Math K–3

An Incremental Development

Home Study Sampler

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with

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Math K–3 Home Study Sampler Contents

The contents of this sampler were chosen to illustrate what you will find in Saxon's Home Study Math K–3 program.

A Guide to the Sampler

This sampler shows only a very small portion of what you would receive in the primary Saxon Home Study Kit. It is designed to give you a flavor of the program. The sampler includes an overview of the program, a table of contents for each level, samples of lesson pages taken from the teacher's manual, and samples of pages from the student workbook (grades 1 through 3).

The samples of lessons from the teacher's manual and the accompanying student pages were chosen for their variety. These lessons show various concepts taught and many of the manipulatives used in the program. Some are lessons taught early in the year, while others are later lessons. Sample lessons which use lesson masters are included at each level, and grades 1 through 3 each show an example of a lesson with a written assessment. Notes about the sample lessons are included before the lessons at each level.

Program Overview

*The **instructional components** of each grade can be viewed in the sample lessons.*

Saxon Math develops a solid foundation in the language and basic concepts in all areas of mathematics. It carefully builds concepts in small increments and provides practice in order to create success for your child.

Saxon's primary Home Study Kits for kindergarten through third grade provide materials appropriate for teaching children in a home setting. Each kit contains:

- a Teacher's Manual (a spiral-bound book containing from 112 lessons in kindergarten up to 140 lessons in third grade)
- a Meeting Book (a consumable book which you and your child will use during The Meeting at the beginning of the day)

Each first through third grade kit also contains:

- a Student Workbook (two books which include written practice pages, lesson masters, assessments, and fact sheets) and Fact Cards

Each lesson in the teacher's manual provides a list of materials and preparation instructions. The lesson which follows is scripted, making teaching easy and providing appropriate language and questions. This lesson includes The Meeting, a new objective to be taught, fact practice and written practice instructions (in grades 1 through 3), and assessment instructions on appropriate days.

There are five components to Saxon's primary math program.

1. The Meeting

During The Meeting you and your child will use a Meeting Book to orally practice skills related to the calendar, counting, patterning, time, temperature, graphs, money, and problem solving. The difficulty of skills practiced will vary according to grade level.

2. The Lesson

The Lesson or new objective can be taught later in the day. New concepts, which build on skills previously introduced and practiced, are presented through carefully selected, hands-on activities. Some manipulatives used in the lessons will be found in the home or can be made, while others can be purchased from an educational supply house.

3. Written Practice

The written practice (grades 1 through 3 only) includes practice of the new objective and previous skills. The first side (A) is completed with your assistance, while the other side (B), with problems similar to those on the first side, is done later in the day.

4. Fact Practice

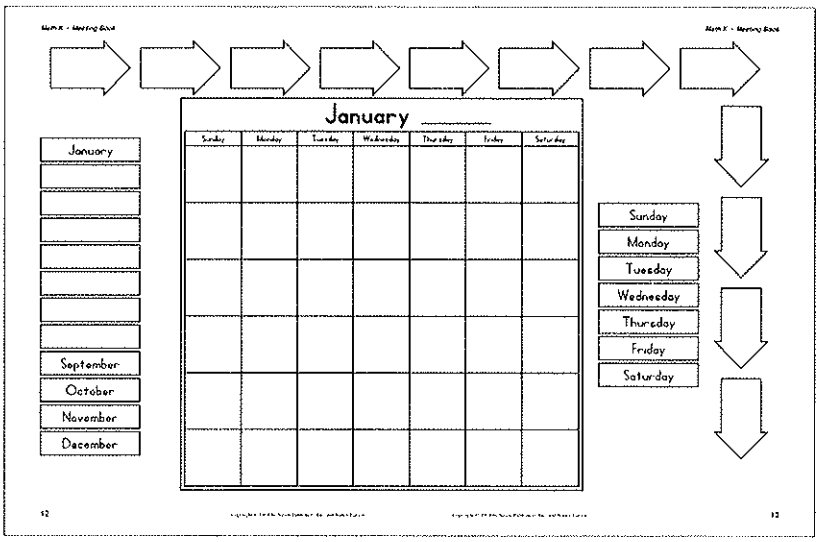
The number facts (grades 1 through 3 only) are practiced daily using fact cards and fact sheets. Number facts with similar patterns are introduced in groups, and your child will learn to recognize these patterns to find the answers to the facts.

5. Assessments

Oral and written assessments question your child on skills practiced for at least five lessons. In grades 1 through 3, a written assessment occurs every five lessons and an oral assessment occurs every ten lessons. In kindergarten, an oral assessment occurs every six lessons.

