required form from the PM stimulus booklet for progress monitoring purposes).

Materials Needed

For the student, you will need:

- a printout of the appropriate test form.

To record student responses, you will need:

- the corresponding aimswebPlus DRF on a computer that is connected to the internet.

Note. Each Quantity Difference Fluency test form contains 2 pages.

Administration Directions

During testing, please keep in mind:

- As needed, remind the student of the task. For example, by saying: **How many more blue dots do we need to make the dots match?**
- If the student becomes stuck on an item, wait about 7 to 10 seconds for an answer before having him/her move on to the next item.
- If the student is having trouble staying on track, point to each item for him/her.
- If the student is unable to correctly answer the first 5 items, discontinue administration.

Place the Quantity Difference Fluency practice page in front of the student. Point to the top pair of boxes and say:

Look at these boxes with dots. We want the number of blue dots to match the number of red dots. How many more blue dots do we need to make the dots match?

If correct (1), say: **That's right! There are two blue dots and three red dots, so we need one more blue dot to make the dots match.**

If incorrect, say: **There are two blue dots and three red dots, so we need one more blue dot to make the dots match.**

Point to the bottom pair of boxes and say:

Now look at these boxes. Remember, we want the number of blue dots to match the number of red dots. How many more blue dots do we need to make the dots match?

If correct (2), say: **That's right! There is one blue dot and three red dots, so we need two more blue dots to make the dots match.**

If incorrect, say: **There is one blue dot and three red dots, so we need two more blue dots to make the dots match.**

Place the student test pages in front of the student in order and so that only the first page is visible. Then, point to the boxes in the upper-left corner and move your finger along the rows as you say:

Here are some more boxes with dots. Start here and tell me how many more blue dots we need to make the dots match. Keep going until I tell you to stop. Ready? Begin.

Click Begin on the DRF screen when you say Begin.

Follow along on the DRF, clicking on items that were incorrectly answered or skipped.

If the student finishes the items on the first page, turn to the second page and tell him/her to keep going.

At 1 minute, say:

Stop.

Follow the directions on the DRF screen to click on the last item answered by the student and score student responses.

Note. Very occasionally, a student will finish in less than 1 minute. If this occurs, click on the pause icon (■) and select Student Finished Form from the pop-up menu. Then, follow the directions on the DRF screen to score student responses.

Discontinue Rule: If the student is unable to correctly answer the first 5 items, discontinue administration of this form. Click on the pause icon (■) and select Discontinue Form from the pop-up menu.

Scoring Rules

Students receive 1 point for each correctly answered item. The maximum total score for Quantity Difference Fluency is 24 points.

Concepts & Applications

Overview

Level: Kindergarten and Grade 1 (Fall, Winter, Spring)

Concepts & Applications assesses a student's knowledge of essential math concepts in the areas of counting and cardinality, algebra, base ten numbers, measurement and data, and geometry and his/her ability to solve one- and two-step word problems.

The student solves math word problems. The examiner reads each item to the student and the student states the correct answer, using the corresponding visual stimulus to solve the problem. This measure has no time limit and the student attempts *all* items. Figure 5 shows a sample student test page.

Figure 5 Concepts & Applications Student Test Page



Before you begin, be sure the testing area is reasonably quiet and free from distractions. Each test form is different, so be sure to use the appropriate form for a given student's testing session (e.g., the stimulus book for the current benchmark season).

Materials Needed

For the student, you will need:

- a printout of the appropriate test form.

To record student responses, you will need:

- the corresponding aimswebPlus DRF on a computer that is connected to the internet.

Note. Each Concepts & Applications test form contains 25 pages.

Administration Directions

During testing, please keep in mind:

- As needed, encourage the student by saying: **You are doing fine. Keep going.**
- As needed, direct the student's attention to specific portions of the student test page. For example, if a question refers first to one group of items and then a second group of items of the test page, point to the appropriate group of items as you read the question.
- If the student becomes stuck on an item, encourage the student to answer by saying: **Give your best guess.**
- If the student is unable to correctly answer the first 5 items, discontinue administration.

Kindergarten Directions

Place the Concepts & Applications practice page in front of the student. Say:

How many circles are there?

If correct (1), say: **That's right! There is one circle, right here** (*point to circle*).

If incorrect, say: **There is one circle, right here** (*point to circle*).

Place the student test pages in front of the student in order and so that only the first page is visible. Say:

Now I'm going to ask you some more math questions. Listen carefully and do your best.

Using the DRF, read each item question carefully and exactly, turning the student test pages so that the student sees the corresponding item as you read each question.

