MOVING with MATH
LEARNING SYSTEM

Grade 4

Extensions Training

A condensed, grade-level review for grades K–8.
Available in English and Spanish.

The MOVING WITH MATH Difference
Meeting the Challenge

I. Overview of Materials
II. Assessment Overview
III. "A Typical Day"
IV. Research-Based Strategies
V. Results
VI. Conclusion

Extensions

- Reviews the essential math objectives for grades K–8
- Students use manipulatives in every lesson to develop conceptual understanding and improve achievement
- Assessment linked to state standards provides data to differentiate instruction for all students

All Materials Conveniently Packaged

Class Kit Includes:

- 1 Teachers Resource Manual
- 20 Student Books
- 1 Test Assessment Pack
- 20 Parent Handbooks

Find the Overview:
Page 3 of the Sampler

Boxed Class Kits in Spanish

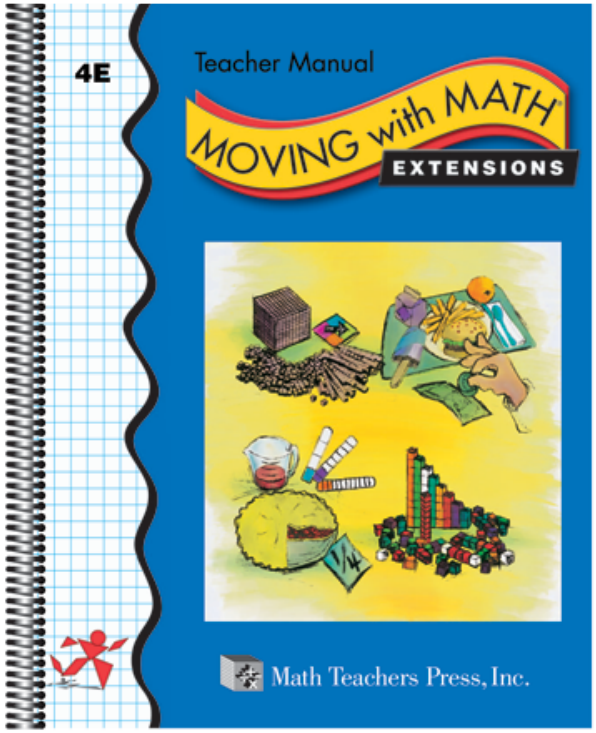
Spanish Class Kit Includes:

- 1 Teachers Resource Manual
- 1 Spanish Resource Pack
- 20 Spanish Student Books
- 20 Spanish Parent Handbooks

Find the Spanish Kits:
Page 50 of the Sampler

Teacher Resource Manual

Includes a DVD, a foreword, and 3 yellow tabs:



Assessment

Teacher Guide

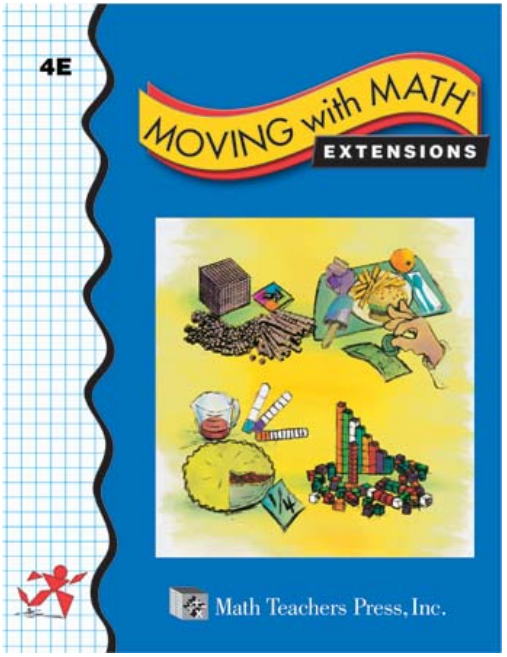
Skill Builders **and Masters**

DVD – Overview and Manipulative Activities

- DVD found in each Teachers Manual

DVD VIDEO DVD icon is displayed in Teachers Manual when the hands-on activity is demonstrated on the DVD

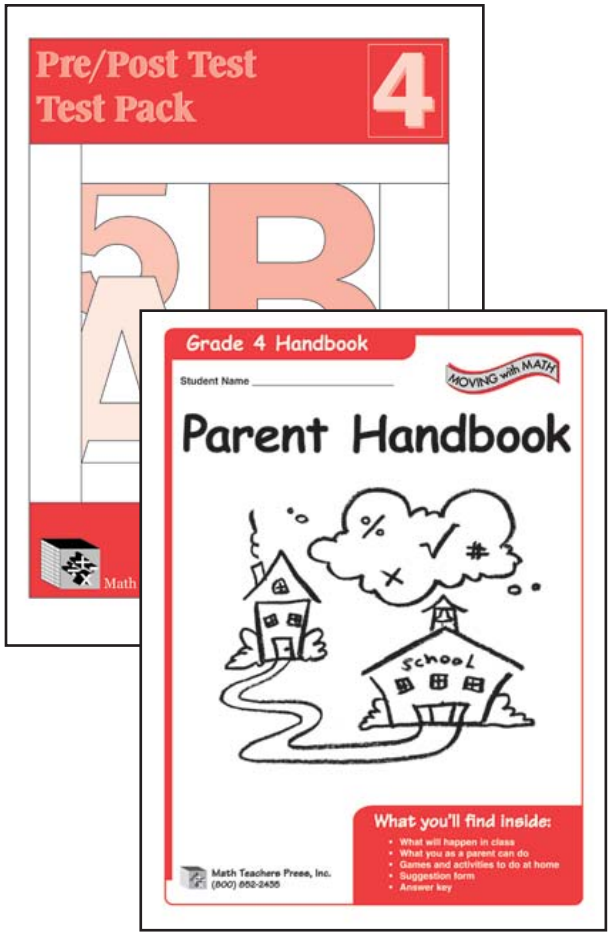
Student Activity Books



- Student Activity Pages
- Daily Reviews
- Daily Review Record Sheet

Available in Spanish

Other Components



Test Assessment Packs:

- 20 Pre- and Post-Tests
- Student and Class Record Sheets

Parent Handbooks (Available in Spanish):

- Family Activities

Manipulatives

Manipulative Kit Includes:

- Unifix Cubes
- Base Ten Blocks
- 5 Place Value Mats
- Fraction Circles
- 5 Ten-Sided Dice
- 8 Six-Sided Dice
- 5 Geoboards

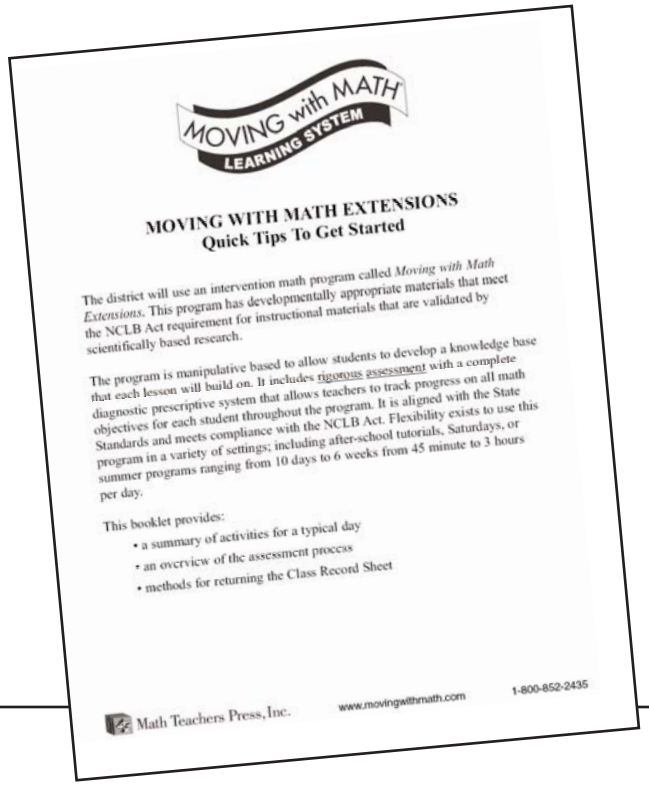
Overhead Manipulative Kit Includes:

- Unifix-Like Squares
- Base Ten Block Pieces
- 45 Coins and 24 Bills
- 63 Fraction Circles
- 5 Clocks
- 1 Geoboard

Quick Tips to Get Started

Quick Tips Include:

1. Summary of Activities for a Typical Day and Location of Materials
2. Overview of the Assessment Process
3. Methods of Measuring and Monitoring Achievement



MOVING with MATH
LEARNING SYSTEM

MOVING WITH MATH EXTENSIONS
Quick Tips To Get Started

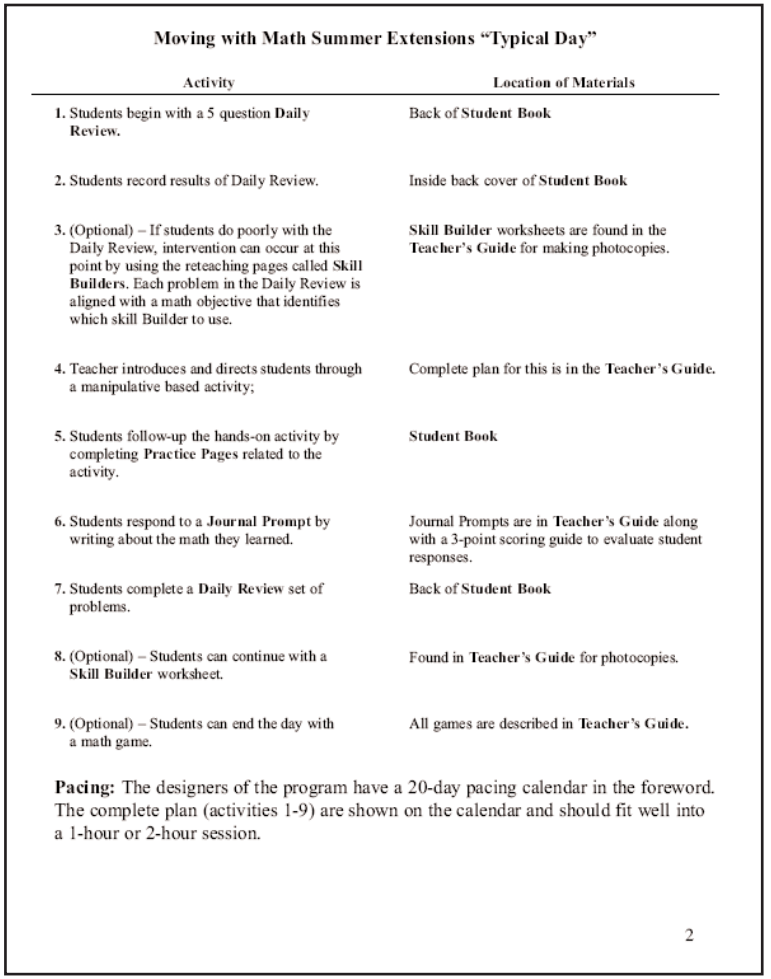
The district will use an intervention math program called *Moving with Math Extensions*. This program has developmentally appropriate materials that meet the NCLB Act requirement for instructional materials that are validated by scientifically based research.

The program is manipulative based to allow students to develop a knowledge base that each lesson will build on. It includes rigorous assessment with a complete diagnostic prescriptive system that allows teachers to track progress on all math objectives for each student throughout the program. It is aligned with the State Standards and meets compliance with the NCLB Act. Flexibility exists to use this program in a variety of settings; including after-school tutorials, Saturdays, or summer programs ranging from 10 days to 6 weeks from 45 minute to 3 hours per day.