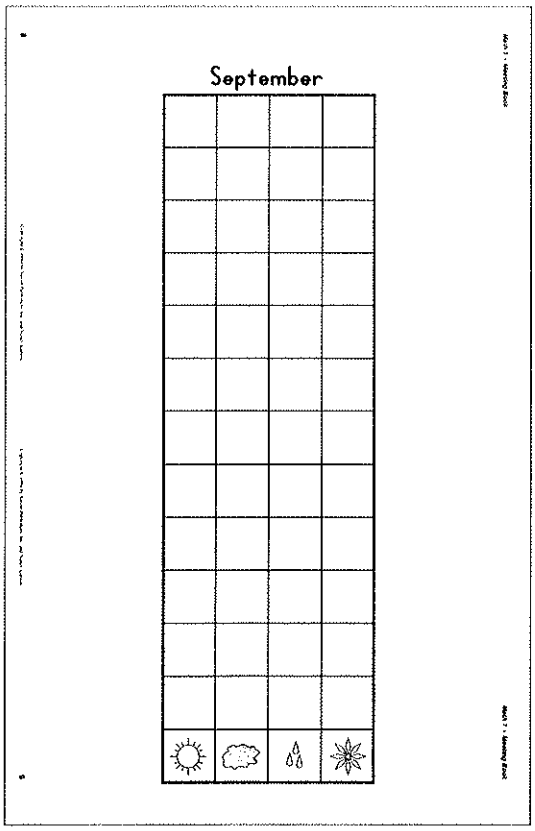
The Meeting Book

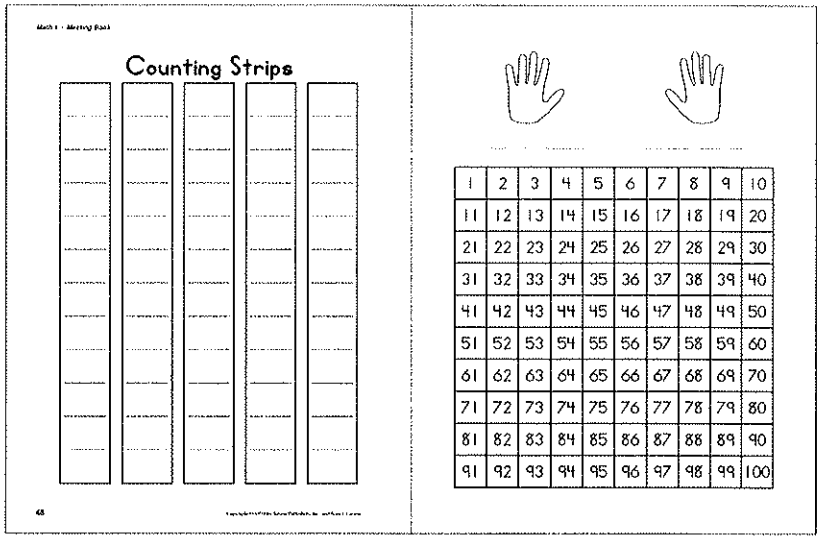
Math K Meeting Book



Monthly calendars are included in each Meeting Book. The kindergarten calendar is used to practice counting, patterning, identifying colors, and writing numbers.