Using the criteria for each item, record the student's response by clicking either for correct responses or for incorrect responses. After the student has answered all Concepts & Applications questions, follow the directions on the DRF screen to score student responses.

*Note. Some CA items have two-part questions; students **must** correctly answer **both** parts to receive credit.*

Discontinue Rule: If the student is unable to correctly answer the first 5 items, discontinue administration of this form. Click on the pause icon (■) and select Discontinue Form from the pop-up menu.

Grade 1 Directions

Place the Concepts & Applications practice page in front of the student. Say:

These students are lined up to get on the bus. Point to the student who is *fourth* in line.

If correct (boy in red shirt), say: **That's right! He is fourth in line.**

If incorrect, say: **He is fourth in line** (*point to boy in red shirt*).


Place the student test pages in front of the student in order and so that only the first page is visible. Say:

Now I'm going to ask you some more math questions. Listen carefully and do your best.

Using the DRF, read each item question carefully and exactly, turning the student test pages so that the student sees the corresponding item as you read each question.

Using the criteria for each item, record the student's response by clicking either for correct responses or for incorrect responses. After the student has answered all Concepts & Applications questions, follow the directions on the DRF screen to score student responses.

*Note. Some CA items have two-part questions; students **must** correctly answer **both** parts to receive credit.*

Discontinue Rule: If the student is unable to correctly answer the first 5 items, discontinue administration of this form. Click on the pause icon () and select Discontinue Form from the pop-up menu.

Scoring Rules

Students receive 1 point for each correctly answered item. The maximum total score for Concepts & Applications is 25 points.

Number Comparison Fluency–Pairs

Overview

Level: Grade 1 (Fall, Winter, Spring)

Use: Benchmarking and progress monitoring

Number Comparison Fluency–Pairs assesses a student’s ability to accurately and efficiently determine which of two numbers is greater. Because it is a timed measure, Number Comparison Fluency–Pairs can also measure the level of automaticity of these skills.

The student sees rows of number pairs on each test page. Starting with the first row, the student points to and names the larger number in each pair. The student attempts as many items as possible in 1 minute. Figure 6 shows a sample student test page.

Figure 6 Number Comparison Fluency–Pairs Student Test Page

3	8	6	4	0	7	9	1	5	24
7	11	5	9	13	6	20	8	2	0
25	15	4	14	16	21	8	3	10	9
7	14	20	12	11	18	19	30	35	27
2	10	46	34	17	22	38	33	7	8

Before you begin, be sure the testing area is reasonably quiet and free from distractions. Each test form is different, so be sure to use the appropriate form for a given student’s testing session (e.g., the stimulus book for the current benchmark season or the required form from the PM stimulus booklet for progress monitoring purposes).

Materials Needed

For the student, you will need:

- a printout of the appropriate test form.

To record student responses, you will need:

- the corresponding aimswebPlus DRF on a computer that is connected to the internet.

Note. Each Number Comparison Fluency–Pairs test form contains 2 pages.

Administration Directions

During testing, please keep in mind:

- As needed, remind the student of the task. For example, by saying: **Point to and tell me which number is larger.**
- If the student becomes stuck on an item, wait about 3 to 5 seconds for an answer before having him/her move on to the next item.
- If the student is having trouble staying on track, point to each item for him/her.
- If the student is unable to correctly answer the first 5 items, discontinue administration.

Place the Number Comparison Fluency–Pairs practice page in front of the student. Point to the top box and say:

Look at the numbers in this box. Point to the larger number and tell me what it is.

If correct (7), say: **That's right! 7 comes after 4 when you count, so 7 is the larger number.**

If incorrect, say: **7 comes after 4 when you count, so 7 is the larger number.**

Point to the bottom box and say:

Now look at the numbers in this box. Point to the larger number and tell me what it is.

If correct (18), say: **That's right! 18 is larger than 12.**

If incorrect, say: **18 is larger than 12.**

Place the student test pages in front of the student in order and so that only the first page is visible.

Then, point to the box in the upper-left corner and move your finger along the rows as you say:

Here are some more boxes with numbers. Start here and in each box, point to the larger number and tell me what it is. Keep going until I tell you to stop. Ready? Begin.

Click Begin on the DRF screen when you say Begin.

Follow along on the DRF, clicking on items that were incorrectly answered or skipped.

If the student finishes the items on the first page, turn to the second page and tell him/her to keep going.

At 1 minute, say:

Stop.

Follow the directions on the DRF screen to click on the last item answered by the student and score student responses.