This booklet provides:

- a summary of activities for a typical day
- an overview of the assessment process
- methods for returning the Class Record Sheet

Math Teachers Press, Inc. www.movingwithmath.com 1-800-852-2435



Moving with Math Summer Extensions "Typical Day"

Activity	Location of Materials
1. Students begin with a 5 question **Daily Review.**	Back of **Student Book**
2. Students record results of Daily Review.	Inside back cover of **Student Book**
3. (Optional) – If students do poorly with the Daily Review, intervention can occur at this point by using the reteaching pages called **Skill Builders.** Each problem in the Daily Review is aligned with a math objective that identifies which skill Builder to use.	**Skill Builder** worksheets are found in the **Teacher's Guide** for making photocopies.
4. Teacher introduces and directs students through a manipulative based activity;	Complete plan for this is in the **Teacher's Guide.**
5. Students follow-up the hands-on activity by completing **Practice Pages** related to the activity.	**Student Book**
6. Students respond to a **Journal Prompt** by writing about the math they learned.	Journal Prompts are in **Teacher's Guide** along with a 3-point scoring guide to evaluate student responses.
7. Students complete a **Daily Review** set of problems.	Back of **Student Book**
8. (Optional) – Students can continue with a **Skill Builder** worksheet.	Found in **Teacher's Guide** for photocopies.
9. (Optional) – Students can end the day with a math game.	All games are described in **Teacher's Guide.**

Pacing: The designers of the program have a 20-day pacing calendar in the foreword. The complete plan (activities 1-9) are shown on the calendar and should fit well into a 1-hour or 2-hour session.

2

Assessment Overview

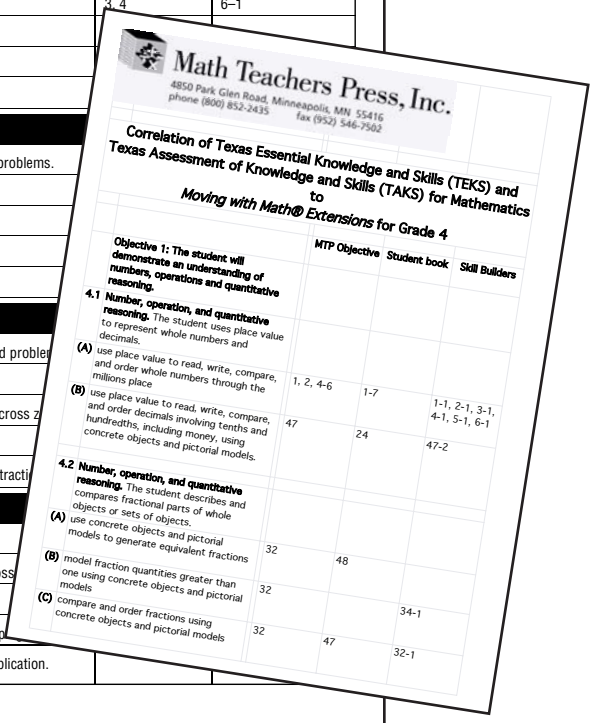
Learning Objectives

Learning objectives match state standards and are integrated with assessment and curriculum.

TX Correlation to Objectives, Grade 4

Use this table to match pre- or post-test problems to objectives and pages in the teacher manual and student book.

STATE STANDARD	MTP OBJ	Numeration	Student Book	Skill Builders
4.1A	**B-1**	Identify the place value in a 3-digit number.	1, 2	1–1
4.1A	**B-2**	Compare and order numbers up to 6 digits.	5, 6	2–1
4.6A	**B-3**	Complete patterns of multiples of the numbers 1–6 or 10.	8	3–1
4.1A	**B-4**	Write a 4-, 5- or 6-digit numeral from printed words or sets.	7	4–1
4.1A	**B-5**	Write the words for any numeral up to 6 digits in length.		5–1
4.1A	**B-6**	Identify the place value in a 4-, 5-, or 6-digit number.	3, 4	6–1
4.5A	**B-7**	Round a 2-, 3- or 4-digit number to the nearest ten.		
4.5A	**B-8**	Round a 3- or 4-digit number to the nearest hundred.		
4.6A	**B-9**	Find a missing number.		
4.3A	**B-10**	Add 3-digit numbers with zero or two regroupings. Word problems.		
4.3A	**B-11**	Add three or four 2-digit numbers with regroupings.		
4.3A	**B-12**	Add 4- or 5-digit numbers with regroupings.		
4.3A	**B-13**	Add up to five numbers of differing lengths, 1- to 5-digits.		
4.15B	**B-14**	Knows the meaning of "sum" and the "+" sign in addition.		
4.3A	**B-15**	Subtract 3-digit numbers with up to two regroupings, word proble		
4.3B	**B-16**	Subtract 3-digit numbers with regroupings across zero.		
4.3A	**B-17**	Subtract 4- or 5-digit numbers with regroupings, can be across z		
4.3A	**B-18**	Subtract numbers of varying lengths, 1- to 5-digits.		
4.15B	**B-19**	Knows the meaning of "difference" and the "-" sign in subtracti		
4.4B	**B-20**	Knows multiplication facts with factors 0-9.		
5.3B	**B-21**	Multiply a 3-digit number by a 1-digit number, can be across		
4.6B	**B-22**	Multiply a 1- or 2-digit number by 10 or a multiple of 10.		
4.4D	**B-23**	Multiply a 2-digit number by a 2-digit number with regroup		
4.15B	**B-24**	Knows the meaning of "product" and the "x" sign in multiplication.		



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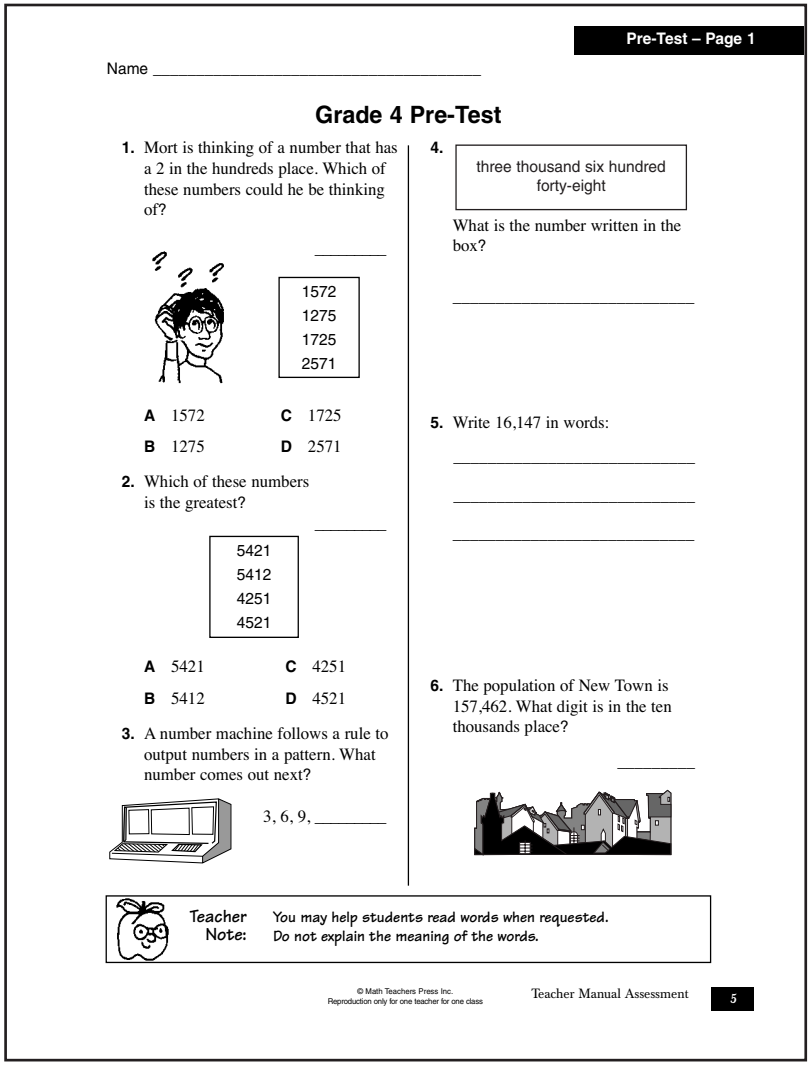
Correlation of Texas Essential Knowledge and Skills (TEKS) and Texas Assessment of Knowledge and Skills (TAKS) for Mathematics to *Moving with Math® Extensions* for Grade 4

	MTP Objective	Student book	Skill Builders
Objective 1: The student will demonstrate an understanding of numbers, operations and quantitative reasoning.			
4.1 Number, operation, and quantitative reasoning. The student uses place value to represent whole numbers and decimals.			
(A) use place value to read, write, compare, and order whole numbers through the millions place	1, 2, 4–6	1-7	1-1, 2-1, 3-1, 4-1, 5-1, 6-1
(B) use place value to read, write, compare, and order decimals involving tenths and hundredths, including money, using concrete objects and pictorial models.	47	24	47-2
4.2 Number, operation, and quantitative reasoning. The student describes and compares fractional parts of whole objects or sets of objects.			
(A) use concrete objects and pictorial models to generate equivalent fractions	32	48	
(B) model fraction quantities greater than one using concrete objects and pictorial models	32		34-1
(C) compare and order fractions using concrete objects and pictorial models	32	47	32-1

Find the Objectives:

Page 7 of the Sampler
Pages *v* of the Teacher Manual

Assess Students with Pre-Test on Day 2



Pre-Test – Page 1

Name _____

Grade 4 Pre-Test

1. Mort is thinking of a number that has a 2 in the hundreds place. Which of these numbers could he be thinking of?

1572
1275
1725
2571

A 1572 **C** 1725
B 1275 **D** 2571

2. Which of these numbers is the greatest?

5421
5412
4251
4521

A 5421 **C** 4251
B 5412 **D** 4521

3. A number machine follows a rule to output numbers in a pattern. What number comes out next?

3, 6, 9, _____

4. three thousand six hundred forty-eight

What is the number written in the box?

5. Write 16,147 in words:

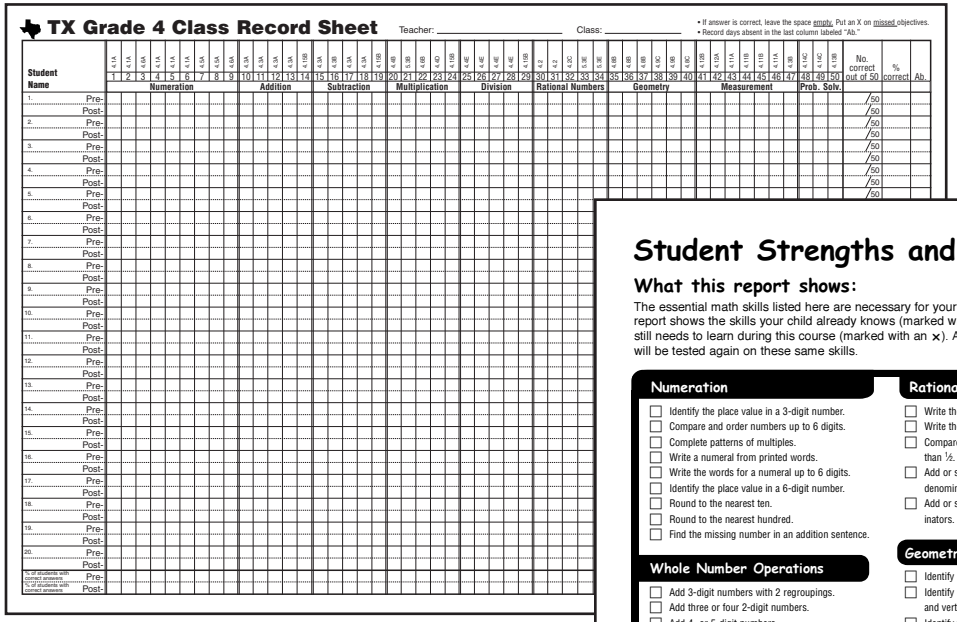
6. The population of New Town is 157,462. What digit is in the ten thousands place?

Teacher Note: You may help students read words when requested. Do not explain the meaning of the words.

Find the Pre-Test:

Page 8 of the Sampler
Page 5 of the Teacher Manual

Results of the Pre-Test are Recorded in Three Locations



TX Grade 4 Class Record Sheet

Teacher: _____ Class: _____

• If answer is correct, leave the space empty. Put an X on missed objectives.
• Record days absent in the last column labeled "Ab."