Math 1 Meeting Book

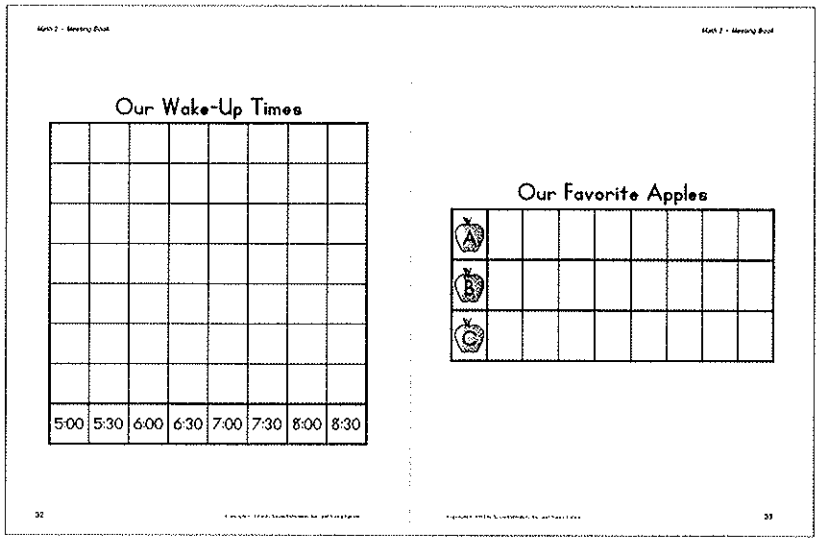




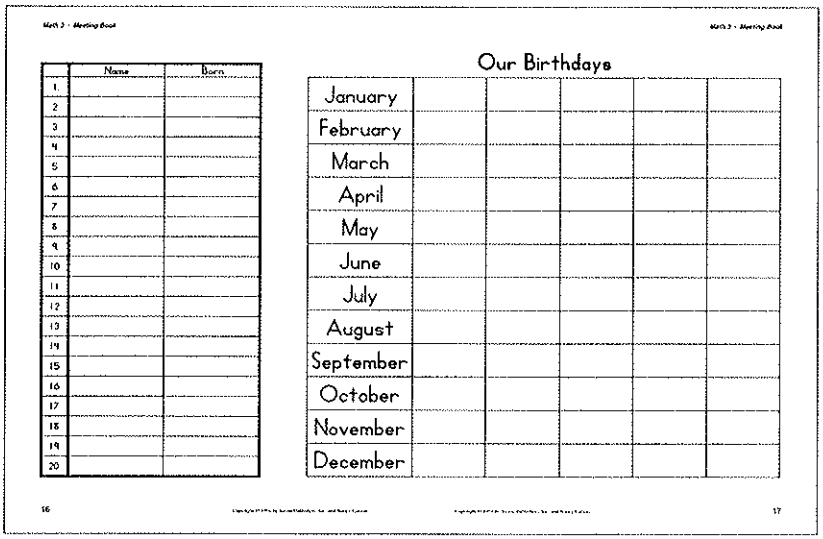
First and second graders graph the weather each day using the Meeting Book. In the first grade, the weather graph is used to practice counting and comparing. Number patterning is practiced using a hundred number chart and counting strips.

Math 2 Meeting Book

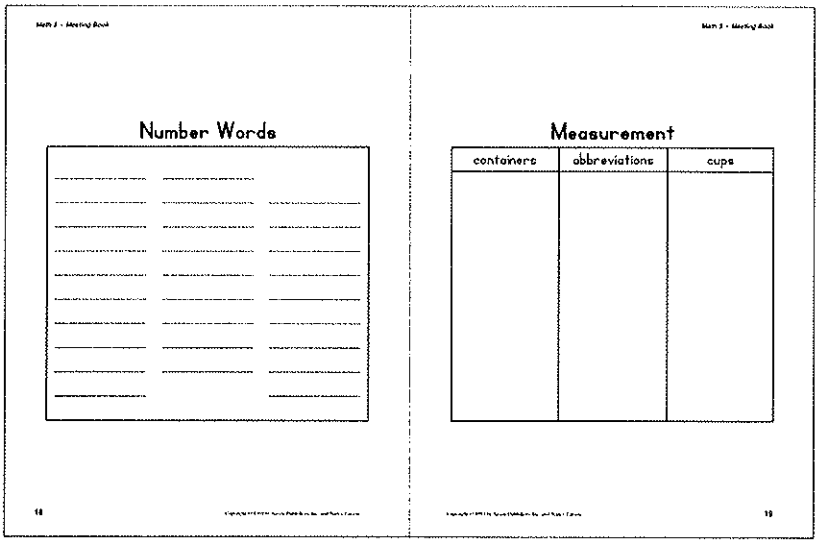
Math 2 and Math 3 Meeting Books include graphs created in Math 2 and Math 3 lessons. Graph reading is practiced during The Meeting.



Math 3 Meeting Book



The Meeting Books also include pages for recording information learned in lessons.



Math K
Home Study
Table of Contents

The table of contents indicates the ***order of topics*** *covered in Math K.*

Examples of the ***development of topics*** *can be seen in the Sample Lessons.*

Math K Table of Contents *(continued)*

Notes on Math K Sample Lessons

On the following pages you will find three *Math K* lessons. These are lessons taken from the *Math K Home Study Teacher's Manual.* The teacher's manual also includes oral assessment recording forms, lesson masters, and optional handwriting masters. An example of a lesson master and a page of the oral assessment recording forms are included with these lessons.

The charts below identify the components found in each lesson and describe how each component is used.

Lesson 35

Meeting	The calendar in the Meeting Book is used to practice patterning, counting, and identifying colors, numbers, months, and days of the week.
Lesson	Construction paper shapes are used to teach ordinal position to fourth.
Master K-35	This master provides shape patterns to use in the lesson.

Lesson 79

Meeting	Estimation and clock activities have been added, as well as naming weekend days.
Lesson	Linking cubes are used to measure length.

Lesson 109

Meeting	A new month is introduced, along with a new color pattern for the month.
Lesson	Teddy bear counters are used to act out story problems.

Lesson 35 – Eleventh Lesson in November

identifying ordinal position to fourth

lesson preparation

materials

Master K-35
2 pieces of construction paper
2 small envelopes
work mats

the night before

- Use Master K-35 to make two sets of construction paper shapes. Put each set of pieces in a small envelope.

in the morning

- Fill in the missing dates up to today's date on the calendar. Use the brown, red, red pattern to color these squares. Today's date will be written and the square colored during The Meeting.

The Meeting

- Open the Meeting Book to November's calendar.
- Point to the month at the top of the calendar.

  "What month is it?"

  "What letter does November begin with?"

  "Where else do you see November on this page?"
- Point to the list of months to the left of the calendar.