Note. Very occasionally, a student will finish in less than 1 minute. If this occurs, click on the pause icon (■) and select Student Finished Form from the pop-up menu. Then, follow the directions on the DRF screen to score student responses.

Discontinue Rule: If the student is unable to correctly answer the first 5 items, discontinue administration of this form. Click on the pause icon (■) and select Discontinue Form from the pop-up menu.

Scoring Rules

Students receive 1 point for each correctly answered item. The maximum score for Number Comparison Fluency–Pairs is 50 points.

Math Facts Fluency–I Digit

Overview

Level: Grade 1 (Fall, Winter, Spring)

Use: Benchmarking and progress monitoring

Math Facts Fluency–I Digit assesses a student’s ability to accurately and efficiently add and subtract numbers from 0 through 10. Because it is a timed measure, Math Facts Fluency–I Digit can also measure the level of automaticity of these skills.

The student sees rows of number pairs on each test page. Starting with the first row, the student solves problems involving the addition and subtraction of numbers 0 through 10. The student attempts as many items as possible in 1 minute. Figure 7 shows a sample student test page.

Figure 7 Math Facts Fluency–I Digit Student Test Page

$2 + 2 =$	$1 + 2 =$	$0 + 4 =$	$3 + 3 =$	$5 + 1 =$
$1 + 0 =$	$4 - 1 =$	$6 + 1 =$	$3 + 0 =$	$2 - 2 =$
$3 + 5 =$	$3 - 1 =$	$6 - 0 =$	$1 + 5 =$	$6 + 3 =$
$5 - 0 =$	$4 + 4 =$	$5 - 3 =$	$8 + 1 =$	$4 - 2 =$

Before you begin, be sure the testing area is reasonably quiet and free from distractions. Each test form is different, so be sure to use the appropriate form for a given student’s testing session (e.g., the stimulus book for the current benchmark season or the required form from the PM stimulus booklet for progress monitoring purposes).

Materials Needed

For the student, you will need:

- a printout of the appropriate test form.

To record student responses, you will need:

- the corresponding aimswebPlus DRF on a computer that is connected to the internet.

Note. Each Math Facts Fluency–I Digit test form contains 2 pages.

Administration Directions

During testing, please keep in mind:

- As needed, remind the student of the task. For example, by saying: **What is 3 minus 1?**
Or, **What is 3 take away 1?**
- If the student becomes stuck on an item, wait about 3 to 5 seconds for an answer before having him/her move on to the next item.
- If the student is having trouble staying on track, point to each item for him/her.
- If the student is unable to correctly answer the first 5 items, discontinue administration.

Place the Math Facts Fluency–I Digit practice page in front of the student. Point to the top box and say:

Look at the number sentence in this box. What is 1 plus 3?

If correct (4), say: **That's right! 1 plus 3 more equals 4. So, 4 is the correct answer.**

If incorrect, say: **1 plus 3 more equals 4. So, 4 is the correct answer.**

Point to the bottom box and say:

Now look at the number sentence in this box. What is 3 minus 2?

If correct (1), say: **That's right! 3 take away 2 equals 1. So, 1 is the correct answer.**

If incorrect, say: **3 take away 2 equals 1. So, 1 is the correct answer.**

Place the student test pages in front of the student in order and so that only the first page is visible.

Then, point to the box in the upper-left corner and move your finger along the rows as you say:

Here are some more boxes with number sentences. Start here and tell me the answer to each number sentence. Keep going until I tell you to stop. Ready? Begin.

Click Begin on the DRF screen when you say Begin.

Follow along on the DRF, clicking on items that were incorrectly answered or skipped.

If the student finishes the items on the first page, turn to the second page and tell him/her to keep going.

At 1 minute, say:

Stop.

Follow the directions on the DRF screen to click on the last item answered by the student and score student responses.

Note. Very occasionally, a student will finish in less than 1 minute. If this occurs, click on the pause icon (■) and select Student Finished Form from the pop-up menu. Then, follow the directions on the DRF screen to score student responses.

Discontinue Rule: If the student is unable to correctly answer the first 5 items, discontinue administration of this form. Click on the pause icon (■) and select Discontinue Form from the pop-up menu.

Scoring Rules

Students receive 1 point for each correctly answered item. The maximum score for Math Facts Fluency—1 Digit is 40 points.

Math Facts Fluency–Tens

Overview

Level: Grade 1 (Winter, Spring)

Use: Benchmarking and progress monitoring

Math Facts Fluency–Tens assesses a student’s ability to accurately and efficiently mentally determine 10 more or 10 less than a given number from 0 through 100. Because it is a timed measure, Math Facts Fluency–Tens can also measure the level of automaticity of these skills.