Student Name		1 4.1A	2 4.1A	3 4.4A	4 4.1A	5 4.1A	6 4.1A	7 4.5A	8 4.5A	9 4.6A	10 4.3A	11 4.3A	12 4.3A	13 4.3A	14 4.10B	15 4.3A	16 4.3B	17 4.3A	18 4.3A	19 4.10B	20 4.4B	21 5.3B	22 4.6B	23 4.4D	24 4.10B	25 4.4E	26 4.4E	27 4.4E	28 4.4E	29 4.10B	30 4.2	31 4.2	32 4.2C	33 5.3E	34 5.3E	35 4.6B	36 4.6B	37 4.6B	38 4.6C	39 4.6B	40 4.6C	41 4.10B	42 4.12A	43 4.11A	44 4.11B	45 4.11B	46 4.11A	47 4.8B	48 4.14C	49 4.14C	50 4.13B	No. correct out of 50	% correct	Ab.
		Numeration									Addition					Subtraction				Multiplication					Division					Rational Numbers					Geometry					Measurement									Prob. Solv.					
1.	Pre-																																																	/50		
	Post-																																																	/50		
2.	Pre-																																																	/50		
	Post-																																																	/50		
3.	Pre-																																																	/50		
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20.	Pre-																																																	/50		
	Post-																																																	/50		
*% of students with correct answers	Pre-																																																		
*% of students with correct answers	Post-																																																		

Student Strengths and Weaknesses

What this report shows:

The essential math skills listed here are necessary for your child's future math success. This report shows the skills your child already knows (marked with a ✓) as well as those your child still needs to learn during this course (marked with an ×). At the end of this class, your child will be tested again on these same skills.

Numeration

- ☐ Identify the place value in a 3-digit number.
- ☐ Compare and order numbers up to 6 digits.
- ☐ Complete patterns of multiples.
- ☐ Write a numeral from printed words.
- ☐ Write the words for a numeral up to 6 digits.
- ☐ Identify the place value in a 6-digit number.
- ☐ Round to the nearest ten.
- ☐ Round to the nearest hundred.
- ☐ Find the missing number in an addition sentence.

Whole Number Operations

- ☐ Add 3-digit numbers with 2 regroupings.
- ☐ Add three or four 2-digit numbers.
- ☐ Add 4- or 5-digit numbers.
- ☐ Add up to 5 numbers of differing lengths.
- ☐ Define the word "sum" and the "+" sign.
- ☐ Subtract 3-digit numbers with 2 regroupings.
- ☐ Subtract 3-digit numbers with regroupings across 0.
- ☐ Subtract 5-digit numbers with regroupings across 0.
- ☐ Subtract numbers of varying lengths.
- ☐ Define the word "difference" and the "–" sign.
- ☐ Know multiplication facts up to 9's.
- ☐ Multiply a 3-digit number by a 1-digit number across zero.
- ☐ Multiply a 2-digit number by a multiple of 10.
- ☐ Multiply a 2-digit number by a 2-digit number with regrouping.
- ☐ Define the word "product" and the "x" sign.
- ☐ Know division facts with divisors 0 to 9.
- ☐ Divide a 2-digit number by a 1-digit number.
- ☐ Divide a 4-digit number by a 1-digit number.
- ☐ Divide a 4-digit number by a 1-digit number, 0's in the quotient.
- ☐ Define the word "quotient" and the "÷" sign.

Rational Numbers

- ☐ Write the fraction for the shaded part of a whole.
- ☐ Write the fraction for the shaded part of a set.
- ☐ Compare fractions less than ½ to fractions more than ½.
- ☐ Add or subtract 2 proper fractions with like denominators.
- ☐ Add or subtract 2 mixed numbers with like denominators.

Geometry & Measurement

- ☐ Identify plane figures such as lines and angles.
- ☐ Identify line position such as horizontal, diagonal and vertical.
- ☐ Identify types of lines such as intersecting, parallel, and perpendicular.
- ☐ Identify a line of symmetry.
- ☐ Identify congruent figures, name polygons.
- ☐ Identify solid figures such as cones, cylinders, spheres and cubes.
- ☐ Tell time to 5 minutes.
- ☐ Read a thermometer, scale and calendar.
- ☐ Measure to the nearest ½ inch or .5 cm.
- ☐ Recall equivalence of customary units of length, weight and capacity.
- ☐ Recall equivalence of metric units of length, weight and capacity.
- ☐ Find the perimeter of a polygon. Find area.
- ☐ Make change for $10.00.

Problem Solving

- ☐ Solve a word problem with multiplication.
- ☐ Solve a word problem with division.
- ☐ Read and interpret a graph.

Page 3

Student Progress Report

Grade 4

Mark an X in the Pre- and/or Post-Test boxes to indicate missed objectives.

Student _____

Pre-Test Post-Test

Numeration

- ☐☐ **B-1** Identify the place value in a 3-digit number.
- ☐☐ **B-2** Compare and order numbers up to 6 digits.
- ☐☐ **B-3** Complete patterns of multiples.
- ☐☐ **B-4** Write a numeral from printed words.
- ☐☐ **B-5** Write the words for a numeral up to 6 digits.
- ☐☐ **B-6** Identify the place value in a 6-digit number.
- ☐☐ **B-7** Round to the nearest ten.
- ☐☐ **B-8** Round to the nearest hundred.
- ☐☐ **B-9** Find the missing number in an addition sentence.

Addition

- ☐☐ **B-10** Add 3-digit numbers with 2 regroupings.
- ☐☐ **B-11** Add three or four 2-digit numbers.
- ☐☐ **B-12** Add 4- or 5-digit numbers.
- ☐☐ **B-13** Add up to 5 numbers of differing lengths.
- ☐☐ **B-14** Define the word "sum" and the "+" sign.

Subtraction

- ☐☐ **B-15** Subtract 3-digit numbers with 2 regroupings.
- ☐☐ **B-16** Subtract 3-digit numbers with regroupings across 0.
- ☐☐ **B-17** Subtract 5-digit numbers with regroupings across 0.
- ☐☐ **B-18** Subtract numbers of varying lengths.
- ☐☐ **B-19** Define the word "difference" and the "–" sign.

Multiplication

- ☐☐ **B-20** Know multiplication facts up to 9's.
- ☐☐ **B-21** Multiply a 3-digit number by a 1-digit number across zero.
- ☐☐ **B-22** Multiply a 2-digit number by a multiple of 10.
- ☐☐ **B-23** Multiply a 2-digit number by a 2-digit number with regrouping.
- ☐☐ **B-24** Define the word "product" and the "x" sign.

Division

- ☐☐ **B-25** Know division facts with divisors 0 to 9.
- ☐☐ **B-26** Divide a 2-digit by a 1-digit number.
- ☐☐ **B-27** Divide a 4-digit by a 1-digit number.

Pre-Test Post-Test

- ☐☐ **B-28** Divide a 4-digit by a 1-digit number, 0's in the quotient.
- ☐☐ **B-29** Define the word "quotient" and the "÷" sign.

Rational Numbers

- ☐☐ **B-30** Write the fraction for the shaded part of a whole figure.
- ☐☐ **B-31** Write the fraction for the shaded part of a set.
- ☐☐ **B-32** Compare fractions less than ½ to fractions more than ½.
- ☐☐ **B-33** Add or subtract 2 proper fractions with like denominators.
- ☐☐ **B-34** Add or subtract 2 mixed numbers with like denominators.

Geometry

- ☐☐ **B-35** Identify plane figures.
- ☐☐ **B-36** Identify and draw line position.
- ☐☐ **B-37** Identify types of lines.
- ☐☐ **B-38** Identify a line of symmetry.
- ☐☐ **B-39** Identify congruent figures, name polygons.
- ☐☐ **B-40** Identify solid figures.

Measurement

- ☐☐ **B-41** Tell time to 5 minutes.
- ☐☐ **B-42** Read a thermometer, scale and calendar.
- ☐☐ **B-43** Measure to the nearest ½ inch or .5 cm.
- ☐☐ **B-44** Recall equivalence of customary units of length, weight and capacity.
- ☐☐ **B-45** Recall equivalence of metric units of length, weight and capacity.
- ☐☐ **B-46** Find the perimeter of a polygon. Find area.
- ☐☐ **B-47** Make change for $10.00.

Problem Solving

- ☐☐ **B-48** Solve a word problem with multiplication.
- ☐☐ **B-49** Solve a word problem with division.
- ☐☐ **B-50** Read and interpret a graph.

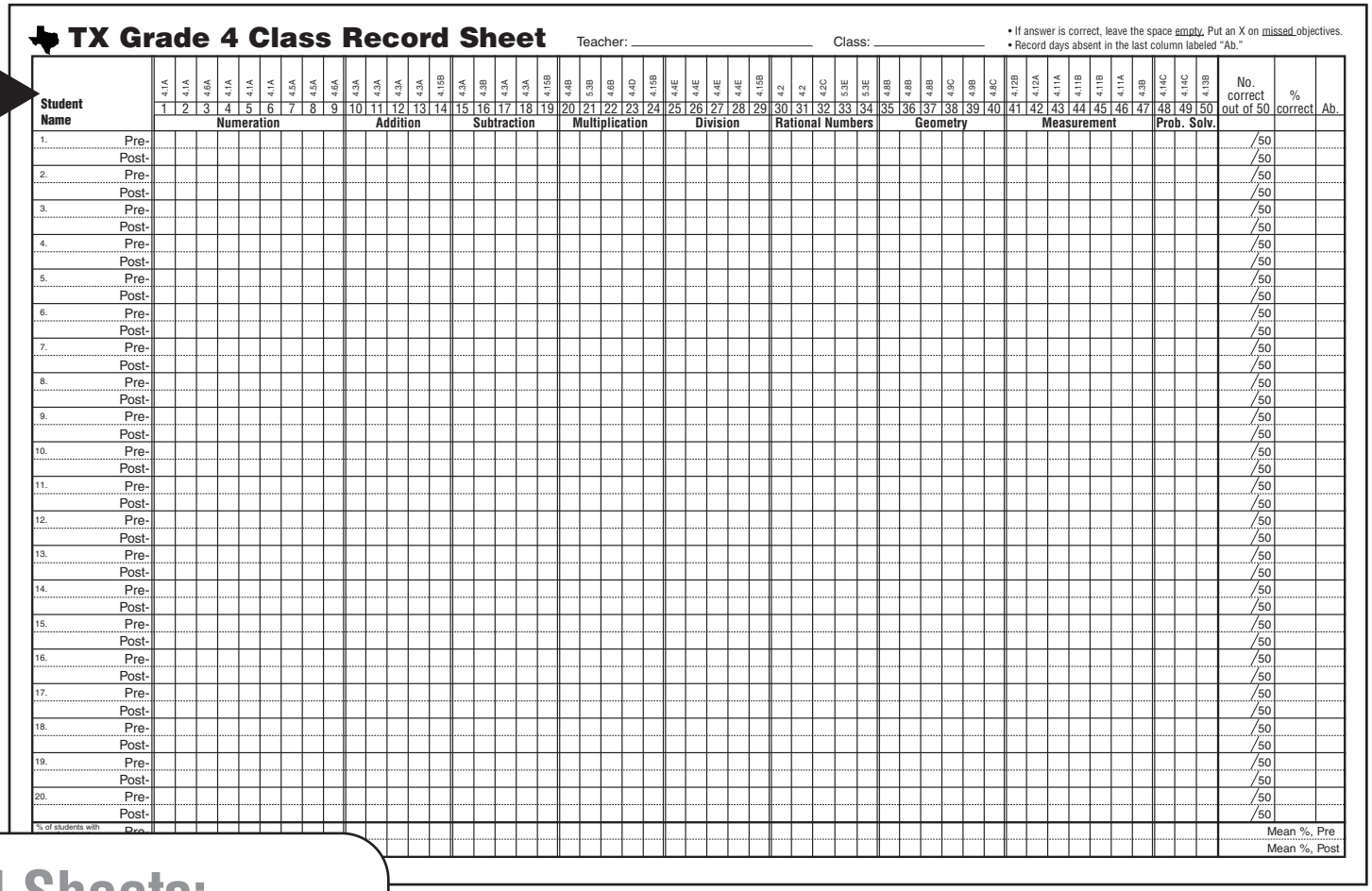
☐☐ **Total Scores (out of 50 possible)**

50 50

Teacher Manual Assessment 1

Class Record Sheet

State standards across the top.