  "Let's spell the word 'November' together."
- Ask your child to point to each letter as you spell the word together.

  "What months have we used the Meeting Book?"
- Point to the year at the top of the calendar.

  "What year is it?"
- Put a piece of paper under yesterday's day of the week in the list to the right of the calendar. The paper should cover the remaining days of the week.

  "Yesterday was _____."

"What day of the week is it today?"

- Move the paper down to show today's day of the week.

"Were you right?"

"What letter does (day of the week) begin with?"

"Where else do you see (day of the week) on this page?"

- Point to today's day of the week on the calendar.

"Let's spell (day of the week) together."

- Ask your child to point to each letter as you spell the word together.
- Say the following once or twice a week:

"Let's say the days of the week together."

- Point to the days across the top of the calendar.

"Yesterday's date was November _____th."

"What is today's date?"

"What number will I write in today's date square?"

"Let's count to see if you are right."

- Point to each square as your child counts.
- Write the date in the date square.

"Today is (day of the week), November (date), (year)."

"Let's say that together."

- Point to each part as you say this together.

"What colors are we using for our November calendar squares?" *brown and red*

"What pattern are we using this month?" *brown, red, red*

"What color do you think we will use to color today's square?"

"Let's read our pattern together to check."

- Point to the squares as your child reads the colors.
- Ask your child to color the square.

"Let's read our pattern another way."

- Point to the squares as your child reads "ABBABB . . . ."
- Point to the last arrow with a number in it.

"This arrow tells us that this was the 34th day we used the Meeting Book."

- Point to the next arrow.

"What number should I write in this arrow?"

- Write the number 35 in the arrow.

"Let's count the number of days we have used the Meeting Book."

- Point to the arrows as your child counts with you.

The Lesson

Identifying Ordinal Position to Fourth

"Today we are going to act out stories using shape pieces."

"You will learn the special words we use to tell us each shape's place in line."

- Give your child a work mat and an envelope of shape pieces. Put an envelope of shape pieces and a work mat on the table in front of you.

"Take the shape pieces out of the envelope."

"What shape pieces do you have?" *square, triangle, rectangle, circle*

"How many shapes do you have?" *4*

"We're going to pretend that our shape pieces are lining up to jump in a pool."

"Which shape do you think should be first in line?"

- Ask your child to name a shape.

"Hold up your (shape)."

"Put the (shape) at the top of your mat."

- Demonstrate, using your pieces.

"This will be the first shape."

"Which shape do you think should be second in line?"

- Ask your child to name a shape.

"Put the (shape) next in line."

- Demonstrate, using your pieces.

"Which shape will be next in line?"

- Ask your child to name a shape.

"Put the (shape) next in line."

"Which shape will be last?"

"Put the (shape) in line."

"Which shape is first?"

"Which shape is second?"

"Which shape is third?"

"Which shape is last?"

"We can also say that the (shape) is fourth."

"The shapes are in the pool and they are making a design."

"Make a design with your shapes."

"Now they are ready to line up to climb the ladder out of the pool."

"Which shape will be first now?"

- Ask your child to name a shape.

"Put the (shape) at the top of your mat."

"Which shape will be second?"

- Ask your child to name a shape.

"Put the (shape) in line."

"Which shape will be third?"

- Ask your child to name a shape.

"Put the (shape) in line."

"Which shape will be fourth?"

"Put the (shape) in line."

"Point to the shape that is first."

"Point to the shape that is second."

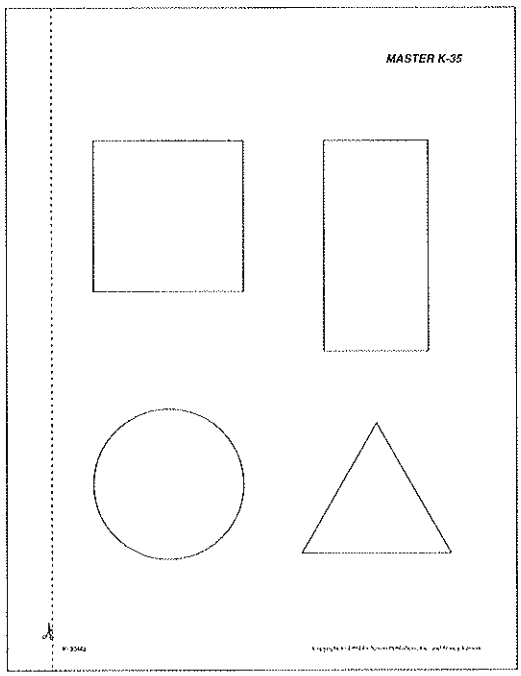
"Point to the shape that is third."

"Point to the shape that is fourth."

"We're going to put our shape pieces away now."

"Put your shape pieces in your envelope."

- Save the envelopes of shape pieces.