The student sees rows of number pairs on each test page. Starting with the first row, the student solves problems involving the addition and subtraction of 10. The student attempts as many items as possible in 1 minute. Figure 8 shows a sample student test page.

Figure 8 Math Facts Fluency–Tens Student Test Page

$60 + 10 =$	$40 + 10 =$	$15 + 10 =$	$20 - 10 =$
$35 + 10 =$	$50 - 10 =$	$75 + 10 =$	$90 - 10 =$
$40 - 10 =$	$64 + 10 =$	$85 - 10 =$	$7 + 10 =$
$72 - 10 =$	$26 + 10 =$	$13 - 10 =$	$59 + 10 =$

Before you begin, be sure the testing area is reasonably quiet and free from distractions. Each test form is different, so be sure to use the appropriate form for a given student’s testing session (e.g., the stimulus book for the current benchmark season or the required form from the PM stimulus booklet for progress monitoring purposes).

Materials Needed

For the student, you will need:

- a printout of the appropriate test form.

To record student responses, you will need:

- the corresponding aimswebPlus DRF on a computer that is connected to the internet.

Note. Each Math Facts Fluency–Tens test form contains 2 pages.

Administration Directions

During testing, please keep in mind:

- As needed, remind the student of the task. For example, by saying: **How much is 65 plus 10?**
- If the student becomes stuck on an item, wait about 7 to 10 seconds for an answer before having him/her move on to the next item.
- If the student is having trouble staying on track, point to each item for him/her.
- If the student is unable to correctly answer the first 4 items, discontinue administration.

Place the Math Facts Fluency–Tens practice page in front of the student. Point to the top box and say:

Look at the number sentence in this box. What is 10 plus 10?

If correct (20), say: **That's right! 10 plus 10 more equals 20. So, 20 is the correct answer.**

If incorrect, say: **10 plus 10 more equals 20. So, 20 is the correct answer.**

Point to the bottom box and say:

Now look at the number sentence in this box. What is 30 minus 10?

If correct (20), say: **That's right! 30 take away 10 equals 20. So, 20 is the correct answer.**

If incorrect, say: **30 take away 10 equals 20. So, 20 is the correct answer.**

Place the student test pages in front of the student in order and so that only the first page is visible.

Then, point to the box in the upper-left corner and move your finger along the rows as you say:

Here are some more boxes with number sentences. Start here and tell me the answer to each number sentence. Keep going until I tell you to stop. Ready? Begin.

Click Begin on the DRF screen when you say Begin.

Follow along on the DRF, clicking on items that were incorrectly answered or skipped.

If the student finishes the items on the first page, turn to the second page and tell him/her to keep going.

At 1 minute, say:

Stop.

Follow the directions on the DRF screen to click on the last item answered by the student and score student responses.

Note. Very occasionally, a student will finish in less than 1 minute. If this occurs, click on the pause icon (■) and select Student Finished Form from the pop-up menu. Then, follow the directions on the DRF screen to score student responses.

Discontinue Rule: If the student is unable to correctly answer the first 4 items, discontinue administration of this form. Click on the pause icon (■) and select Discontinue Form from the pop-up menu.

Scoring Rules

Students receive 1 point for each correctly answered item. The maximum score for Math Facts Fluency–Tens is 32 points.

Appendix

Timing Guidelines and Discontinue Rules

Table AI provides a summary of the item timing guidelines (i.e., when to have a student move on to the next item) and measure discontinue rules.

Table AI Item Timing Guidelines and Measure Discontinue Rules

Measure	When to move on*	When to discontinue
Number Naming Fluency (NNF)	~3–5 seconds	Student incorrectly names the first 5 numbers.
Quantity Total Fluency (QTF)	~3–5 seconds	Student incorrectly answers the first 5 items.
Quantity Difference Fluency (QDF)	~7–10 seconds	Student incorrectly answers the first 5 items.
Concepts & Applications (CA)	When stuck, say: Give your best guess.	Student incorrectly answers the first 5 items.
Number Comparison Fluency–Pairs (NCF–P)	~3–5 seconds	Student incorrectly answers the first 5 items.
Math Facts Fluency–1 Digit (MFF–1D)	~3–5 seconds	Student incorrectly answers the first 5 items.
Math Facts Fluency–Tens (MFF–T)	~7–10 seconds	Student incorrectly answers the first 4 items.

*Note. The times listed are general guidelines. As noted in the Test Accommodations section of this guide, examiners are given flexibility in determining when to have a student move on to the next item during the timed fluency measures and are encouraged to use their professional judgement on a case-by-case basis.



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