TX Grade 4 Class Record Sheet Teacher: _____ Class: _____

- If answer is correct, leave the space empty. Put an X on missed objectives.
- Record days absent in the last column labeled "Ab."

Student Name		4.1A	4.1A	4.6A	4.1A	4.1A	4.1A	4.5A	4.5A	4.6A	4.3A	4.3A	4.3A	4.3A	4.15B	4.3A	4.3B	4.3A	4.3A	4.15B	4.4B	5.3B	4.6B	4.4D	4.15B	4.4E	4.4E	4.4E	4.4E	4.15B	4.2	4.2	4.2C	5.3E	5.3E	4.8B	4.8B	4.8B	4.9C	4.9B	4.8C	4.12B	4.12A	4.11A	4.11B	4.11B	4.11A	4.3B	4.14C	4.14C	4.13B	No. correct out of 50	% correct	Ab.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50			
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	Post-																																																		/50		
18.	Pre-																																																		/50		
	Post-																																																		/50		
19.	Pre-																																																		/50		
	Post-																																																		/50		
20.	Pre-																																																		/50		
	Post-																																																		/50		
% of students with	Pre-																																																	Mean %, Pre		
	Post-																																																	Mean %, Post		

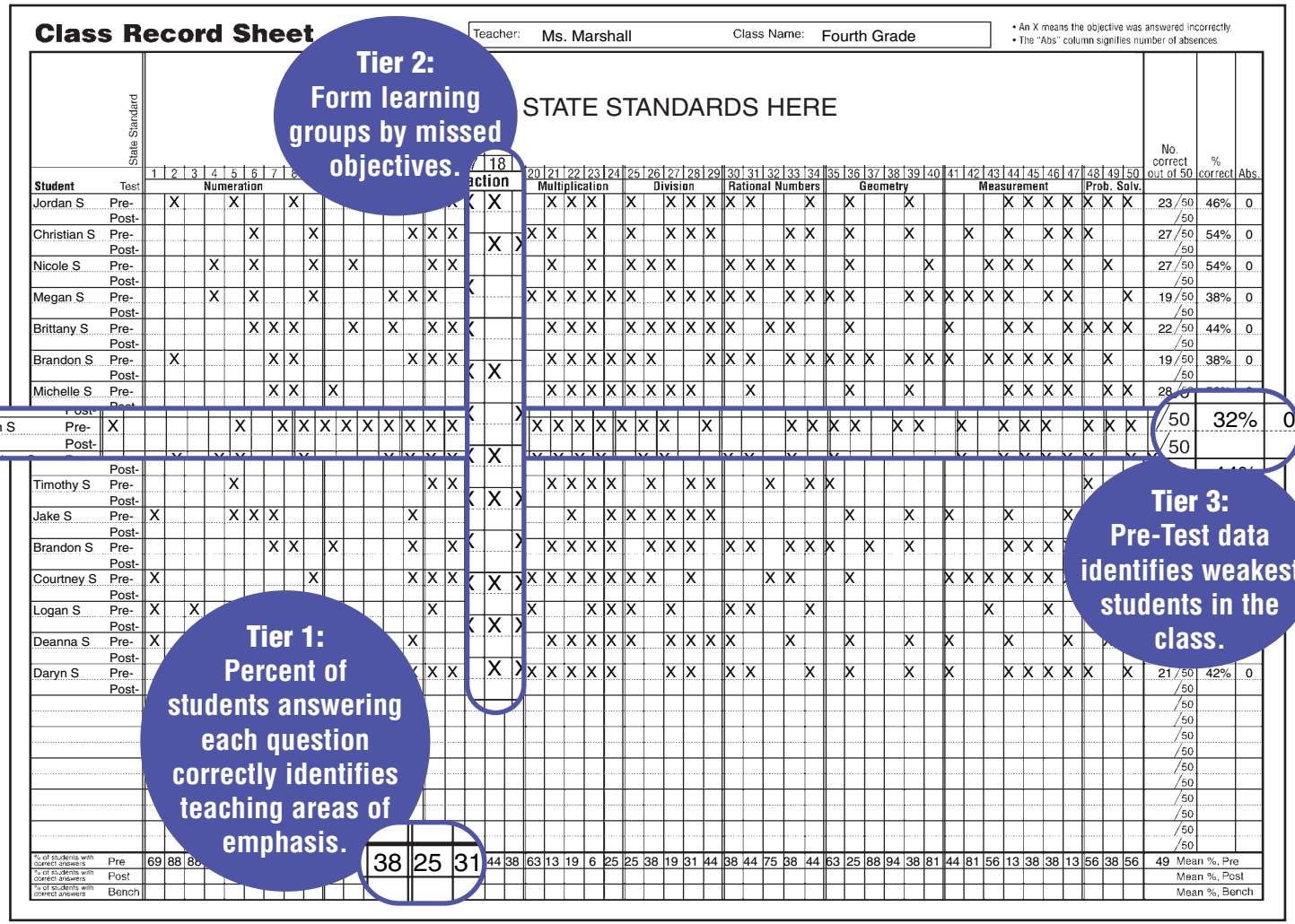
Find the Record Sheets:

Page 9 of the Sampler

Pages 1–4 of the Teacher Manual

Class Record Sheet

The **Class Record Sheet** allows the teacher to identify at-risk students, group students for differentiated instruction, and identify content objectives that need extra attention.



Parent Handbook

Student Strengths and Weaknesses

What this report shows:

The essential math skills listed here are necessary for your child's future math success. This report shows the skills your child already knows (marked with a ✓) as well as those your child still needs to learn during this course (marked with an ×). At the end of this class, your child will be tested again on these same skills.

Numeration

- ☐ Identify the place value in a 3-digit number.
- ☐ Compare and order numbers up to 6 digits.
- ☐ Complete patterns of multiples.
- ☐ Write a numeral from printed words.
- ☐ Write the words for a numeral up to 6 digits.
- ☐ Identify the place value in a 6-digit number.
- ☐ Round to the nearest ten.
- ☐ Round to the nearest hundred.
- ☐ Find the missing number in an addition sentence.

Whole Number Operations

- ☐ Add 3-digit numbers with 2 regroupings.
- ☐ Add three or four 2-digit numbers.
- ☐ Add 4- or 5-digit numbers.
- ☐ Add up to 5 numbers of differing lengths.
- ☐ Define the word "sum" and the "+" sign.
- ☐ Subtract 3-digit numbers with 2 regroupings.
- ☐ Subtract 3-digit numbers with regroupings across 0.
- ☐ Subtract 5-digit numbers with regroupings across 0.
- ☐ Subtract numbers of varying lengths.
- ☐ Define the word "difference" and the "–" sign.
- ☐ Know multiplication facts up to 9.
- ☐ Multiply a 3-digit number by a 1-digit number across zero.
- ☐ Multiply a 2-digit number by a multiple of 10.
- ☐ Multiply a 2-digit number by a 2-digit number with regrouping.
- ☐ Define the word "product" and the "x" sign.
- ☐ Know division facts with divisors 0 to 9.
- ☐ Divide a 2-digit number by a 1-digit number.
- ☐ Divide a 4-digit number by a 1-digit number.
- ☐ Divide a 4-digit number by a 1-digit number, 0 in the quotient.
- ☐ Define the word "quotient" and the "÷" sign.

Rational Numbers

- ☐ Write the fraction for the shaded part of a whole.
- ☐ Write the fraction for the shaded part of a set.
- ☐ Compare fractions less than ½ to fractions more than ½.
- ☐ Add or subtract 2 proper fractions with like denominators.
- ☐ Add or subtract 2 mixed numbers with like denominators.

Geometry & Measurement

- ☐ Identify plane figures such as lines and angles.
- ☐ Identify line position such as horizontal, diagonal and vertical.
- ☐ Identify types of lines such as intersecting, parallel, and perpendicular.
- ☐ Identify a line of symmetry.
- ☐ Identify congruent figures, name polygons.
- ☐ Identify solid figures such as cones, cylinders, spheres and cubes.
- ☐ Tell time to 5 minutes.
- ☐ Read a thermometer, scale and calendar.
- ☐ Measure to the nearest ½ inch or .5 cm.
- ☐ Recall equivalence of customary units of length, weight and capacity.
- ☐ Recall equivalence of metric units of length, weight and capacity.
- ☐ Find the perimeter of a polygon. Find area.
- ☐ Make change for $10.00.

Problem Solving

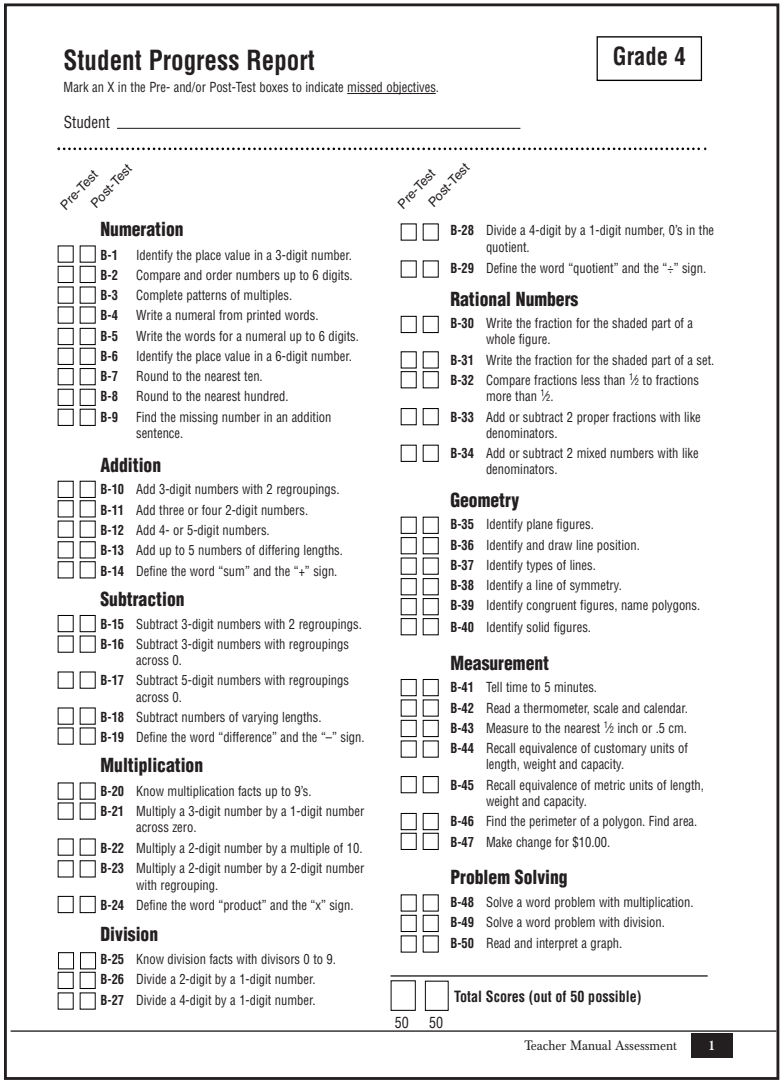
- ☐ Solve a word problem with multiplication.
- ☐ Solve a word problem with division.
- ☐ Read and interpret a graph.

Page 3

Share student's strengths and weaknesses with parents.

Student Progress Report

Identify student's individual needs with a **Student Progress Report**.



Student Progress Report — Grade 4

Mark an X in the Pre- and/or Post-Test boxes to indicate missed objectives.

Student _____

Pre-Test Post-Test

Numeration
- B-1 Identify the place value in a 3-digit number.
- B-2 Compare and order numbers up to 6 digits.
- B-3 Complete patterns of multiples.
- B-4 Write a numeral from printed words.
- B-5 Write the words for a numeral up to 6 digits.
- B-6 Identify the place value in a 6-digit number.
- B-7 Round to the nearest ten.
- B-8 Round to the nearest hundred.
- B-9 Find the missing number in an addition sentence.

Addition
- B-10 Add 3-digit numbers with 2 regroupings.
- B-11 Add three or four 2-digit numbers.
- B-12 Add 4- or 5-digit numbers.
- B-13 Add up to 5 numbers of differing lengths.
- B-14 Define the word "sum" and the "+" sign.