Lesson 79 – Seventh Lesson in March

ordering objects by length
measuring length using nonstandard units

lesson preparation

materials

basket of linking cubes

construction paper (yellow, blue, red, and green)

work mat

the night before

- Cut out the following construction paper strips: blue – 1" × 3", yellow – 1" × 6", red – 1" × 9", and green 1" × 12".

in the morning

- Fill in the missing weekday dates up to today's date on the calendar. Use the green, white, orange pattern to color these squares. Today's date will be written and the square colored during The Meeting.

The Meeting

- Open the Meeting Book to March's calendar.

  "What month is it?"

  "Let's spell the word 'March' together."

- Ask your child to point to each letter as you spell the word together.

  "Where else do you see March on this page?"

- Point to the list of months to the left of the calendar.

  "What letter does March begin with?"

  "What sound do we make for M?"

  "What months have we used the Meeting Book?"

  "How many months are in a year?"

  "Let's count to check."

- Count the month boxes together.

  "What is the first month we used the Meeting Book?"

  "What is the first month of the year?"

- Point to the year at the top of the calendar.

"What year is it?"

NOTE: If today is Monday, insert the new dialogue listed at the end of The Meeting.

- Put a piece of paper under yesterday's day of the week.

"What day of the week is it today?"

- Move the paper down to show today's day of the week.

"Were you right?"

"Let's spell (day of the week) together."

- Ask your child to point to each letter as you spell the word together.

"Where else do you see (day of the week) on this page?"

- Point to today's day of the week on the calendar.

"What letter does (day of the week) begin with?"

"What sound do we make for (first letter of the day of the week)?"

"How many days are in a week?"

"Let's count to check."

- Count the days of the week boxes together.
- Say the following once or twice a week:

"Let's say the days of the week together."

- Point to the days across the top of the calendar.

"Yesterday's date was March _____th."

"What is today's date?"

"What number will you write in today's date square?"

"Let's count to see if you are right."

- Point to each square as your child counts.
- Ask your child to write the number in the square.

"How do we say that when we are saying the date?"

"Today is (day of the week), March (date), (year)."

"Let's say that together."

- Point to each part as you say this together.

"What colors are we using for our March calendar squares?" *green, white, and orange*

"What pattern are we using this month?" *green, white, orange*

"What color do you think you will use to color today's square?"

"Let's read our pattern to check."

- Point to the squares as your child reads the colors.
- Ask your child to color the square.

  "Let's read our pattern another way."

- Point to the squares as your child reads "ABCABCABC . . . ."

NOTE: If today is Friday, insert the new dialogue listed at the end of The Meeting.

- Point to the last arrow with a number in it.

  "This arrow tells us that this was the 78th day we used the Meeting Book."

- Point to the next arrow.

  "What number should I write in this arrow?"

- Write the number 79 in the arrow.
- Do the following twice a week:

  "Let's count the number of days we have used the Meeting Book."

- Point to the arrows as your child counts with you.

NOTE: Do the following estimating and counting activity once a week.

- Use a collection of less than 100 items in a clear container. Items to be counted may be jelly beans, cereal, peanuts, baseball cards, paper clips, crayons, puzzle pieces, pennies, etc. Occasionally use more than 100 items.

  "Let's try to estimate how many _____ are in this container."

  "How many _____ do you think are in this container?"

  "Let's count the _____ together."

  "Every time we have ten _____, we will put them in a small cup (pile)."

- Remove the items one at a time. Put each group of 10 items in a small cup (or pile) as you count the items together.

  "How many _____ did we have?"

  "Let's count by 10's to see if we will have the same amount."

- Count by 10's with your child as you point to each cup (or pile). Count the extras by 1's.

  "Today we will _____ at about (time to the hour)."

  "Show that time on the clock."

Friday

"Do you know what tomorrow is?" *Saturday*

"Let's use our days of the week list to check."

"Where else do you see Saturday on this page?"

"Saturday is the last day of the calendar week."

- Point to Saturday on the calendar.

"What letter does Saturday begin with?"

"What sound do we make for S?"

"What number will you write in Saturday's square?"

- Ask your child to write the number in the square.

"What color will you use to color Saturday's square?"

- Ask your child to color the square.

Monday

"What day of the week was it yesterday?" *Sunday*

"Let's use our days of the week list to check."

"Where else do you see Sunday on this page?"

"Sunday is the first day of the calendar week."

- Point to Sunday on the calendar.

"What letter does Sunday begin with?"

"What sound do we make for S?"

"What number will you write in Sunday's square?"

- Ask your child to write the number in the square.

"What color will you use to color Sunday's square?"

- Ask your child to color the square.

The Lesson

Ordering Objects by Length
Measuring Length Using Nonstandard Units

"Today you will learn how to put strips of paper in order from shortest to longest."

"After you do that, you will learn how to measure the strips using the linking cubes."

- Give your child the construction paper strips and a work mat.

