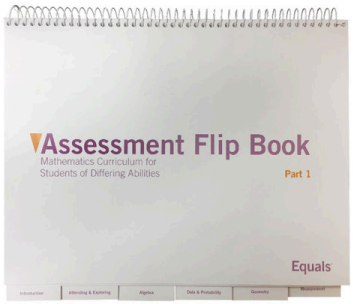
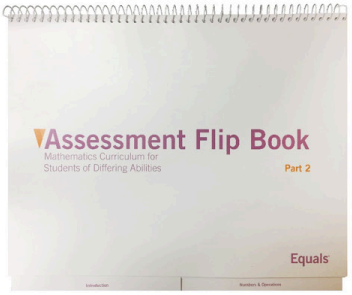
Assessment Manuals

- 2 Parts / books
- Part 1 = 5 of the 6 Subtests
  - Attending and Exploring
  - Algebra
  - Data
  - Geometry
  - Measurement
- Part 2 = Numbers and Operations Subtest exclusively





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The Equals Assessment is a placement assessment used to determine the most appropriate starting point for each student based on their math knowledge.

Assessment Flip Book part 1 contains the following sub-tests:
- Attending and Exploring (screening tool)
- Algebra
- Data
- Geometry
- Measurement

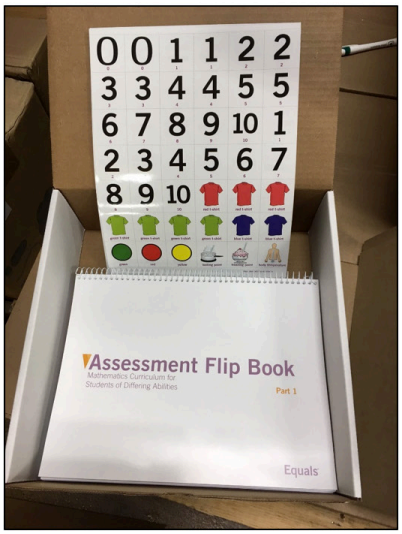
Assessment Flip Book part 2 contains the following sub-tests:
- Numbers and Operations

All sub-tests, with the exception of the Attending and Exploring screening tool, must be administered in order to calculate an adjusted raw score for placement.

The adjusted raw score will then be used in conjunction with the Start Point Chart, found in the introduction of either of the Assessment manuals, to determine an appropriate starting point in the Equals curriculum.

Preparing and Organizing Assessment Materials

- cut pic-symbols, student tools, paper box
- review workmats
- Action Dictionary –from Members Only content
  - prepare communication devices as needed
- gather classroom materials
- use the Assessment Materials List
- print Student Response Booklet from Members Only content



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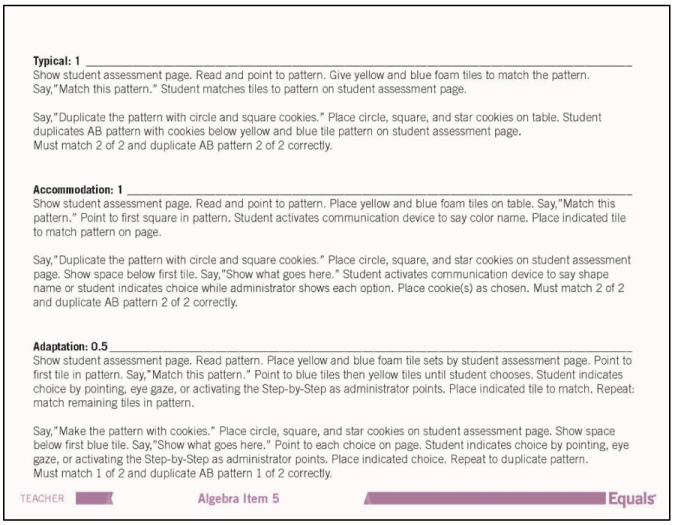
As part of preparing to administer the assessment:

- Cut out the included pic-symbols and paper box.
- Review the different workmats.
- Review some of the student actions within the assessment items. Many of these actions can be supported with the Action Dictionary.
- Look for opportunities for students that require a communication device to indicate their response, and get an idea of what those responses may include. You may want to coordinate with your speech pathologist or programmer. Some possibilities include:
  - Number list to 10.
  - Yes
  - No
  - Color choices
  - Shape choices
- Gather classroom materials using the list from the introduction page in either assessment manual.
- Print the Student Response Booklet from the Members Only content.
- The Assessment Materials list can be printed from the Members Only content. This will show which manipulatives and classroom materials you will need for each subtest.

You can store all of these materials in the Assessment box for ease of organization. This way all of your materials (with the exception of the manipulatives from the manipulative kit) are in one place when you are ready to assess your students.

Typical, Accommodated, and Adapted Items

- **Typical** = full understanding of math concept
- **Accommodation** = full understanding of math concept needs communication or physical supports
- **Adaptation** = all due opportunity to show what student knows



Typical: 1 _____
Show student assessment page. Read and point to pattern. Give yellow and blue foam tiles to match the pattern. Say,"Match this pattern." Student matches tiles to pattern on student assessment page.

Say,"Duplicate the pattern with circle and square cookies." Place circle, square, and star cookies on table. Student duplicates AB pattern with cookies below yellow and blue tile pattern on student assessment page. Must match 2 of 2 and duplicate AB pattern 2 of 2 correctly.

Accommodation: 1 _____
Show student assessment page. Read and point to pattern. Place yellow and blue foam tiles on table. Say,"Match this pattern." Point to first square in pattern. Student activates communication device to say color name. Place indicated tile to match pattern on page.

Say,"Duplicate the pattern with circle and square cookies." Place circle, square, and star cookies on student assessment page. Show space below first tile. Say,"Show what goes here." Student activates communication device to say shape name or student indicates choice while administrator shows each option. Place cookie(s) as chosen. Must match 2 of 2 and duplicate AB pattern 2 of 2 correctly.

Adaptation: 0.5 _____
Show student assessment page. Read pattern. Place yellow and blue foam tile sets by student assessment page. Point to first tile in pattern. Say,"Match this pattern." Point to blue tiles then yellow tiles until student chooses. Student indicates choice by pointing, eye gaze, or activating the Step-by-Step as administrator points. Place indicated tile to match. Repeat: match remaining tiles in pattern.

Say,"Make the pattern with cookies." Place circle, square, and star cookies on student assessment page. Show space below first blue tile. Say,"Show what goes here." Point to each choice on page. Student indicates choice by pointing, eye gaze, or activating the Step-by-Step as administrator points. Place indicated choice. Repeat to duplicate pattern. Must match 1 of 2 and duplicate AB pattern 1 of 2 correctly.

TEACHER Algebra Item 5 Equals

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All assessment items can be assessed in three ways: **typical**, **accomodation**, and **adaptation**.

Familiarize yourself with each version to determine the most appropriate version to present to the student.

Each version is meant to support students with different needs. The assessment version presented can change from question to question.