Subtraction
- B-15 Subtract 3-digit numbers with 2 regroupings.
- B-16 Subtract 3-digit numbers with regroupings across 0.
- B-17 Subtract 5-digit numbers with regroupings across 0.
- B-18 Subtract numbers of varying lengths.
- B-19 Define the word "difference" and the "–" sign.

Multiplication
- B-20 Know multiplication facts up to 9's.
- B-21 Multiply a 3-digit number by a 1-digit number across zero.
- B-22 Multiply a 2-digit number by a multiple of 10.
- B-23 Multiply a 2-digit number by a 2-digit number with regrouping.
- B-24 Define the word "product" and the "x" sign.

Division
- B-25 Know division facts with divisors 0 to 9.
- B-26 Divide a 2-digit by a 1-digit number.
- B-27 Divide a 4-digit by a 1-digit number.
- B-28 Divide a 4-digit by a 1-digit number, 0's in the quotient.
- B-29 Define the word "quotient" and the "÷" sign.

Rational Numbers
- B-30 Write the fraction for the shaded part of a whole figure.
- B-31 Write the fraction for the shaded part of a set.
- B-32 Compare fractions less than ½ to fractions more than ½.
- B-33 Add or subtract 2 proper fractions with like denominators.
- B-34 Add or subtract 2 mixed numbers with like denominators.

Geometry
- B-35 Identify plane figures.
- B-36 Identify and draw line position.
- B-37 Identify types of lines.
- B-38 Identify a line of symmetry.
- B-39 Identify congruent figures, name polygons.
- B-40 Identify solid figures.

Measurement
- B-41 Tell time to 5 minutes.
- B-42 Read a thermometer, scale and calendar.
- B-43 Measure to the nearest ½ inch or .5 cm.
- B-44 Recall equivalence of customary units of length, weight and capacity.
- B-45 Recall equivalence of metric units of length, weight and capacity.
- B-46 Find the perimeter of a polygon. Find area.
- B-47 Make change for $10.00.

Problem Solving
- B-48 Solve a word problem with multiplication.
- B-49 Solve a word problem with division.
- B-50 Read and interpret a graph.

Total Scores (out of 50 possible) 50 50

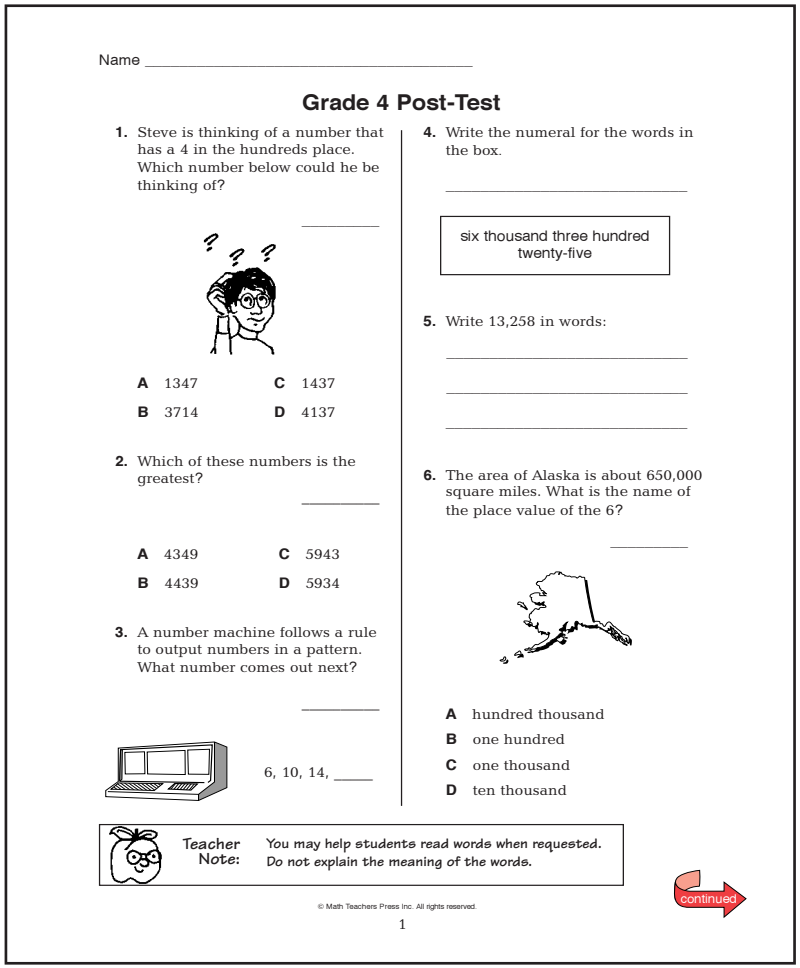
Teacher Manual Assessment 1

Find the Record Sheets:

Page 9 of the Sampler
Pages 1-4 of the Teacher Manual

Re-assess Students with Post-Test at the End of the Program (During Last Week)

The results of the Post-Test are recorded on the **Class Record Sheet** and **Student Progress Report**.



Name _____

Grade 4 Post-Test

1. Steve is thinking of a number that has a 4 in the hundreds place. Which number below could he be thinking of?

_____

A 1347 **C** 1437

B 3714 **D** 4137

2. Which of these numbers is the greatest?

_____

A 4349 **C** 5943

B 4439 **D** 5934

3. A number machine follows a rule to output numbers in a pattern. What number comes out next?

_____

6, 10, 14, _____

4. Write the numeral for the words in the box.

_____

six thousand three hundred twenty-five

5. Write 13,258 in words:

_____

_____

_____

6. The area of Alaska is about 650,000 square miles. What is the name of the place value of the 6?

_____

A hundred thousand

B one hundred

C one thousand

D ten thousand

Teacher Note: *You may help students read words when requested. Do not explain the meaning of the words.*

1

continued

Find the Post-Test:

Page 8 of the Sampler

Pages 15 of the Teacher Manual

A Typical Day

Easy Lesson Planning with Pacing Calendars

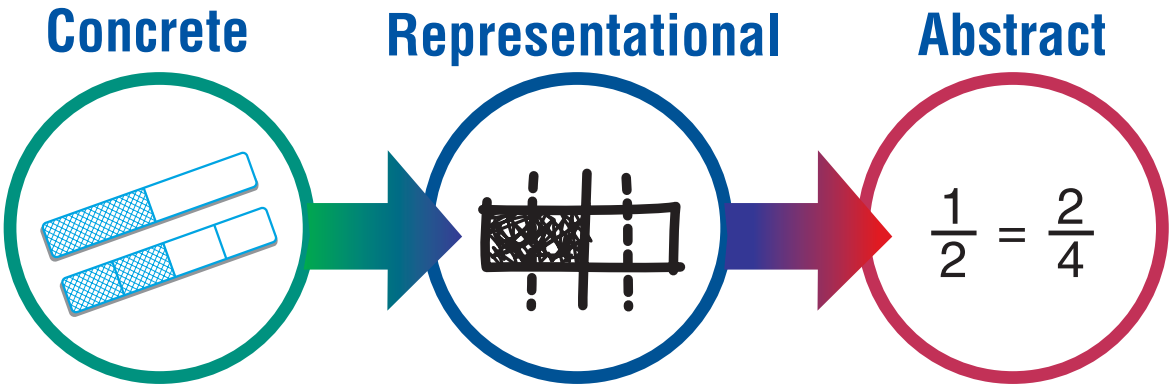
Research indicates that student achievement goes up when the teacher is perceived to be well-organized.

	Lesson 1	Lesson 2
Warm-up	Daily Review #1 (in back of student book)	Test Day
Lesson	**Objective:** Place value, expanded notation to 4-digits **Materials:** Base ten blocks, dice, place value mat, index cards, Master 3 **Teacher Guide pages:** 1-4	Administer the Pre-Test. Record results on Class Record Sheet and Student Progress Report (in Test Assessment Pack). Transfer results to pg. 3 of the Parent Handbook and send home with student.
Math Practice	Student book pages 1-4	Test Day
Journal Prompt/ Performance Assessment	Teacher Guide page 2 (see Assessment section for instructions)	Test Day Optional prompt on Teacher Guide page 4
Test Preparation and Homework	Daily Review #2 (in back of student book) Skill Builders 6-1 (in back of this manual)	Test Day
Games	Hammer to 100 Place Value Bingo (on Teacher Guide pages 1, 4)	Test Day

Find the Calendar:

Page 11 of the Sampler
Pages *ix* of the Teacher Manual

The Three Stages of Learning



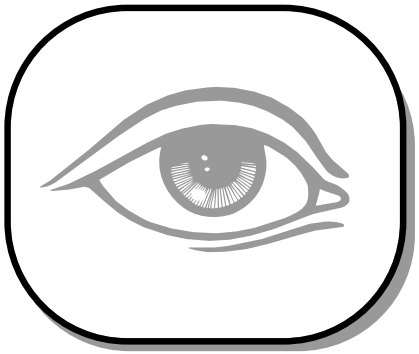
Majority of students do not become abstract until between the ages of 12 and 14.

–Jean Piaget

Find the Philosophy:
Page 4 of the Sampler
Page *i* of the Teacher Manual

The Three Learning Styles

Kinesthetic



Visual

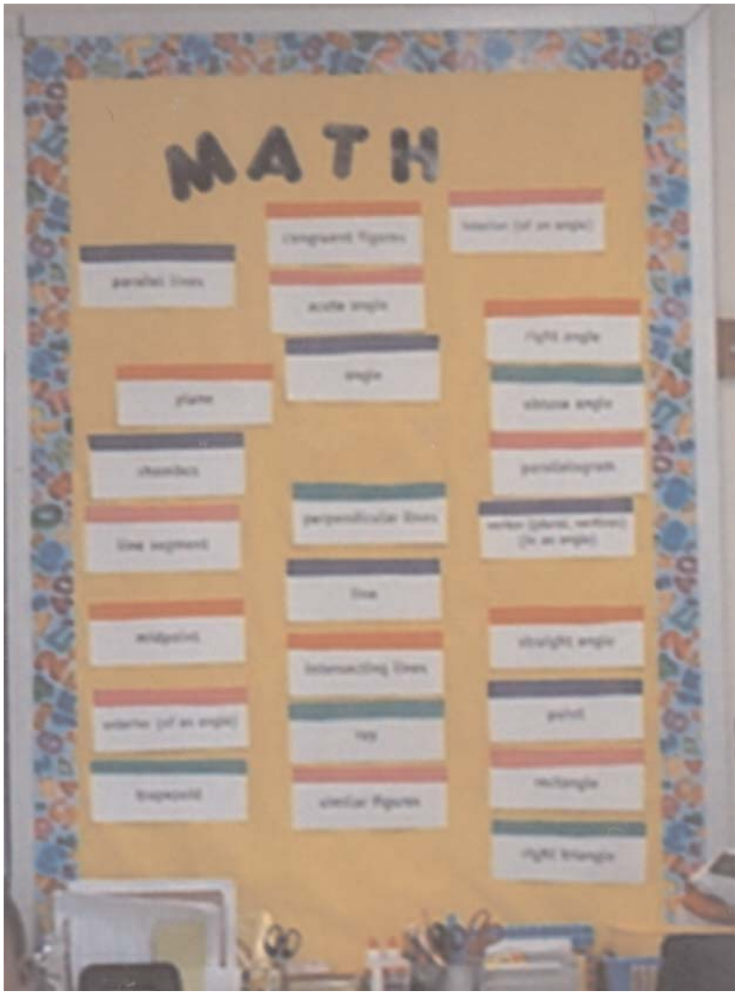
Auditory

"Children already come to us differentiated. It just makes sense that we would differentiate instruction in response to them."