"Are your strips of paper all the same?"

"How are they different?" *color and length*

"Now you will put these strips in order from shortest to longest."

"Which color strip is the shortest?"

- Point to the left side of the work mat.

"Put the shortest strip here."

- Position the strip vertically.

"Which color strip will you put next?" *yellow*

"Where will you put it?" *next to the blue*

- Repeat with the last two strips.

"Each strip is a little longer than the one before it."

- Point to the differences in the lengths of the strips.

"Which color strip is the shortest?"

"Which color strip is the longest?"

"Now I will use linking cubes to measure one of the paper strips."

"I will try to make a train the same length as the yellow strip."

- Snap together 5 linking cubes. (Use assorted colors.)
- Align one end of the linking cube train with one end of the strip.

"Is my train the same length as the strip?" *no*

"How do you know?" *it's too short*

"What should I do?" *snap on more cubes*

- Add 5 more linking cubes.
- Align one end of the linking cube train with one end of the strip.

"Is my train the same length as the strip?" *no*

"How do you know?" *it's too long*

"What should I do?" *take off some cubes*

- Take off 2 linking cubes.
- Align one end of the linking cube train with one end of the strip.

"Is my train the same length as the strip?" *yes*

"How do you know?" *both ends match*

"Which strip will need the most linking cubes?" *green*

"Which strip will need the fewest linking cubes?" *blue*

"Make a train the same length as the blue strip."

- Allow time for your child to do this.

"How many cubes did you use?"

"Point to each cube as we count them together."

- Repeat, using the red strip and the green strip.

Lesson 109 – First Lesson in June

acting out some, some went away stories

lesson preparation

materials

basket of teddy bear counters

work mat

in the morning

- If the month does not begin today, write the dates up to today's date on the calendar. The June color pattern on the date squares will be yellow, light green, light green, pink. Color the squares with dates up to today's date. Today's date will be written and the square colored during The Meeting.

The Meeting

- Open the Meeting Book to June's calendar.

  "This is a new month."

  "What month is it?"

  "What letter does June begin with?"

  "Is this an uppercase or a lowercase letter?"

  "Let's spell the word 'June' together."

- Ask your child to point to each letter as you spell the word together.

  "Where else do you see June on this page?"

- Point to the list of months to the left of the calendar.

  "June is the sixth month of the year."

  "How many months are in a year?"

  "Let's count to check."

- Count the month boxes together.
- Point to the year at the top of the calendar.

  "What year is it?"

  "What digits did I use to write (year)?"

  "What day of the week is it today?"

  "Let's spell (day of the week) together."

  "Where else do you see (day of the week) on this page?"

- Point to today's day of the week on the calendar.

  "What letter does (day of the week) begin with?"

  "What sound do we make for (first letter of the day of the week)?"

  "Today you will write the date in the square under (day of the week)."

  "Where do you think you will write the date?"

- Ask your child to point to the appropriate square.

  "Today is June _____."

  "What number should you write in the square?"

- Ask your child to write the number in the square.

  "How do we say that when we are saying the date?"

  "Today is (day of the week), June (date), (year)."

- Point to each part as you read the date.

  "Let's say that together."

  "What colors did we use for our May calendar squares?" *blue, yellow, and green*

  "What was our pattern?" *blue, yellow, yellow, green*

  "What did we call this pattern?" *ABBC pattern*

  "In June, we will color our squares yellow, green, and pink."

  "We will make a yellow, green, green, pink pattern."

  "What do you think we will call this pattern?" *ABBC*

  "What color do you think I will use to color today's square?"

- Color the square.

- Point to the last arrow on the page with May's calendar.

  "This arrow tells us that this was the 108th day we used the Meeting Book."

- Point to the first arrow in the bottom left-hand corner on the page with June's calendar.

  "What number should I write in this arrow?"

- Write the number 109 in the arrow.

  "Let's count the number of days we have used the Meeting Book."

- Point to the arrows, beginning with 1, as your child counts with you.

The Lesson

Acting Out Some, Some Went Away Stories

"A few days ago we acted out stories using the teddy bear counters."

"What happened in our stories?"

"Today you will learn how to act out different stories."

"Today we are going to pretend that the teddy bears are going to a carnival (amusement park)."

"What types of rides do they have at a carnival?"

"We will pretend that the work mat is a ride at a carnival."

- Give your child a work mat and the basket of teddy bear counters.

"Put ten teddy bears in a line next to your mat."

- Allow time for your child to do this.

"We will pretend that the teddy bears are waiting in line to get on the ferris wheel (or a ride named by your child)."

"Eight teddy bears got on the ferris wheel."

"Show what happened."

"When the ferris wheel stopped, some of the teddy bears got off."

"How many teddy bears got off?"

"Show this using the teddy bear counters."

"How many teddy bears are on the ferris wheel now?"

"When the ferris wheel stopped the next time, some more teddy bears got off."