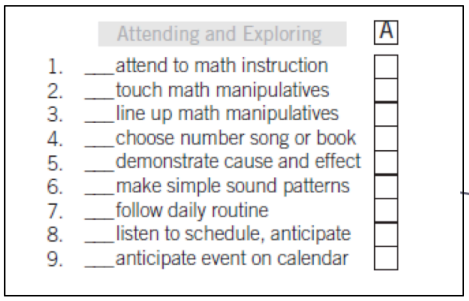
Assessment version:

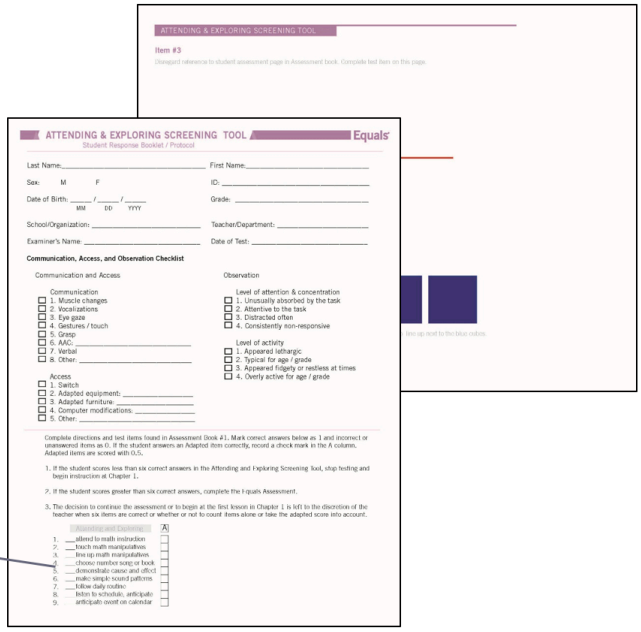
- **Typical**: presented with minimal support and designed to test the full knowledge of the student.
- **Accomodation**: provide support for students who have limited fine motor and/or verbal communication abilities. This version of the test items is designed to test the full knowledge of the student. The supports provided should not give the student any advantage over the Typical items. It is hoped that students who have limited verbal communication, will have a communication device to use during the assessment and have programed options that can allow the student to make choices. Some examples of response to include are: yes, no, that one, basic shapes, colors, and numerals to 10. However, alternate response strategies are included.
- **Adaptation**: differentiated versions of the typical and accommodated questions, giving students the opportunity to show partial knowledge of the math concept being assessed. The Adapted items present part of the math concept and/or a multiple choice format for students to answer the question. Students who answer with the Adapted version receive partial credit (.5).

Remember that you are assessing a students understanding of math in their world. The questions will not necessarily be an inventory of rote skills, but rather what they understand and how they problem solve and connect concepts and skills.

Attending and Exploring Screening Tool

- Print from Members Only
  - MO→ Assessment folder → Attending and Exploring Screening Tool
- Assesses Attending and Exploring skills
- Do not have to administer for every student





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The Equals Placement Assessment has the option of utilizing the subtest Attending and Exploring as a screening tool to determine if the remainder of the assessment should be given.

When deciding if this screening tool should be used look through the 9 items to determine if this subtest would be appropriate to administer.

The Attending and Exploring Subtest does not have to be given if confident a student possesses the skills measured in Attending and Exploring subtest. In that case, any other subtest can be used as the starting point for the assessment.

Assessment Scoring

Assess all 5 subtests (Attending and Exploring separate)

- 1 for correct answer, 0 for incorrect answer
- Adapted items – check "A" column
- Basal and Ceiling – 3 consecutive items

  Student Protocol Pages
- Scoring Table

  Assessment Manual
- Suggested Start Point Chart

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- *Assess the students in ALL (5) subtest areas. (Attending and Exploring is separate)*
- *Use 1 to indicate a correct response*
- *0 to indicate an incorrect response*
- *Be sure to **check the box for all items that were asked using the adaptation version** regardless of whether the student was correct or not.*
- *The **basal** is established with 3 correct answers in a row.*
- *The **ceiling** is reached when student gets 3 incorrect answers in a row.*
- *There is a scoring table on the third page of the student protocol page to assist you.*
- *Once you have calculated the adjusted raw score, you will use the suggested start point chart to assign chapter placement. This can be found in the introduction of either of the assessment manuals.*

Scoring: Examples

Equals Math Subtest	Raw Score	Adaptations
Algebra	8	4
Data Analysis and Probability	10	3
Geometry	22	8
Measurement	6	3
Numbers and Operations	90	28
Total	136	46

Total Raw Score		Total Adaptations		Adjusted Raw Score
	-	(46 x .5)	=	
136	-	23	=	113

Adjusted Raw Score: 113

Chapter Placement: _____

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Count all correct items for each subtest, then find the total raw score.

Look at all of the items where the adaptation version was asked. Count all adaptation items the student answered **correctly**, and record those in the Adaptations column.

Multiply the total amount of correct adaptation items by .5.

Subtract the amount of correct adaptations (multiplied by .5) from the Total Raw Score.

Record the Adjusted Raw Score on the line near the bottom of the scoring sheet.

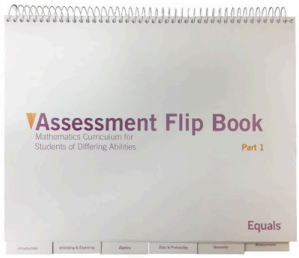
Use the Suggested Start Point Chart located in the introduction of either Assessment manual to determine a student's chapter placement.

From the example above:

136 = number of items answered correctly on all 5 sub-tests
46 = Total number of adaptation items **answered correctly**
23 = Total number of adaptation items answered correctly and adjusted

136 - 23 = 113
(total raw score) - (adjusted adaptations) = (Adjusted Raw Score)

How are students placed in Equals?



- District guidelines
- Chapter 1 / Attending and Exploring Screening Tool
- Contents page
- Contents page.....confirm with assessment
- Assess all students before you begin

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District guidelines take precedence. Your team should decide what will best fit the needs of your school with regards to placement.

Options for placement:

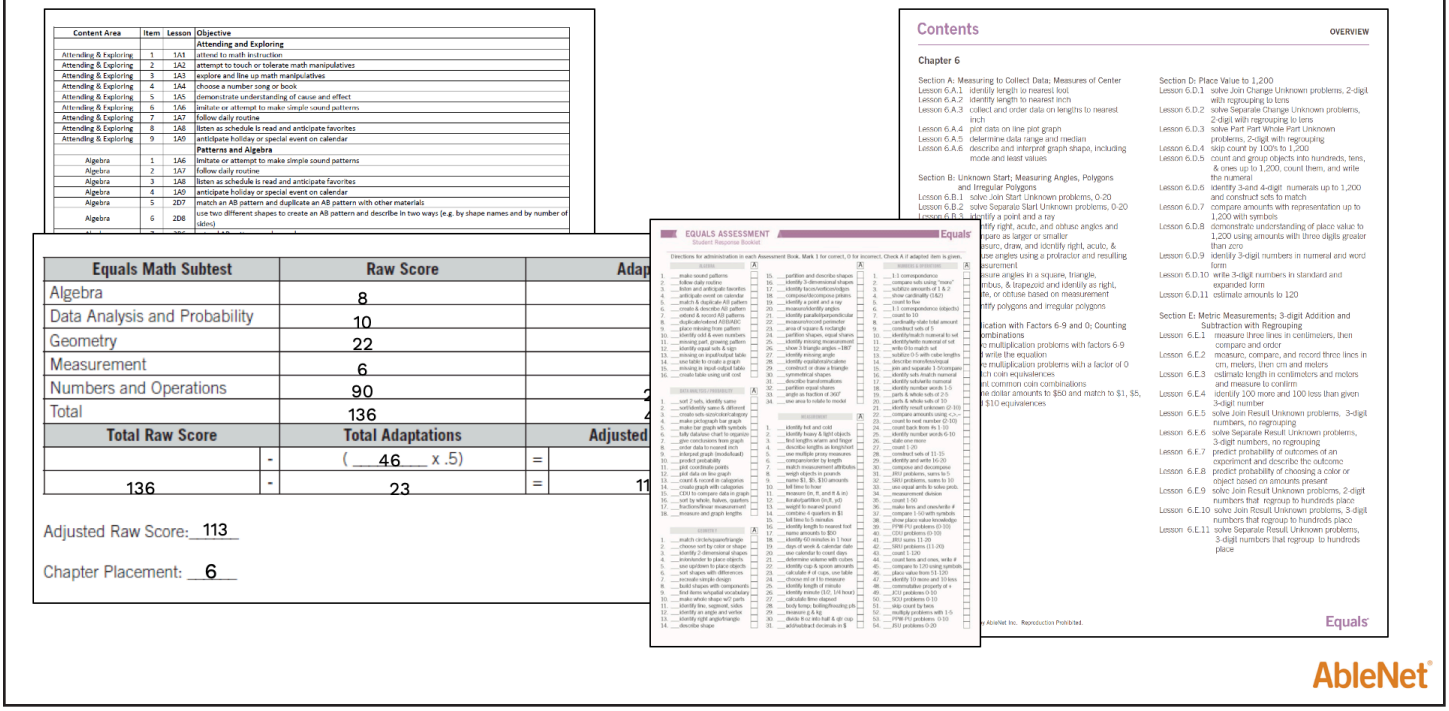
- **Begin at Chapter 1 Lesson 1:** If a student has had no or little math instruction, begin with Chapter 1, Lesson 1. Administering the Equals assessment to a student at this level is not necessary if you are confident that they would be a good fit for chapter one. The assessment would not change their starting point.

- **Place students based on observed skills:** Consult the contents pages of the Equals Overview Manual: review the lesson objectives from Chapter 1 -10. Consider student understanding of not only the concept, but also vocabulary, math tools, and strategies introduced in the lessons.

- **Assess at a later date:** Begin teaching, using a previously stated strategy and confirm that starting point with the assessment at a later time.

- **Use the Equals Assessment:** Commit to using the Equals assessment. Assess students, calculate their score, and find the corresponding Chapter, placing them in the most appropriate section based on their score.

Placement



Content Area	Item	Lesson	Objective
			Attending and Exploring
Attending & Exploring	1	1A1	attend to math instruction
Attending & Exploring	2	1A2	attempt to touch or tolerate math manipulatives
Attending & Exploring	3	1A3	explore and line up math manipulatives
Attending & Exploring	4	1A4	choose a number song or book
Attending & Exploring	5	1A5	demonstrate understanding of cause and effect
Attending & Exploring	6	1A6	imitate or attempt to make simple sound patterns
Attending & Exploring	7	1A7	follow daily routine
Attending & Exploring	8	1A8	listen as schedule is read and anticipate favorites
Attending & Exploring	9	1A9	anticipate holiday or special event on calendar
			Patterns and Algebra
Algebra	1	1A6	imitate or attempt to make simple sound patterns
Algebra	2	1A7	follow daily routine
Algebra	3	1A8	listen as schedule is read and anticipate favorites
Algebra	4	1A9	anticipate holiday or special event on calendar
Algebra	5	2D7	match an AB pattern and duplicate an AB pattern with other materials
Algebra	6	2D8	use two different shapes to create an AB pattern and describe in two ways (e.g. by shape names and by number of sides)

Equals Math Subtest	Raw Score	Adap
Algebra	8	
Data Analysis and Probability	10	
Geometry	22	
Measurement	6	
Numbers and Operations	90	
Total	136	

Total Raw Score		Total Adaptations		Adjusted
	-	(46 x .5)	=	
136	-	23	=	11

Adjusted Raw Score: 113

Chapter Placement: 6

Contents OVERVIEW

Chapter 6

Section A: Measuring to Collect Data; Measures of Center
Lesson 6.A.1 identify length in nearest tool
Lesson 6.A.2 identify length to nearest inch
Lesson 6.A.3 collect and order data on lengths to nearest inch
Lesson 6.A.4 plot data on line plot graph
Lesson 6.A.5 determine data range and median
Lesson 6.A.6 describe and interpret graph shape, including mode and least values

Section B: Unknown Start; Measuring Angles, Polygons and Irregular Polygons
Lesson 6.B.1 solve Join Start Unknown problems, 0-20
Lesson 6.B.2 solve Separate Start Unknown problems, 0-20
Lesson 6.B.3 identify a point and a ray
Lesson 6.B.4 identify right, acute, and obtuse angles and compare as larger or smaller
Lesson 6.B.5 measure, draw, and identify right, acute, & obtuse angles using a protractor and resulting measurement
Lesson 6.B.6 measure angles in a square, triangle, rhombus, & trapezoid and identify as right, acute, or obtuse based on measurement
Lesson 6.B.7 identify polygons and irregular polygons

Section C: Multiplication with Factors 6-9 and 0; Counting Combinations
Lesson 6.C.1 solve multiplication problems with factors 6-9
Lesson 6.C.2 write the equation
Lesson 6.C.3 solve multiplication problems with a factor of 0
Lesson 6.C.4 identify coin equivalences
Lesson 6.C.5 count common coin combinations
Lesson 6.C.6 solve dollar amounts to $50 and match to $1, $5, and $10 equivalences

Section D: Place Value to 1,200
Lesson 6.D.1 solve Join Change Unknown problems, 2-digit with regrouping to tens
Lesson 6.D.2 solve Separate Change Unknown problems, 2-digit with regrouping to tens
Lesson 6.D.3 solve Part Part Whole Part Unknown problems, 2-digit with regrouping
Lesson 6.D.4 skip count by 100's to 1,200
Lesson 6.D.5 count and group objects into hundreds, tens, & ones up to 1,200, count them, and write the numeral
Lesson 6.D.6 identify 3-and 4-digit numerals up to 1,200 and construct sets to match
Lesson 6.D.7 compare amounts with representation up to 1,200 with symbols
Lesson 6.D.8 demonstrate understanding of place value to 1,200 using amounts with three digits greater than zero
Lesson 6.D.9 identify 3-digit numbers in numeral and word form
Lesson 6.D.10 write 3-digit numbers in standard and expanded form
Lesson 6.D.11 estimate amounts to 120

Section E: Metric Measurements, 3-digit Addition and Subtraction with Regrouping
Lesson 6.E.1 measure three lines in centimeters, then compare and order
Lesson 6.E.2 measure, compare, and record three lines in cm, meters, then cm and meters
Lesson 6.E.3 estimate length in centimeters and meters and measure to confirm
Lesson 6.E.4 identify 100 more and 100 less than given 3-digit number
Lesson 6.E.5 solve Join Result Unknown problems, 3-digit numbers, no regrouping
Lesson 6.E.6 solve Separate Result Unknown problems, 3-digit numbers, no regrouping
Lesson 6.E.7 predict probability of outcomes of an experiment and describe the outcome
Lesson 6.E.8 predict probability of choosing a color or object based on amounts present
Lesson 6.E.9 solve Join Result Unknown problems, 2-digit numbers that regroup to hundreds place
Lesson 6.E.10 solve Join Result Unknown problems, 3-digit numbers that regroup to hundreds place
Lesson 6.E.11 solve Separate Result Unknown problems, 3-digit numbers that regroup to hundreds place

EQUALS ASSESSMENT
Student Response Booklet

Equals

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To place students in Equals based on their Assessment score, you will need:

- Student's assessment score
- Protocol sheet
- Contents Pages (found in the Overview manual)
- Start Point Chart (found in the introduction of either Assessment manual)
- Assessment Item Document/Electronic Scoring

Locate the suggested chapter based on the students score.