–Carol Ann Tomlinson

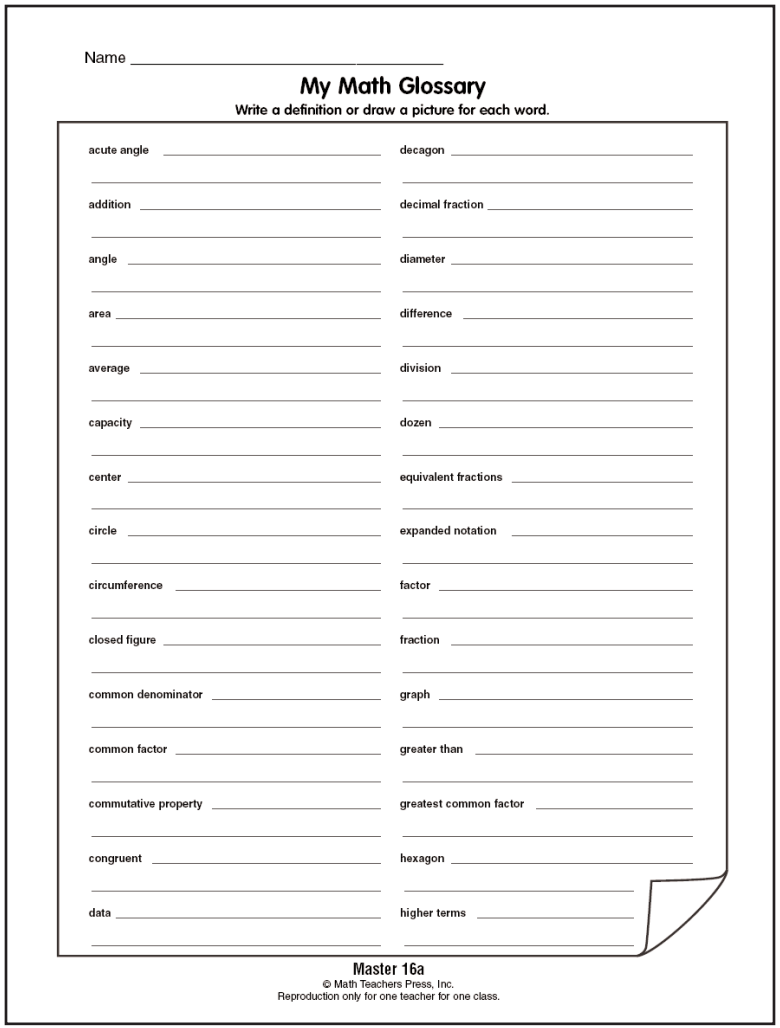
Teaching Math Vocabulary

- Write each word on a large index card.
- The class reads the word aloud 3 times to become familiar with it.
- At the end of the lesson, students write or draw a picture of the meaning of the word.
- Students write definitions in a glossary.
- Place the card on the classroom Word Wall.
- Vocabulary words are introduced at the beginning of every lesson.



Teaching Math Vocabulary

Students are able to write their own definitions of vocabulary words in their blank math glossary.



Name _____

My Math Glossary

Write a definition or draw a picture for each word.

acute angle	decagon
addition	decimal fraction
angle	diameter
area	difference
average	division
capacity	dozen
center	equivalent fractions
circle	expanded notation
circumference	factor
closed figure	fraction
common denominator	graph
common factor	greater than
commutative property	greatest common factor
congruent	hexagon
data	higher terms

Master 16a

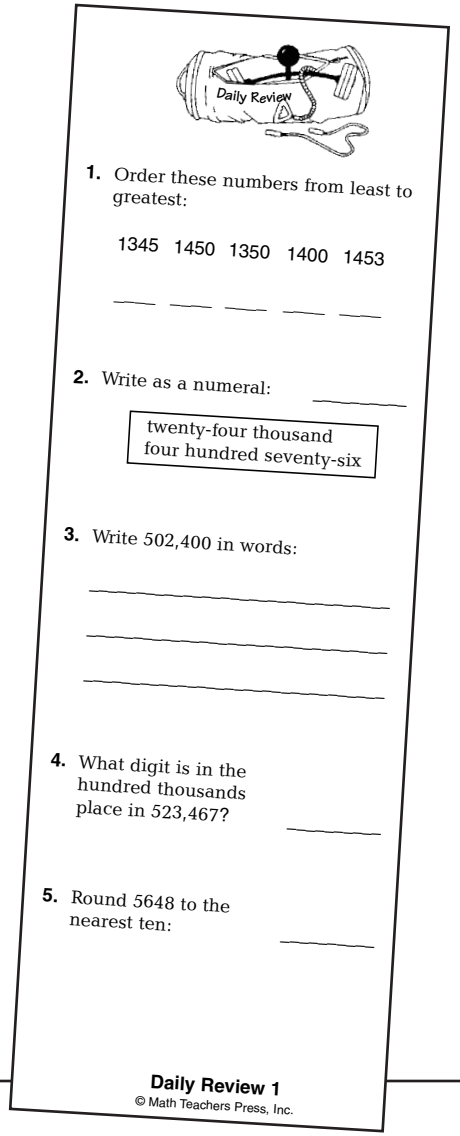
Find the Math Glossary:

Page 11 of the Sampler

Masters 18a-18b of the Teacher Manual

Students Begin with a 5 Question Daily Review

- Differentiate instruction on a daily basis
- Correlated to learning objectives
- Continuous monitoring of achievement
- Develop long term retention
- Provides successful math experiences



Find the Daily Reviews:
Back of the Student Book

Students Record Results of Daily Review

Name _____ Date _____ Pre-Test _____ Date _____ Post-Test _____ **4E**

Daily Reviews

Record the results from your Daily Reviews here.
The label "Obj." shows which objective that problem covered.

	Review 1	Review 2	Review 3	Review 4	Review 5	Review 6	Review 7	Review 8
1.	Obj. 2	Obj. 3	Obj. 13	Obj. 13	Obj. 16	Obj. 2	Obj. 21	Obj. 3
2.	Obj. 4	Obj. 8	Obj. 14	Obj. 14	Obj. 17	Obj. 4	Obj. 22	Obj. 8
3.	Obj. 5	Obj. 9	Obj. 16	Obj. 16	Obj. 18	Obj. 5	Obj. 24	Obj. 9
4.	Obj. 6	Obj. 11	Obj. 17	Obj. 17	Obj. 19	Obj. 6	Obj. 25	Obj. 12
5.	Obj. 7	Obj. 12	Obj. 18	Obj. 18	Obj. 20	Obj. 7	Obj. 26	Obj. 26
Correct								

	Review 9	Review 10	Review 11	Review 12	Review 13	Review 14	Review 15	Review 16
1.	Obj. 16	Obj. 13	Obj. 2	Obj. 8	Obj. 20	Obj. 16	Obj. 41	Obj. 23
2.	Obj. 17	Obj. 20	Obj. 3	Obj. 9	Obj. 21	Obj. 17	Obj. 42	Obj. 44
3.	Obj. 18	Obj. 21	Obj. 5	Obj. 25	Obj. 22	Obj. 18	Obj. 43	Obj. 45
4.	Obj. 19	Obj. 22	Obj. 7	Obj. 26	Obj. 25	Obj. 25	Obj. 48	Obj. 46
5.	Obj. 26	Obj. 24	Obj. 13	Obj. 29	Obj. 26	Obj. 26	Obj. 49	Obj. 47
Correct								

	Review 17	Review 18	Review 19	Review 20	Review 21	Review 22	Review 23	Review 24
1.	Obj. 27	Obj. 41	Obj. 30	Obj. 31	Obj. 44	Obj. 23	Obj. 1	Obj. 6
2.	Obj. 28	Obj. 43	Obj. 32	Obj. 32	Obj. 45	Obj. 27	Obj. 2	Obj. 7
3.	Obj. 29	Obj. 47	Obj. 33	Obj. 33	Obj. 46	Obj. 28	Obj. 3	Obj. 8
4.	Obj. 35	Obj. 48	Obj. 34	Obj. 34	Obj. 48	Obj. 35	Obj. 4	Obj. 9
5.	Obj. 36	Obj. 49	Obj. 37	Obj. 37	Obj. 49	Obj. 36	Obj. 5	Obj. 10
Correct								

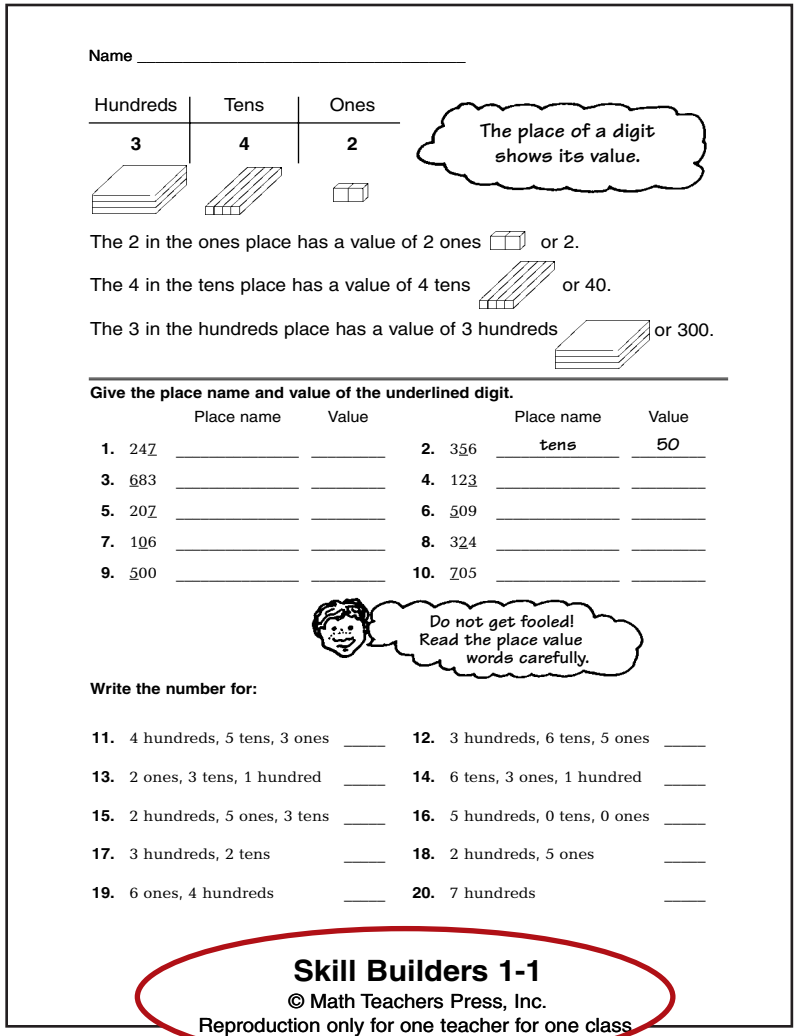
	Review 25	Review 26	Review 27	Review 28	Review 29	Review 30	Review 31	Review 32
1.	Obj. 11	Obj. 16	Obj. 21	Obj. 26	Obj. 31	Obj. 36	Obj. 41	Obj. 46
2.	Obj. 12	Obj. 17	Obj. 22	Obj. 27	Obj. 32	Obj. 37	Obj. 42	Obj. 47
3.	Obj. 13	Obj. 18	Obj. 23	Obj. 28	Obj. 33	Obj. 38	Obj. 43	Obj. 48
4.	Obj. 14	Obj. 19	Obj. 24	Obj. 29	Obj. 34	Obj. 39	Obj. 44	Obj. 49
5.	Obj. 15	Obj. 20	Obj. 25	Obj. 30	Obj. 35	Obj. 40	Obj. 45	Obj. 50
Correct								

Find the Daily Reviews:
Back of the Student Book

Optional *Skill Builder* Reteaching Pages

If students do poorly with the Daily Review, intervention can occur at this point by using the reteaching pages called *Skill Builders*. Each problem in the Daily Review is aligned with a math objective that identifies which *Skill Builder* to use.

Reproducible.



Name _____

Hundreds	Tens	Ones
3	4	2

The place of a digit shows its value.

The 2 in the ones place has a value of 2 ones or 2.

The 4 in the tens place has a value of 4 tens or 40.

The 3 in the hundreds place has a value of 3 hundreds or 300.

Give the place name and value of the underlined digit.

		Place name	Value			Place name	Value
1.	24<u>7</u>			2.	3<u>5</u>6	tens	50
3.	<u>6</u>83			4.	12<u>3</u>		
5.	20<u>7</u>			6.	<u>5</u>09		
7.	1<u>0</u>6			8.	3<u>2</u>4		
9.	<u>5</u>00			10.	<u>7</u>05		

Do not get fooled! Read the place value words carefully.