"How many teddy bears got off?"

"Show this using the teddy bear counters."

"How many teddy bears are on the ferris wheel now?"

"At the next stop, all the rest of the teddy bears got off."

"How many teddy bears got off?"

"Show this using the teddy bear counters."

"How many teddy bears are on the ferris wheel now?"

"What happened in this story?"

"There were some teddy bears on the ferris wheel and then some went away."

"We call this a some, some went away story."

- Repeat several times using different numbers of bears and different carnival rides.

"Make up a some, some went away story about the teddy bears at the carnival."

- Allow time for your child to make up several stories.

Child's Name _____

MATH K

Oral Assessment Recording Forms

LESSON 27 – Oral Assessment #1

Date _____

Counting Objects; Matching Sets of Objects Using One-to-One Correspondence

Materials:
linking cubes (8 blue and 10 yellow)

A. • Arrange 8 unconnected blue linking cubes in a row. *"Count the cubes in this row."*	B. • Give your child 10 yellow cubes. *"Make another row that is the same as my row of cubes."* *"How do you know they are the same?"*

LESSON 34 – Oral Assessment #2

Date _____

Identifying and Naming Shapes

Materials:
construction paper shape pieces 

A. • Point to each shape. *"What shape is this?"*				B. *"Point to the..."*			
square	triangle	circle	rectangle	*square."*	*triangle."*	*circle."*	*rectangle."*

LESSON 42 – Oral Assessment #3

Date _____

Matching Sets and Numbers

Materials:
number cards 0–10
10 linking cubes (one color)
work mat

A. • Provide 10 linking cubes of one color. • Show your child the number cards (7, 9, 0, 5) one at a time. *"Show me this number of cubes."*				B. • Put 4 cubes on the work mat. • Give your child the number cards arranged in random order. *"Show me the number card that tells the number of cubes on the mat."* • Repeat with 6 and 8 cubes.		
7	9	0	5	4	6	8

LESSON 50 – Oral Assessment #4

Date _____

Sorting and Identifying the Sorting Rule

Materials:
red, yellow, and blue shape pieces from Lessons 20 and 30

A. • Give your child a mixed pile of shape pieces. *"Sort these pieces in some way."* *"How did you sort them?"*	B. • Mix the shape pieces. *"Sort the pieces in a different way."* *"How did you sort them?"*

Math 1
Home Study
Table of Contents

The table of contents indicates the ***order of topics*** *covered in Math 1.*

Examples of the ***development of topics*** *can be seen in the Sample Lessons.*

Math 1 Table of Contents *(continued)*

Notes on Math 1 Sample Lessons

On the following pages you will find three *Math 1* lessons. These are lessons taken from the *Math 1 Home Study Teacher's Manual.* The miniature pages pictured at the end of each lesson show the student materials which accompany each lesson and include answers for your convenience. These materials are found in the Student Workbook.

The charts below identify the components found in each lesson and describe how each component is used.

Lesson 46

Meeting	The Meeting Book is used to practice patterning, shapes, counting, time, money, and left/right.
Lesson	Each lesson begins with number writing. This lesson also uses containers to practice ordering by volume and identifying a 1-cup measure.
Fact Sheet	Subtraction is practiced.
Worksheet	Side A is completed with your assistance immediately following the lesson, while Side B is completed later in the day.

Lesson 75

Meeting	Counting increments have been added, and the pennies in the coin cup are tallied.
Assessment	A written assessment occurs every five lessons.
Lesson	Number writing includes finding the 10's and 1's in the number. Dimes, pennies, and grocery items are used to practice adding two-digit numbers.
Master 1-75	This master provides practice adding two-digit numbers.
Fact Sheet	Addition is practiced.
Worksheet	Number writing and story problems, along with other skills, are practiced every day.

Lesson 107

Meeting	Pennies are used for counting numbers over 100, and nickels and pennies are counted.
Lesson	Pattern blocks are used to show one half, one third, and one sixth.
Fact Sheet	Subtracting a number from 10 is practiced.
Worksheet	The lesson topic is practiced, along with concepts taught in earlier lessons.

Lesson 46

writing the number 42
ordering containers by volume
identifying one-cup liquid measure

lesson preparation

materials

1-cup liquid measuring cup (preferably plastic)
5 empty containers
basin, funnel, and newspaper
water (approximately 3 gallons)
food coloring (optional)
masking tape
marker
linking cubes (10 each of red, green, blue, yellow, and black)
large fact cards (subtracting one facts)
Fact Sheet S 2.0

the night before

- Use five empty plastic containers. The containers should be of clearly different sizes. If possible, include liter, quart, half gallon, and pint or half pint containers. Soft drink, milk, shampoo, ketchup, syrup, or salad dressing bottles can be used. Prior to the lesson, use a piece of tape and a marker to label the five containers A, B, C, D, and E.
- Highlight the 1-cup line on the measuring cup with tape or a marker.

in the morning

- Food coloring in the water makes the water level in the containers easier to see. Use a basin or place old newspapers on the floor or table to catch spills. A funnel can also be used to make pouring easier.
- Write the following number pattern on the meeting strip:

16, 17, 18, ___, ___, ___

Answer: 16, 17, 18, 19, 20, 21

- Put **5 dimes** in the coin cup.