It is always appropriate to begin instruction in the beginning of the chapter your student scored into, however you may want to fine tune placement using information gained from the assessment. **This step is optional.**

Look at the student's protocol sheet, Contents Pages, and Assessment Item Document or Electronic Scoring. This will help you:

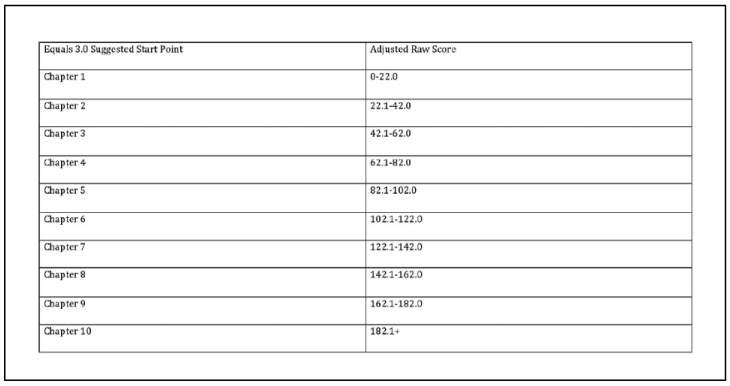
- Identify objectives from earlier in the curriculum your student missed that you want to revisit. This will help fill in gaps in the students math knowledge. These lessons could be taught before jumping in at the suggested starting point.

- Determine if the beginning of the chapter is the best starting point. It is entirely possible that the student possesses the skills taught in the first section(s) from the chapter. If you do not want to revisit these skills, find an appropriate section in which to begin instruction.

You want to begin instruction in a section and lesson where the student will be successful. Keeping student confidence high, especially in the beginning, is very important.

Example of Math Groups

- Student 1: 23.4
- Student 2:156.8
- Student 3: 67.8
- Student 4: 73.4
- Student 5: 32.8
- Student 6: 75.6
- Student 7:142.8
- Student 8:148.2



Equals 3.0 Suggested Start Point	Adjusted Raw Score
Chapter 1	0-22.0
Chapter 2	22.1-42.0
Chapter 3	42.1-62.0
Chapter 4	62.1-82.0
Chapter 5	82.1-102.0
Chapter 6	102.1-122.0
Chapter 7	122.1-142.0
Chapter 8	142.1-162.0
Chapter 9	162.1-182.0
Chapter 10	182.1+

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In general, the students in a classroom will have varying levels of math knowledge. This means you may be working with multiple chapter placements/groups within one classroom.

- Use student scores to assign chapter placements.
- Create groups based on chapter placement.
- If possible, arrange students into no more than 2-3 groups.

Look at student scores, chapter placement, and demonstrated knowledge from the assessment to make further placement decisions. A student that scores near the end of a chapter, and another student that scores at the very beginning of the next chapter may be placed together in one group.

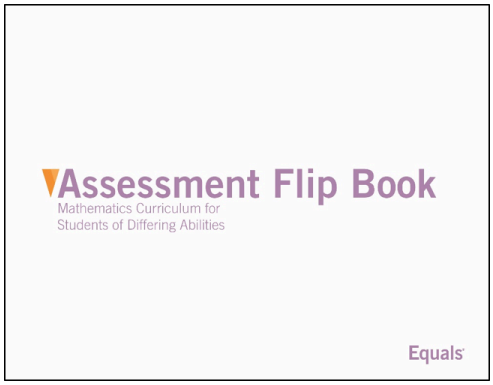
Example:

Student 1 scores 140
Student 2 scores 144

Based on score alone, these two students would be placed into two different chapters (Chapter 7 and Chapter 8 respectively). Look at each students' protocol to determine a starting point where both students will be successful, but also challenged. In this scenario, Chapter 7 Section D may be a great starting point for both of these students.

Assessment Tips

- Assessment Manual
  - Introduction
- 1 subtest at a time: all students
- Prepare you Equals Assessment box
  - cut: pic-symbols, paper box, rulers, and number line
  - gather classroom materials
  - pull manipulatives
- Members Only content
  - Student Response Booklet
  - Assessment Items (document)



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Assessment Tips:

Organize and create your assessment box in advance.

Assess in your math area so you can quickly grab manipulatives instead of locating them ahead of time.

Assess one sub-test at a time for all students. This gives each student a natural break between sub-tests, and allows you to become familiar with the sub-test so you can begin to anticipate upcoming questions and possible supports/adaptations your students will need.

Use Electronic Scoring from the Members Only Content. Enter the students responses (1 or 0) for each item, mark any items that were asked using the adaptation version. This will not only score the assessment for you, but also provide a chapter placement and identify which objectives your student demonstrated knowledge of on the assessment.

Equals Assessment Materials

Attending & Exploring

Manipulative Kit	Content Kit	Classroom Materials	Assessment Pic-symbols
MathLine Ang-Leg any math manipulative (2) eg: MathLine, ruler, protractor, counters etc attribute blocks baseballs building blocks butterflies connecting cubes insect counters Step by Step		calendar of student birthday month cause and effect toy charecters or props to match books/songs individual student schedule small sticky note *sticker (optional)* sticky tac three familiar math books OR three familiar math songs	

Data Analysis & Probability

Manipulative Kit	Content Kit	Classroom Materials	Assessment Pic-symbols
2 rulers (optional) attribute blocks baseballs building blocks circle counters connecting cubes flying disks foam tiles Step by Step wax coated yarn sticks		paper *Optional: 3 markers, 4 pairs of scissors, 5 pencils*	t-shirts: red, blue, green numerals 0-5 color circles: red, green, yellow 2" 5" 6" markers, scissors, pencils, rulers 3/4; 1 -3/4; 1 -1/4 (option: pictured) hot dog, week

Algebra

Manipulative Kit	Content Kit	Classroom Materials	Assessment Pic-symbols
Ang-Leg Attribute blocks connecting cubes cookie shapes foam tiles Money cards ($1 bills) Step by Step		calendar of student birthday month individual student schedule small sticky note *sticker (optional)*	numerals 2, 3, 4, 6

Measurement

Manipulative Kit	Content Kit	Classroom Materials	Assessment Pic-symbols
Ang-Legs building blocks connecting cubes demonstration clock ruler Step by Step		masking tape lines (6 inches, 1 ft 6in, & 2 ft) paper clips, small (3) sticky notes	boiling point freezing point body temperature

Equals Assessment Materials

Geometry			
Manipulative Kit	Content Kit	Classroom Materials	Assessment Pic-symbols
Ang-Legs attribute blocks bowls building blocks ocean animal counters pattern blocks protractor Shape Puzzles (halves: triangle, rectangle, square, circle) Step by Step wax coated yarn sticks			none