Write the number for:

11.	4 hundreds, 5 tens, 3 ones	____	12.	3 hundreds, 6 tens, 5 ones	____
13.	2 ones, 3 tens, 1 hundred	____	14.	6 tens, 3 ones, 1 hundred	____
15.	2 hundreds, 5 ones, 3 tens	____	16.	5 hundreds, 0 tens, 0 ones	____
17.	3 hundreds, 2 tens	____	18.	2 hundreds, 5 ones	____
19.	6 ones, 4 hundreds	____	20.	7 hundreds	____

Skill Builders 1-1

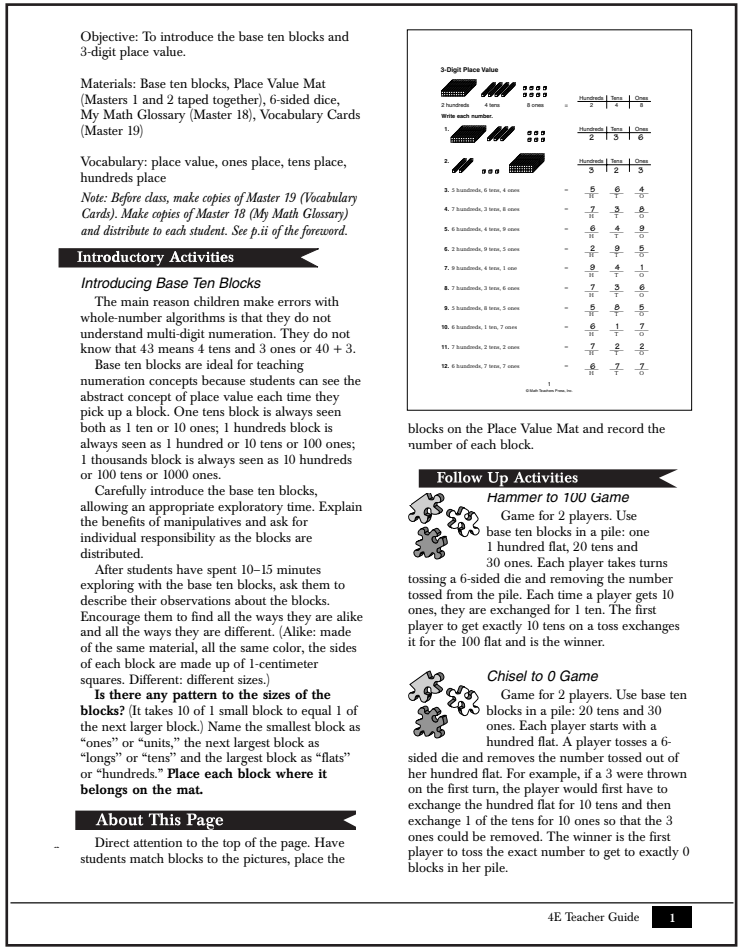
Find the *Skill Builders*:

Page 13 of the Sampler

Pages 1-1–50-7 of the Teacher Manual

Teacher Introduces and Directs Students Through a Manipulative Activity

Alike	Different



Objective: To introduce the base ten blocks and 3-digit place value.

Materials: Base ten blocks, Place Value Mat (Masters 1 and 2 taped together), 6-sided dice, My Math Glossary (Master 18), Vocabulary Cards (Master 19)

Vocabulary: place value, ones place, tens place, hundreds place

Note: Before class, make copies of Master 19 (Vocabulary Cards). Make copies of Master 18 (My Math Glossary) and distribute to each student. See p.ii of the foreword.

Introductory Activities

Introducing Base Ten Blocks

The main reason children make errors with whole-number algorithms is that they do not understand multi-digit numeration. They do not know that 43 means 4 tens and 3 ones or 40 + 3.

Base ten blocks are ideal for teaching numeration concepts because students can see the abstract concept of place value each time they pick up a block. One tens block is always seen both as 1 ten or 10 ones; 1 hundreds block is always seen as 1 hundred or 10 tens or 100 ones; 1 thousands block is always seen as 10 hundreds or 100 tens or 1000 ones.

Carefully introduce the base ten blocks, allowing an appropriate exploratory time. Explain the benefits of manipulatives and ask for individual responsibility as the blocks are distributed.

After students have spent 10–15 minutes exploring with the base ten blocks, ask them to describe their observations about the blocks. Encourage them to find all the ways they are alike and all the ways they are different. (Alike: made of the same material, all the same color, the sides of each block are made up of 1-centimeter squares. Different: different sizes.)

Is there any pattern to the sizes of the blocks? (It takes 10 of 1 small block to equal 1 of the next larger block.) Name the smallest block as "ones" or "units," the next largest block as "longs" or "tens" and the largest block as "flats" or "hundreds." **Place each block where it belongs on the mat.**

About This Page

Direct attention to the top of the page. Have students match blocks to the pictures, place the blocks on the Place Value Mat and record the number of each block.

Follow Up Activities

Hammer to 100 Game

Game for 2 players. Use base ten blocks in a pile: one 1 hundred flat, 20 tens and 30 ones. Each player takes turns tossing a 6-sided die and removing the number tossed from the pile. Each time a player gets 10 ones, they are exchanged for 1 ten. The first player to get exactly 10 tens on a toss exchanges it for the 100 flat and is the winner.

Chisel to 0 Game

Game for 2 players. Use base ten blocks in a pile: 20 tens and 30 ones. Each player starts with a hundred flat. A player tosses a 6-sided die and removes the number tossed out of her hundred flat. For example, if a 3 were thrown on the first turn, the player would first have to exchange the hundred flat for 10 tens and then exchange 1 of the tens for 10 ones so that the 3 ones could be removed. The winner is the first player to toss the exact number to get to exactly 0 blocks in her pile.

4E Teacher Guide 1

Find the First Lesson Page:

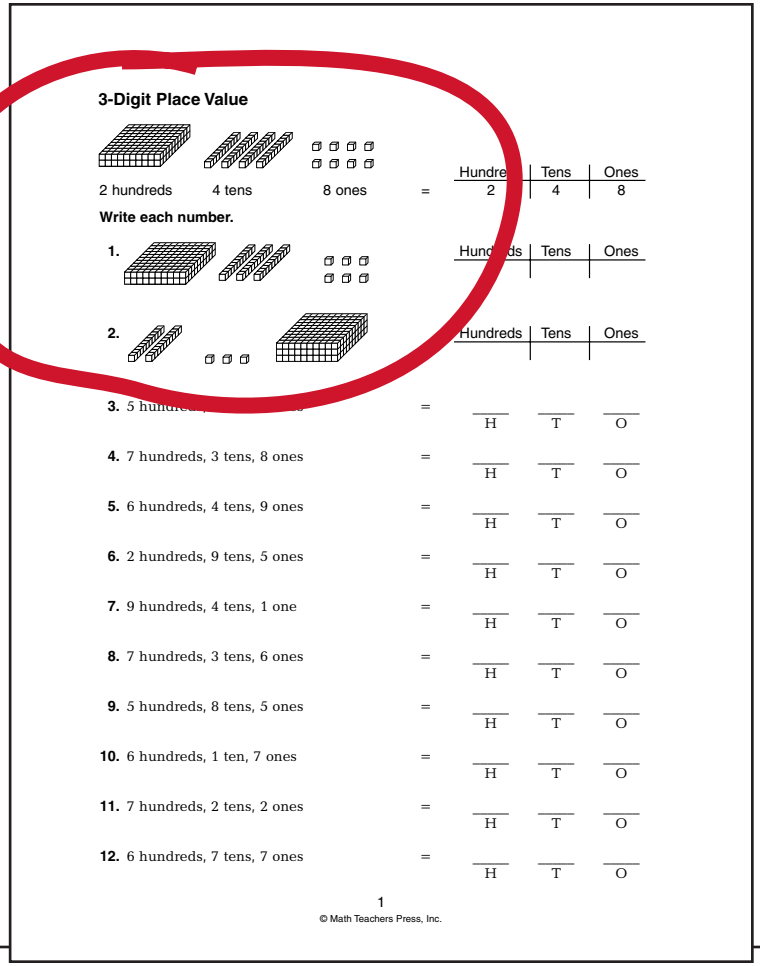
Page 1 of the Teacher Manual

Teacher Introduces and Directs Students Through a Manipulative Activity

“How are the blocks alike?”
“How are the blocks different?”

Students Follow Up the Hands-On Activity by Completing Practice Pages Related to the Activity

Pictures of manipulatives transition students to the abstract.



3-Digit Place Value

2 hundreds 4 tens 8 ones = Hundreds 2 | Tens 4 | Ones 8

Write each number.

1. Hundreds | Tens | Ones

2. Hundreds | Tens | Ones

3. 5 hundreds, 8 tens, 2 ones = H T O

4. 7 hundreds, 3 tens, 8 ones = H T O

5. 6 hundreds, 4 tens, 9 ones = H T O

6. 2 hundreds, 9 tens, 5 ones = H T O

7. 9 hundreds, 4 tens, 1 one = H T O

8. 7 hundreds, 3 tens, 6 ones = H T O

9. 5 hundreds, 8 tens, 5 ones = H T O

10. 6 hundreds, 1 ten, 7 ones = H T O

11. 7 hundreds, 2 tens, 2 ones = H T O

12. 6 hundreds, 7 tens, 7 ones = H T O

1

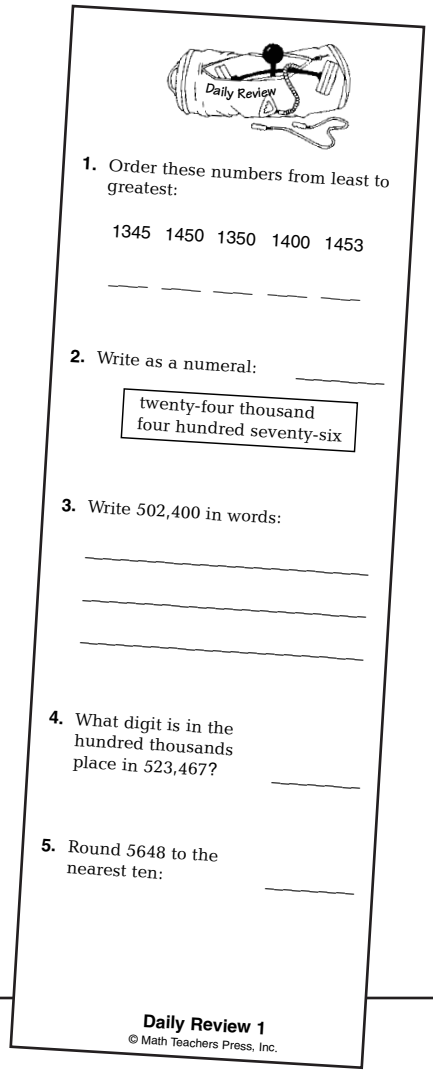
Find the First Student Page:
Page 1 of the Student Book

Students Respond to Journal Prompts by Writing About the Math They Learned

Journal Prompt

Draw a picture of the number 156. Then write the number in expanded notation. Which digit has the least value? How do you know?