Numbers and Operations			
Manipulative Kit	Content Kit	Classroom Materials	Assessment Pic-symbols
Ang-Legs attribute blocks building blocks butterflies circle counters colored bowls connecting cubes cookie shapes fraction stacks insect counters Money Cards Pizza Fractions rubber stamps/number stamps Step by Step straws	*Optional: Numeral cards (1-20)* Place Value 10- and 100-frames, blank 10-frame (items after 58)	dry erase marker masking tape paper rubber bands or paper clips to bind Place Value cards sticky notes	numerals 1 -10 greater than, less than, equal .2; 1.2; .8

Content Area	Item	Lesson	Objective
			Attending and Exploring
Attending & Exploring	1	1A1	attend to math instruction
Attending & Exploring	2	1A2	attempt to touch or tolerate math manipulatives
Attending & Exploring	3	1A3	explore and line up math manipulatives
Attending & Exploring	4	1A4	choose a number song or book
Attending & Exploring	5	1A5	demonstrate understanding of cause and effect
Attending & Exploring	6	1A6	imitate or attempt to make simple sound patterns
Attending & Exploring	7	1A7	follow daily routine
Attending & Exploring	8	1A8	listen as schedule is read and anticipate favorites
Attending & Exploring	9	1A9	anticipate holiday or special event on calendar
			Patterns and Algebra
Algebra	1	1A6	imitate or attempt to make simple sound patterns
Algebra	2	1A7	follow daily routine
Algebra	3	1A8	listen as schedule is read and anticipate favorites
Algebra	4	1A9	anticipate holiday or special event on calendar
Algebra	5	2D7	match an AB pattern and duplicate an AB pattern with other materials
Algebra	6	2D8	use two different shapes to create an AB pattern and describe in two ways (e.g. by shape names and by number of sides)
Algebra	7	3B6	extend AB patterns and record
Algebra	8	4.F.1	duplicate and extend ABB and ABC patterns
Algebra	9	4.F.5	identify and place what is missing from a growing pattern
Algebra	10	5E.3	identify odd and even numbers
Algebra	11	5E.4	determine missing number(s) in simple number pattern
Algebra	12	6F2	identify and describe equal sets and expressions and use of the equal sign
Algebra	13	6F5	identify and place missing amounts in a growing pattern in an input/output table with a rule up to x 5
Algebra	14	8A5	use an input/output table with a rule up to x 10 to identify a pattern and create a graph
Algebra	15	8A6	identify and place missing amounts in a pattern in an input/output table with a rule up to x 10
Algebra	16	10E.1	create table to display price of 1-5 items by unit cost (per item, pound, etc.)
			Data and Probability
Data & Probability	1	1B2	sort two sets of identical objects and identify matching set as same
Data & Probability	2	1B4	sort objects by color and identify colors as same and different
Data & Probability	3	1B9	create sets by size, color, or category
Data & Probability	4	2C5	construct a pictograph bar graph to compare

Data & Probability	5	3A6	place data in simple bar graph with symbolic representation
Data & Probability	6	4.E.2	tally categorical data from opinion survey and use data chart to organize the answers
Data & Probability	7	4.E.3	make a bar graph with categorical data and communicate conclusions drawn from the graph
Data & Probability	8	6A3	collect and order data on lengths to nearest inch
Data & Probability	9	6A6	describe and interpret graph shape, including mode and least values
Data & Probability	10	6E.9	predict probability of choosing a color or object based on amounts present
Data & Probability	11	7C6	find coordinate points on a graph to plot given data and answer a question about the data
Data & Probability	12	7C8	plot collected data on line graph and communicate conclusions drawn from it
Data & Probability	13	9A3	count and record the number of items in at least three categories in classroom or other location
Data & Probability	14	9A4	create a graph to show amounts in each category counted
Data & Probability	15	9A5	solve Compare Difference problems to compare data in a graph
Data & Probability	16	10D1	collect and sort data by whole, halves, and fourths
Data & Probability	17	10D3	identify fractions and their equivalent of linear measurement in halves and fourths
Data & Probability	18	10D4	measure and graph lengths by wholes, halves, and fourths
			Geometry
Geometry	1	1C1	match identical circles, squares, and triangles and identify as same
Geometry	2	1C4	choose one attribute (color or shape) to sort shapes
Geometry	3	1C5	identify two-dimensional shapes (circle, triangle, square)
Geometry	4	1C7	use spatial vocabulary (in, on, and under) to discuss and place objects in a familiar envrionment.
Geometry	5	1C8	use spatial vocabulary (up, down) to discuss and place objects in a familiar envrionment.
Geometry	6	1C12	sort circle, triangle, square, rhombus, and rectangle with variety of sizes and orientations by shape
Geometry	7	1C13	recreate a simple design with two to four shapes
Geometry	8	1C14	model three-dimensional shapes in the world by building shapes from components (e.g., blocks into tower)
Geometry	9	2D1	locate items within a familiar environment using spatial vocabulary
Geometry	10	2D3	put together two equal parts of a shape to make a whole circle, square, rectangle, and triangle.
Geometry	11	3E.1	identify a line, a line segment, and the sides of a two-dimensional shape
Geometry	12	3E.2	identify an angle and vertex
Geometry	13	4B1	identify right angle and right triangle
Geometry	14	4B5	describe circle, square, rectangle, triangle, and rhombus, with number of sides, vertices, angles, and parallel/perpendicular lines
Geometry	15	4B9	partition circles, rectangles, and squares into two, three, and four equal shares, describing them as parts (halves, thirds, fourths, and quarters) and whole
Geometry	16	4.F.6	identify three-dimensional shapes with different sizes and orientation

Geometry	17	5C3	identify faces, vertices, and edges on a three-dimensional figure
Geometry	18	5C5	compose and decompose cubes and rectangular prisms into larger and smaller cubes and rectangular prisms
Geometry	19	6B3	identiy a point and a ray
Geometry	20	6B6	measure angles in a square, triangle, rhombus, and trapezoid and identify as right, acute, or obtuse based on measurement
Geometry	21	7D6	identify parallel and perpendicular lines within shapes and the environment and draw them
Geometry	22	7D9	measure and record perimeter of a rectangle, square, trIangle, hexagon, octagon, trapezoid, and rhombus
Geometry	23	8C1	identify and measure area of a square and a rectangle
Geometry	24	8C2	partition rhombus, trapezoid and hexagon into equal shares and describe by parts and whole
Geometry	25	9C1	identify missing measurements of a rectangle, square, equilateral triangle, hexagon, octagon, trapezoid, and rhombus on a perimeter model when measurements of two sides are identified
Geometry	26	9C2	identify and show three angles in triangle equal 180 degrees
Geometry	27	9C3	identify angles in a triangle are addditive and determine missing angle measurement in a triangle when two angle measurements are identified (to equal 180 degrees)
Geometry	28	9C5	identify equilateral and scalene triangles
Geometry	29	9C6	construct or draw a triangle
Geometry	30	9D.3	identify symmetrical shapes and locate the line of symmetry
Geometry	31	9D.5	describe transformations to prove congruency
Geometry	32	10B6	partition and describe equal shares in rectangle, square, and rhombus with total amount and fractions, determining more equal shares results in smaller shares
Geometry	33	10B7	identify an angle measurement as a fraction of the 360 degree circle (e.g. 30 degree angle is 30/360 of a circle)
Geometry	34	10E.9	use concepts of area and relate area to a scaled model
			Measurement
Measurement	1	1A10	identify hot and cold
Measurement	2	1E.1	identify objects that are heavy and light
Measurement	3	1E.3	use one arm and one finger to locate lengths of the same approximate size
Measurement	4	1E.4	describe lengths as long and short
Measurement	5	2F 6	place multiple proxy measures of a finger length to measure objects that require more than one length
Measurement	6	2F 8	compare and order objects by length, using words *longer* and *shorter* to describe
Measurement	7	3D2	identify and match measurement attributes to tools and everyday situations
Measurement	8	3D5	weigh objects in pounds
Measurement	9	3D7	name dollar amounts: $1, $5, $10

Measurement	10	3F9	tell time to the hour with an analog and digital clock
Measurement	11	4.E.6	measure lines in inches, feet, and feet and inches
Measurement	12	4.E.8	iterate/partition inches, feet, and yards and rename measured lines with different units
Measurement	13	5E.8	identify weight to nearest pound using a dial scale
Measurement	14	5F2	combine four quarters to make a dollar
Measurement	15	5F7	tell time to five minutes with an analog and digital clock
Measurement	16	6A1	identify length to nearest foot
Measurement	17	6C5	name dollar amounts to $50 and match to $1, $5, and $10 equivalencies
Measurement	18	7A3	count and identify 60 minutes in one hour
Measurement	19	7D1	find days of the week and a given date on calendar
Measurement	20	7D3	use calendar to schedule an event and count days to event
Measurement	21	8C5	determine volume of a box with cubes
Measurement	22	8C6	identify dry and liquid cup and spoon measured amounts
Measurement	23	8C9	given number of fluid ounces in 1-5 cups (8-40 ounces) calculate the number of cups per amount and use a table to solve a problem
Measurement	24	8D9	choose appropriate unit (ml, l) to measure large and small liquid amounts
Measurement	25	9B1	identify length of a minute and measure amount of minutes it takes to complete a simple task using a stop-watch
Measurement	26	9B2	identify number of minutes in a half hour and quarter hour
Measurement	27	9B3	solve Join Result Unknown problems to calculate elapsed time to the hour and 1/2 hour
Measurement	28	9B7	identify and compare body temperatures, boiling point, and freezing point in relationship to room and high/low outside temperatures in degrees
Measurement	29	9D.10	choose appropriate unit (g, kg) to measure the mass of heavy and light objects, measure and compare
Measurement	30	10A3	divide 8 fluid ounces in two and four equal shares to represent half and fourth of a cup
Measurement	31	10D11	add and subtract decimals in money terms
			Numbers and Operations
Numbers & Operations	1	1D1	place objects or pictures in one-to-one correspondence with no counting
Numbers & Operations	2	1D2	compare amounts in sets created in piles, rows, and columns and describe with the word more.
Numbers & Operations	3	1D5	subitize amounts of one and two
Numbers & Operations	4	1D8	demonstrate cardinality by repeating last number and unit name after amount is counted (one and two)
Numbers & Operations	5	1D9	count to five
Numbers & Operations	6	2A1	demonstrate one-to-one correspondence counting 1 and 2 objects or pictures
Numbers & Operations	7	2A8	count to 10
Numbers & Operations	8	2A9	demonstrate cardinality of number after counting a set by stating total amount

Numbers & Operations	9	2B2	construct sets of 5
Numbers & Operations	10	2B3	identify sets of 1-5 and match the numeral to the set
Numbers & Operations	11	2B4	identify sets of 1-5 and write the numeral of the set
Numbers & Operations	12	2B5	demonstrate understanding of concept of zero and write 0 to match a set with zero
Numbers & Operations	13	2B6	subitize amounts 0-5 with cube lengths and variety of arrangements
Numbers & Operations	14	2C1	compare amounts of two sets (up to five each) and describe as more, less, or equal amounts
Numbers & Operations	15	2C3	join and separate sets of amounts one through five and compare the result
Numbers & Operations	16	2F 3	identify sets of 10 and match the numeral to the set
Numbers & Operations	17	2F 4	identify sets of 10 and write the numeral of the set
Numbers & Operations	18	2F 5	identify number words one through five and match to numerals
Numbers & Operations	19	3A1	compose and decompose sets of 2-5 and describe the parts and whole
Numbers & Operations	20	3B3	compose and decompose sets of 10 and describe the parts and whole
Numbers & Operations	21	3B5	identify result unknown (whole or part) of sets 2-10 when parts are joined or separated
Numbers & Operations	22	3C2	compare amounts 1-10, using symbols for more than, less than, and equal to
Numbers & Operations	23	3C3	count from one number to another between 2-10
Numbers & Operations	24	3C4	count back from numbers 1-10
Numbers & Operations	25	3C5	identify number words six through ten
Numbers & Operations	26	3C8	state one more than given number, 1-10
Numbers & Operations	27	3F1	count 1-20
Numbers & Operations	28	3F3	construct a set to match numerals 11-15
Numbers & Operations	29	3F7	identify sets of 16-20 and write the numerals
Numbers & Operations	30	3F8	compose and decompose amounts to 11-20 and describe the parts and whole
Numbers & Operations	31	4A1	solve Join Result Unknown problems, sums to 5
Numbers & Operations	32	4A4	solve Separate Result Unknown problems, sums to 10
Numbers & Operations	33	4C1	create groups of equal amounts to solve problems with manipulatives (Multiplication)
Numbers & Operations	34	4C2	count equal groups to solve problems with manipulatives (Measurement Division)
Numbers & Operations	35	4C9	count 1 - 50
Numbers & Operations	36	4D2	count and group objects into tens and ones up to 50, count them by tens and ones, and write the numeral
Numbers & Operations	37	4D4	compare amounts with representation up to 50 with symbols.
Numbers & Operations	38	4D6	demonstrate understanding of place value up to 50
Numbers & Operations	39	4D8	Solve Part Part Whole Unknown problems, 0-10
Numbers & Operations	40	4D9	Solve Compare Difference Unknown problems 0-10
Numbers & Operations	41	5A1	solve Join Result Unknown problems, sums 11 to 20
Numbers & Operations	42	5A2	solve Separate Result Unknown problems, sums 11 to 20