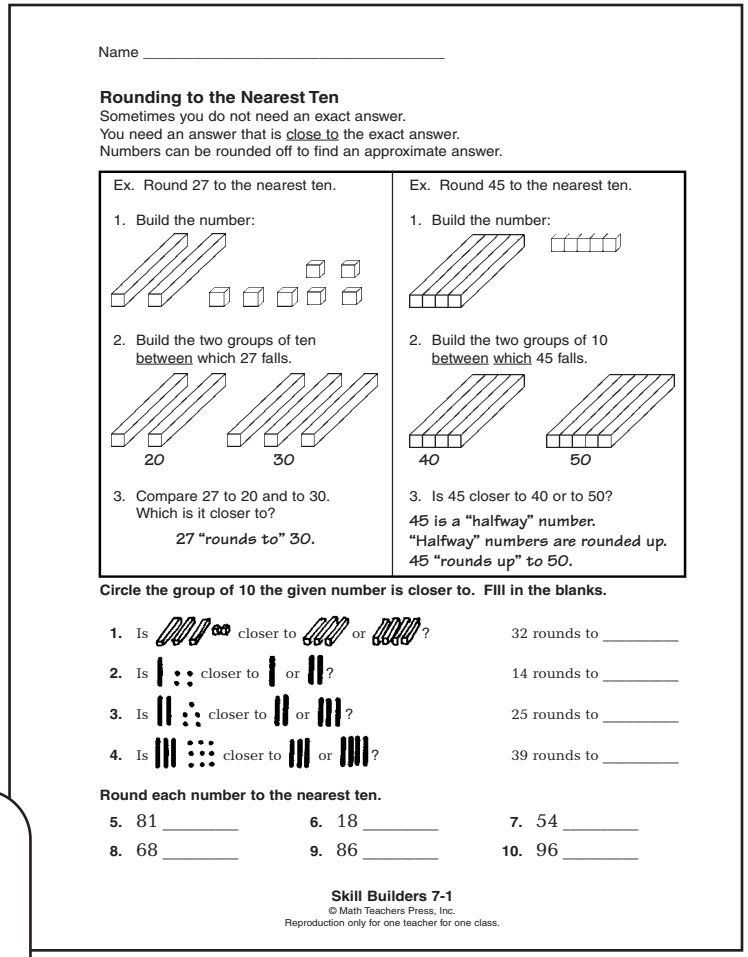
Students Complete a Daily Review Set of Problems (Optional – Time Permitting)



Find the Daily Reviews:

Back of the Student Book

Students Can Continue with a *Skill Builder* (Optional – Time Permitting)



Name _____

Rounding to the Nearest Ten
Sometimes you do not need an exact answer.
You need an answer that is close to the exact answer.
Numbers can be rounded off to find an approximate answer.

Ex. Round 27 to the nearest ten.	Ex. Round 45 to the nearest ten.
1. Build the number:	1. Build the number:
2. Build the two groups of ten between which 27 falls.	2. Build the two groups of 10 between which 45 falls.
20 30	40 50
3. Compare 27 to 20 and to 30. Which is it closer to? 27 "rounds to" 30.	3. Is 45 closer to 40 or to 50? 45 is a "halfway" number. "Halfway" numbers are rounded up. 45 "rounds up" to 50.

Circle the group of 10 the given number is closer to. Fill in the blanks.

1. Is closer to or ? 32 rounds to _____
2. Is closer to or ? 14 rounds to _____
3. Is closer to or ? 25 rounds to _____
4. Is closer to or ? 39 rounds to _____

Round each number to the nearest ten.

5. 81 _____ 6. 18 _____ 7. 54 _____
8. 68 _____ 9. 86 _____ 10. 96 _____

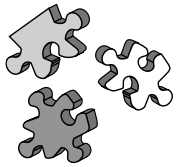
Skill Builders 7-1

Find the *Skill Builders*:

Page 13 of the Sampler
Pages 1-1–50-7 of the Teacher Manual

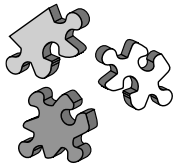
Students Can End the Day with a Math Game (Optional–Time Permitting)

Follow Up Activities



Hammer to 100 Game

Game for 2 players. Use base ten blocks in a pile: one 1 hundred flat, 20 tens and 30 ones. Each player takes turns tossing a 6-sided die and removing the number tossed from the pile. Each time a player gets 10 ones, they are exchanged for 1 ten. The first player to get exactly 10 tens on a toss exchanges it for the 100 flat and is the winner.



Chisel to 0 Game

Game for 2 players. Use base ten blocks in a pile: 20 tens and 30 ones. Each player starts with a hundred flat. A player tosses a 6-sided die and removes the number tossed out of her hundred flat. For example, if a 3 were thrown on the first turn, the player would first have to exchange the hundred flat for 10 tens and then exchange 1 of the tens for 10 ones so that the 3 ones could be removed. The winner is the first player to toss the exact number to get to exactly 0 blocks in her pile.

What Works Clearinghouse Recommendations for RTI

1. **Screen All Students to Identify those at Risk**
   - *Moving with Math* integrates Pre- and Post-Test screening.

2. **In-Depth Instruction of Whole Numbers through Grade 5 and Rational Numbers in Grades 4 through 8**
   - Hands-on, conceptually based lessons

3. **Explicit and Systematic Instruction**
   - Easy-to-use, scripted lesson plans

4. **Instruction on Solving Word Problems**
   - Explicit instruction on steps and strategies for solving word problems in lesson plans

Find the Recommendations:
Back Cover of the Sampler

5. Physical and Visual Representations of Mathematical Ideas

- Lessons are introduced with a manipulative activity and followed with a picture on student pages

6. Building Fluent Retrieval of Basic Facts

- Strategies and practice for learning basic facts
- Daily Reviews for long term retention

7. Progress Monitoring

- Daily Reviews and Journal Prompts provide ongoing assessment to differentiate instruction and monitor progress

8. Motivational Strategies

- Lesson Plans are guided to provide successful, engaging, and educational experiences

Find the Recommendations:
Back Cover of the Sampler

Meeting the Needs of Tier 2 and Tier 3 Students

- Conceptual-based, hands-on lessons incorporate the **three stages of learning** and address the **three learning styles** (kinesthetic, auditory, and visual).
- **Scaffolding** instruction in a logical structure guides and helps students understand a new topic.
- **Front Loading** instruction fills learning gaps and avoids back pedaling.
- Playing games provides more practice time.
- Using manipulatives longer will benefit struggling learners.
- Successful experiences improve self-concept and raise achievement.

Meeting the Needs of Tier 2 and Tier 3 Students

- Individual recognition of students by name and goal setting improves achievement.
- Student Progress Reports may be used as an IEP to target specific objectives.
- Daily Reviews and Reteaching Pages develop concepts to a mastery level for long-term retention.
- Learning groups of students missing objectives may be formed.

Benefits of Manipulatives

- Developmentally appropriate - reach all students regardless of their developmental background
- Builds conceptual understanding
- Improves problem solving skills
- Games foster language acquisition
- Improves test scores
- Research-based and proven results
- Reach students in all tiers - Special Education, ELL

"Students who had studied with manipulatives scored significantly higher on achievement tests."

Mark Driscoll,
Research within Reach

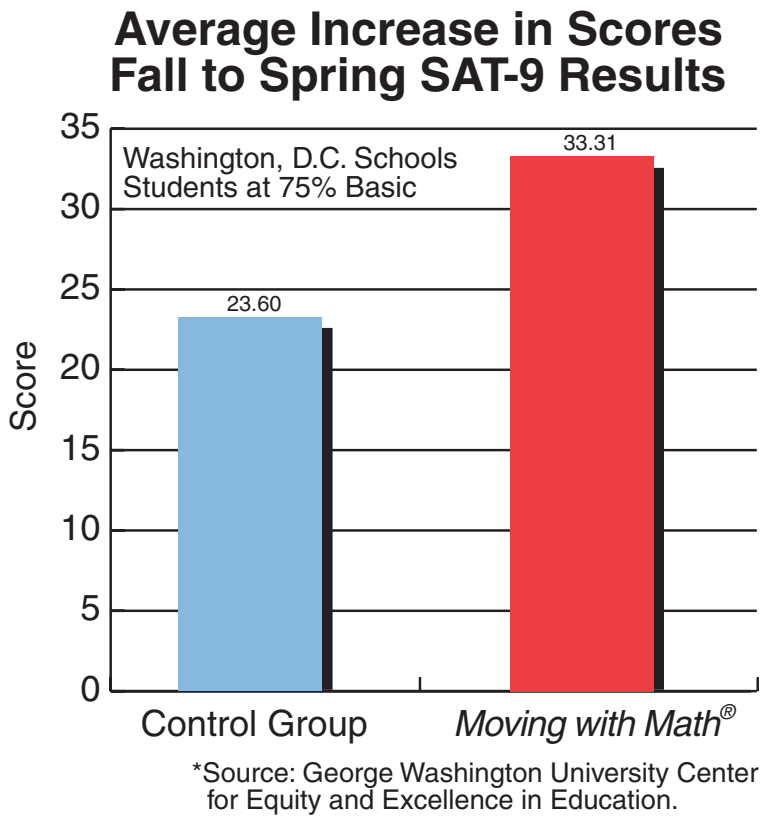
Research-Based Strategies for Special Education and ELL

- Include assessment tools to correctly place all learners
- Use manipulatives, pictures, and charts
- Practice scaffolding and front loading
- Use a consistent five-step problem solving plan
- Develop a math glossary
- Integrate oral and written communication between teacher and students
- Encourage peer communication in small groups playing games
- Make up and solve problems related to the real world

Teacher Support

- **Pacing Calendars** organize instruction plans for every lesson and test in the program. Reduces teacher planning time.
- **Tips to Getting Started** provides an overview of the Extensions program and helps teachers prepare instruction and assessment.
- Lightly scripted lessons provide **explicit instruction** for teachers to address the needs of different learning styles.
- **Supports teachers** at all levels of **math proficiency**.
- **Well-organized system** of instruction where everything is tied to objectives and state standards.

Independent Research Proves Student Gains



*Source: George Washington University Center for Equity and Excellence in Education.

GWU Study Results

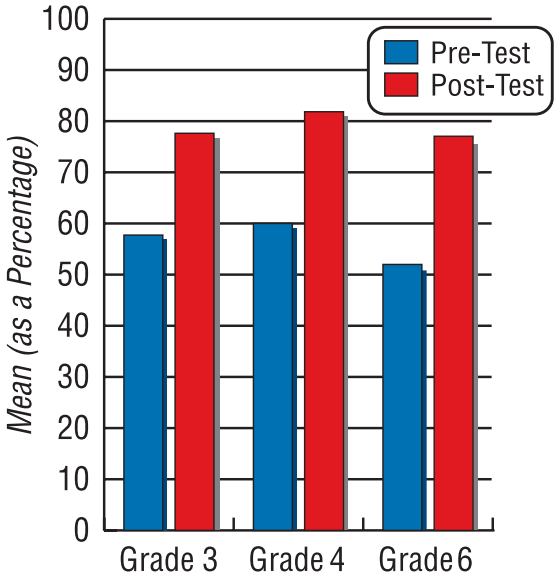
An independent study done by George Washington University found that over 11,000 students in Washington D.C. made statistically significant achievement gains on the SAT-9 compared to a control group in only 30 lessons.

Basic and **Below Basic** students made the greatest gains!

Midland ISD, TX

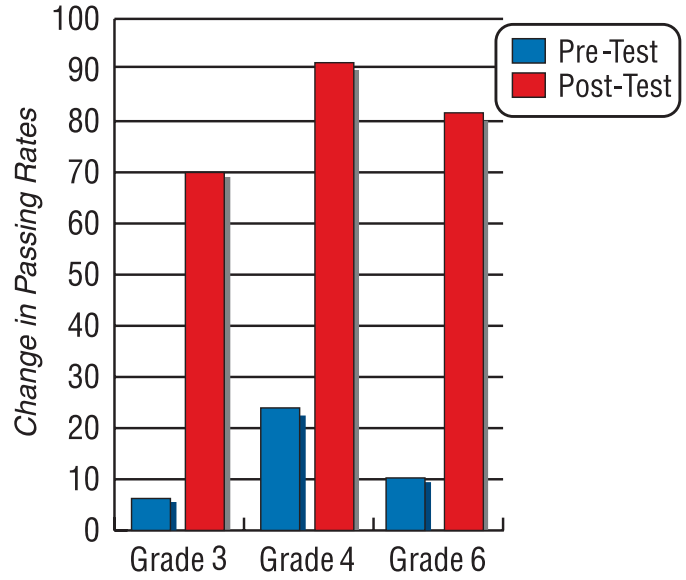
Midland has successfully used Extensions for over six years in summer school. They use it in grades 3, 4, and 6 and always have good results.

Change in Mean Scores Pre-Test to Post-Test



The percent of increase in mean scores ranged from 33% in grade 3 to 45% in grade 6. The average gain for all students was 39%.

Change in Passing Rates in Grades 3, 4 and 6



The overall percent of increase in passing students increased by 523%. The percent of increase ranged from 279% in grade 4 to 1067% in grade 3.

"What you have been obliged to discover by yourself leaves a path in your mind which you can use again when the need arises."

G.C. Lichtenberg