Numbers & Operations	43	5A3	count 1-120
Numbers & Operations	44	5A5	count and group objects into tens and ones up to 120, count them by tens and ones, and write the numeral
Numbers & Operations	45	5A9	compare amounts with representation up to 120 with symbols
Numbers & Operations	46	5A11	demonstrate understanding of place value from 51-120
Numbers & Operations	47	5B3	identify 10 more and 10 less than given number 20-50
Numbers & Operations	48	5B4	demonstrate commutative property of addition
Numbers & Operations	49	5C1	solve Join Change Unknown problems 0-10
Numbers & Operations	50	5C2	solve Separate Change Unknown problems 0-10
Numbers & Operations	51	5E.2	skip count by twos
Numbers & Operations	52	5E.7	solve multiplication problems with factors 1-5
Numbers & Operations	53	5F9	Solve Part Part Whole Part Unknown problems, 0-10
Numbers & Operations	54	6B1	solve Join Start Unknown problems, 0-20
Numbers & Operations	55	6B2	solve Separate Start Unknown problems, 0-20
Numbers & Operations	56	6C1	solve multiplication problems with factors 6-9 and write the equation
Numbers & Operations	57	6C2	solve multiplication problems with a factor of 0
Numbers & Operations	58	6D5	count and group objects into hundreds, tens, and ones up to 1,200, count them, and write the numeral
Numbers & Operations	59	6D8	demonstrate understanding of place value to 1,200 using amounts with three digits greater than zero
Numbers & Operations	60	6D10	write 3-digit numbers in standard and expanded form
Numbers & Operations	61	6E.10	solve Join Result Unknown problems, 2-digit numbers that regroup to hundreds place
Numbers & Operations	62	6E.12	solve Separate Result Unknown problems, 3-digit numbers that regroup to hundreds place
Numbers & Operations	63	6F7	given amount in each group (3, 4, 5, 6), equally distribute amounts up to 20 into two, three, four, and/or five equal groups and state the number of groups (measurement division)
Numbers & Operations	64	6F9	solve measurement division problems with divisors 6-9 and write the equation
Numbers & Operations	65	7A6	solve Compare Quantity Unknown problems, 0-20
Numbers & Operations	66	7A7	solve Compare Referent Unknown problems, 0-20
Numbers & Operations	67	7A10	round numbers to hundreds place value
Numbers & Operations	68	7A12	make 100
Numbers & Operations	69	7B2	count and group objects into thousands, hundreds, tens, and ones up to 10,000, count them by hundreds and tens, and write the numeral
Numbers & Operations	70	7B5	demonstrate understanding of place value up to 10,000
Numbers & Operations	71	7B7	write and compare 4-digit numbers in standard and expanded form
Numbers & Operations	72	7B8	identify 1,000 more and less than given 4-digit number
Numbers & Operations	73	7C1	solve Join Result Unknown problems, 4-digit numbers that regroup to hundreds and thousands place
Numbers & Operations	74	7C2	solve Separate Result Unknown problems, 4-digit numbers that regroup to hundreds and thousands place

Numbers & Operations	75	7D10	given number of groups (3, 4, 5, 6), equally distribute amounts up to 20 and state amount in each group
Numbers & Operations	76	7D11	solve partitive division problems with divisors 1-5 with array or grouping
Numbers & Operations	77	7D12	solve partitive division problems with divisors 6-9 and write the division equation
Numbers & Operations	78	8B1	estimate and solve 1-digit multiplication problems with factor of 10 (e.g. 6 x 10, 4 x 10, etc.)
Numbers & Operations	79	8B3	estimate and solve measurement and partitive division problems with divisor of 10
Numbers & Operations	80	8B5	make and describe rectangular arrays in terms of multiplication
Numbers & Operations	81	8B6	demonstrate commutative property of multiplication
Numbers & Operations	82	8B7	demonstrate associative property of multiplication
Numbers & Operations	83	8C10	multiply 2-digit number by 1-digit and 2-digit numbers > 10
Numbers & Operations	84	8D2	solve partitive division problem with 2-digit divisor > 10
Numbers & Operations	85	8D3	solve a division problem and identify a remainder
Numbers & Operations	86	8D4	identify and define multiples and factors in relationship to multiplication and division
Numbers & Operations	87	8D5	solve multiplication and division problems with unknowns using relationship between the two operations
Numbers & Operations	88	8D6	choose multiplication or division to solve a word problem
Numbers & Operations	89	9E.1	use distributive property to solve two-step word problems using two operations (x and +)
Numbers & Operations	90	9E.3	solve Join Change Unknown problem with unknown represented by a letter
Numbers & Operations	91	9E.5	solve two-step problem using two of four operations with unknown represented by a letter
Numbers & Operations	92	9E.6	describe differences in fraction pieces with differing denominators
Numbers & Operations	93	9E.9	partition square and rectangle into two equal triangles and compare parts
Numbers & Operations	94	10A1	define meaning of numerator and denominator
Numbers & Operations	95	10B2	identify fractions with numerator greater than one and write the fraction name
Numbers & Operations	96	10B3	match and create equivalent fractions with models
Numbers & Operations	97	10B5	order and compare common fractions
Numbers & Operations	98	10C2	add and subtract fractions with common denominator
Numbers & Operations	99	10C3	add fractions to total of one
Numbers & Operations	100	10C6	solve addition problem with models that results in mixed number
Numbers & Operations	101	10D7	show fractions in decimal form and read to tenths place
Numbers & Operations	102	10D8	order whole numbers and decimals to tenths
Numbers & Operations	103	10E.7	calculate percentage of total to determine amount off in a sale

Student Information

Last Name:_____ First Name:_____

Sex: M F ID: _____

Date of Birth: _____ / _____ / _____ Grade: _____
MM DD YYYY

School/Organization: _____ Teacher/Department: _____

Examiner's Name: _____ Date of Test: _____

Communication, Access, and Observation Checklist

COMMUNICATION and ACCESS

Communication
- ☐ 1. Muscle changes
- ☐ 2. Vocalizations
- ☐ 3. Eye gaze
- ☐ 4. Gestures / touch
- ☐ 5. Grasp
- ☐ 6. AAC: _____
- ☐ 7. Verbal
- ☐ 8. Other: _____

Access
- ☐ 1. Switch
- ☐ 2. Adapted equipment: _____
- ☐ 3. Adapted furniture: _____
- ☐ 4. Computer modifications: _____
- ☐ 5. Other: _____

OBSERVATION

Level of attention & concentration
- ☐ 1. Unusually absorbed by the task
- ☐ 2. Attentive to the task
- ☐ 3. Distracted often
- ☐ 4. Consistently non-responsive

Level of activity
- ☐ 1. Appeared lethargic
- ☐ 2. Typical for age / grade
- ☐ 3. Appeared fidgety or restless at times
- ☐ 4. Overly active for age / grade

Underline version(s) used in Equals Assessment: Typical Accommodation Adaptation\

Note: if more than one version was used, circle the version used most often during the assessment.

Comments: _____

_____

_____

_____

_____

EQUALS ASSESSMENT

Student Response Booklet

Equals®

Directions for administration in each Assessment Book. Mark 1 for correct, 0 for incorrect. Check A if adapted item is given.

ALGEBRA

		A
1.	___make sound patterns	
2.	___follow daily routine	
3.	___listen and anticipate favorites	
4.	___anticipate event on calendar	
5.	___match & duplicate AB pattern	
6.	___create & describe AB pattern	
7.	___extend & record AB patterns	
8.	___duplicate/extend ABB/ABC	
9.	___place missing from pattern	
10.	___identify odd & even numbers	
11.	___missing part, growing pattern	
12.	___identify equal sets & sign	
13.	___missing on input/output table	
14.	___use table to create a graph	
15.	___missing in input-output table	
16.	___create table using unit cost	

DATA ANALYSIS / PROBABILITY

		A
1.	___sort 2 sets, identify same	
2.	___sort/identify same & different	
3.	___create sets-size/color/category	
4.	___make pictograph bar graph	
5.	___make bar graph with symbols	
6.	___tally data/use chart to organize	
7.	___give conclusions from graph	
8.	___order data to nearest inch	
9.	___interpret graph (mode/least)	
10.	___predict probability	
11.	___plot coordinate points	
12.	___plot data on line graph	
13.	___count & record in categories	
14.	___create graph with categories	
15.	___CDU to compare data in graph	
16.	___sort by whole, halves, quarters	
17.	___fractions/linear measurement	
18.	___measure and graph lengths	

GEOMETRY

		A
1.	___match circle/square/triangle	
2.	___choose sort by color or shape	
3.	___identify 2-dimensional shapes	
4.	___in/on/under to place objects	
5.	___use up/down to place objects	
6.	___sort shapes with differences	
7.	___recreate simple design	
8.	___build shapes with components	
9.	___find items w/spatial vocabulary	
10.	___make whole shape w/2 parts	
11.	___identify line, segment, sides	
12.	___identify an angle and vertex	
13.	___identify right angle/triangle	
14.	___describe shape	
15.	___partition and describe shapes	
16.	___identify 3-dimensional shapes	
17.	___identify faces/vertices/edges	
18.	___compose/decompose prisms	
19.	___identify a point and a ray	
20.	___measure/identify angles	
21.	___identify parallel/perpendicular	
22.	___measure/record perimeter	
23.	___area of square & rectangle	
24.	___partition shapes, equal shares	
25.	___identify missing measurement	
26.	___show 3 triangle angles =180˚	
27.	___identify missing angle	
28.	___identify equilateral/scalene	
29.	___construct or draw a triangle	
30.	___symmetrical shapes	
31.	___describe transformations	
32.	___partition equal shares	
33.	___angle as fraction of 360˚	
34.	___use area to relate to model	

MEASUREMENT

		A
1.	___identify hot and cold	
2.	___identify heavy & light objects	
3.	___find lengths w/arm and finger	
4.	___describe lengths as long/short	
5.	___use multiple proxy measures	
6.	___compare/order by length	
7.	___match measurement attributes	
8.	___weigh objects in pounds	
9.	___name $1, $5, $10 amounts	
10.	___tell time to hour	
11.	___measure (in, ft, and ft & in)	
12.	___iterate/partition (in,ft, yd)	
13.	___weight to nearest pound	
14.	___combine 4 quarters in $1	
15.	___tell time to 5 minutes	
16.	___identify length to nearest foot	
17.	___name amounts to $50	
18.	___identify 60 minutes in 1 hour	
19.	___days of week & calendar date	
20.	___use calendar to count days	
21.	___determine volume with cubes	
22.	___identify cup & spoon amounts	
23.	___calculate # of cups, use table	
24.	___choose ml or l to measure	
25.	___identify length of minute	
26.	___identify minute (1/2, 1/4 hour)	
27.	___calculate time elapsed	
28.	___body temp; boiling/freezing pts	
29.	___measure g & kg	
30.	___divide 8 oz into half & qtr cup	
31.	___add/subtract decimals in $	

NUMBERS & OPERATIONS

		A
1.	___1:1 correspondence	
2.	___compare sets using “more”	
3.	___subitize amounts of 1 & 2	
4.	___show cardinality (1&2)	
5.	___count to five	
6.	___1:1 correspondence (objects)	
7.	___count to 10	
8.	___cardinality-state total amount	
9.	___construct sets of 5	
10.	___identify/match numeral to set	
11.	___identify/write numeral of set	
12.	___write 0 to match set	
13.	___subitize 0-5 with cube lengths	
14.	___describe more/less/equal	
15.	___join and separate 1-5/compare	
16.	___identify sets /match numeral	
17.	___identify sets/write numeral	
18.	___identify number words 1-5	
19.	___parts & whole sets of 2-5	
20.	___parts & whole sets of 10	
21.	___identify result unknown (2-10)	
22.	___compare amounts using <,>,=	
23.	___count to next number (2-10)	
24.	___count back from #s 1-10	
25.	___identify number words 6-10	
26.	___state one more	
27.	___count 1-20	
28.	___construct sets of 11-15	
29.	___identify and write 16-20	
30.	___compose and decompose	
31.	___JRU problems, sums to 5	
32.	___SRU problems, sums to 10	
33.	___use equal amts to solve prob.	
34.	___measurement division	
35.	___count 1-50	
36.	___make tens and ones/write #	
37.	___compare 1-50 with symbols	
38.	___show place value knowledge	
39.	___PPW-PU problems (0-10)	
40.	___CDU problems (0-10)	
41.	___JRU sums 11-20	
42.	___SRU problems (11-20)	
43.	___count 1-120	
44.	___count tens and ones, write #	
45.	___compare to 120 using symbols	
46.	___place value from 51-120	
47.	___identify 10 more and 10 less	
48.	___commutative property of +	
49.	___JCU problems 0-10	
50.	___SCU problems 0-10	
51.	___skip count by twos	
52.	___multiply problems with 1-5	
53.	___PPW-PU problems 0-10	
54.	___JSU problems 0-20	

NUMBERS & OPERATIONS

		A
55.	___SSU problems 0-20	
56.	___multiply (factors 6-9)	
57.	___multiply (factor 0)	
58.	___group 100s, 10s, 1s to 1200	
59.	___place value to 1,200	
60.	___write 3-digit numbers	
61.	___JRU, 2-digit that regroup	
62.	___SRU, 3-digit that regroup	
63.	___equally distribute into groups	
64.	___MD (6-9 divisors) & write	
65.	___CQU problems 0-20	
66.	___CRU problems 0-20	
67.	___round numbers to hundreds	
68.	___make 100	
69.	___group 1000s, 100s, 10, & 1s	
70.	___place value to 10,000	
71.	___4-digit #s standard/expanded	
72.	___identify 1,000 more and less	
73.	___JRU, 4-digit that regroup	
74.	___SRU, 4-digit that regroup	
75.	___equally distribute up to 20	
76.	___PD with divisors 1-5	
77.	___PD with divisors 6-9	
78.	___1-digit, multiply factor of 10	
79.	___divide with divisor of 10	
80.	___make rectangular arays (x)	
81.	___commutative property of x	
82.	___associative property of x	
83.	___multiply 2-digit by 1 & 2 digits	
84.	___PD with 2-digit divisor > 10	
85.	___division problem w/remainder	
86.	___identify multiples and factors	
87.	___multiply/divide with unknowns	
88.	___choose mult or division	
89.	___distributive property problem	
90.	___JCU with letter	
91.	___2-step problem with letter	
92.	___fractions with dif denominators	
93.	___partition square, rectangle	
94.	___numerator & denominator	
95.	___identify fraction numerator > 1	
96.	___create equivalent fractions	
97.	___order/compare fractions	
98.	___add and subtract fractions	
99.	___add fractions to total of one	
100.	___add fractions, mixed number	
101.	___fraction as decimal	
102.	___order numbers to tenths	
103.	___percent of total off in sale	

Test Items

For the complete test item name, locate Assessment Items document on Members Only under the Assessment tab.

Scoring

Mark *1* for each correct answer and *0* for each incorrect answer. Check the A column each time an adapted test item is given. Add the number of correct items in each subtest to find the student's Total Raw Score. Add the total number of adaptations (ONLY items with a score of 1) given in each subtest to find the student's Total Adaptations. Multiply Total Adaptations by .5. Subtract this amount from Total Raw Score. This is the Adjusted Raw Score. Locate the Adjusted Raw Score on the Equals Suggested Start Point Chart in the Assessment Book Introduction to locate a corresponding chapter. This is the recommended placement for the student. Teacher makes the decision regarding the section of the chapter in which to begin.

Equals Math Subtest	Raw Score	Adaptations
Algebra		
Data Analysis and Probability		
Geometry		
Measurement		
Numbers and Operations		
Total		

Total Raw Score		Total Adaptations		Adjusted Raw Score
	-	(_____ x .5)	=	
	-		=	

Adjusted Raw Score:_____

Chapter Placement: _____