The Meeting

calendar

- Ask your child to identify the following:

  year

  month

  shapes on the calendar

  today's shape

  shape pattern for the month

- Ask your child to write the date on the calendar.
- Ask your child to do the following:

  identify today's day of the week

  identify the days of the week

  read the days of the week

  "How many days of the week are there?"

  "Let's count them."

  "What are the weekdays?"

- Ask your child to write the full date on the meeting strip.

weather graph

- Ask your child to report and graph the weather.
- Ask questions about the graph.

counting

- Count from 1 to 100 using the hundred number chart.
- Count backward from 20 to 1.

  "Let's use our counting strip to help us count by 10's to 100."

- Point to each number on the counting strip as your child counts.
- Add another number to the number line.
- Count to check.

number pattern

- Ask your child to identify and fill in the missing numbers.
- Read the number pattern together.

clock

- Ask your child to set the morning/afternoon/evening/night clock.

coin cup

"What coin do we have in the coin cup today?"

"What do we count by when we count dimes?"

- Ask your child to slide and count the dimes in the coin cup.
- Ask your child to write the money amount on the meeting strip.

right/left

- Continue to practice left and right once a week. Practice more often, if necessary.

The Lesson

Writing the Number 42

"The last number we practiced writing was the number 41."

"What number do you think we will learn how to write today?"

- Write the number 42 on the chalkboard.

"What digits do you see in the number 42?"

"How would you tell someone how to write the number 42?"

"Which digit is on the left?"

"Which digit is on the right?"

Ordering Containers by Volume
Identifying One-Cup Liquid Measure

- Display the five containers so that your child can see them easily.

"Today you will learn how to order containers by volume."

"I have five containers."

"Look at them carefully."

"We are going to fill each container with water."

"The smallest container is the one that will hold the least amount of water."

"Which container do you think is the smallest?"

"Why?"

- Encourage your child to discuss why he/she thinks a certain container will hold the least.
- Put that container on the far left.

"Which container do you think is the smallest now?"

- Put that container next to the one judged to have the least volume.
- Repeat with the other containers.
- Hold up a one-cup measuring cup.

"We will use a measuring cup to find how many cups of water each container will hold."

"Each time we fill this cup, we have one cup of water."

- Point to the highlighted one-cup line on the measuring cup.

"We will fill the cup to this line for exactly one cup of water."

- Hold up the one-cup measuring cup and the container judged by your child to be the smallest.

"Let's estimate how many cups of water this container will hold."

"How many cups of water do you think it will take to fill this container?"

- Record on the chalkboard:

Container	Estimate	Actual
A		
B		
C		
D		
E		

- Record your child's estimate on the chalkboard chart.

"Let's try it to see."

"You will keep track of how many cups of water we use."

- Give your child 10 red, 10 blue, 10 green, 10 yellow, and 10 black linking cubes.

"Every time I pour a cup of water into this container, you will take one (color) linking cube."

"The tower of (color) linking cubes will show how many cups of water we used to fill this container."

"Count with me as I pour each cup of water into this container."

- Pour the water into the measuring cup and from the measuring cup into the first container. Estimate to the nearest cup. For example, if a little more than four cups of water was used, write "4 cups + a little." If four and a half cups were used, write "4 cups + a half cup." If a little less than five cups was used, write "5 cups − a little."

"How many cups of water did we use to fill this container?"

- Record the amount on the chalkboard chart. Stand the tower of linking cubes next to the container.
- Point to the next container in the row.

"Do you think this container will hold more or less water?"

"How many cups of water do you think this container will hold?"

- Record the estimate on the chalkboard.

"Every time I pour a cup of water into the container, you will take one (color) linking cube."

"The tower of (color) linking cubes will show how many cups of water we used to fill this container."

"Count with me as I pour each cup of water into this container."

"How many cups of water did we use to fill this container?"

- Record the amount on the chalkboard chart. Stand the tower of linking cubes next to the container.
- Repeat with the remaining containers, using a different color linking cube for each.

"Which container has the smallest volume?"

"How do you know?"

"Which container has the greatest volume?"

"How do you know?"

"Did we put the containers in order from smallest to largest?"

- Adjust the order of the containers, if necessary.

"Let's look at our towers."

- Stand the towers next to each other.

"What do you notice?" *the towers go up like steps*

- Optional: Put the containers, the plastic measuring cup, and the basin in an area near a sink. Additional plastic containers can be added for your child to fill and compare. Allow time for your child to estimate, fill, and count the number of cups of water needed to fill each container.

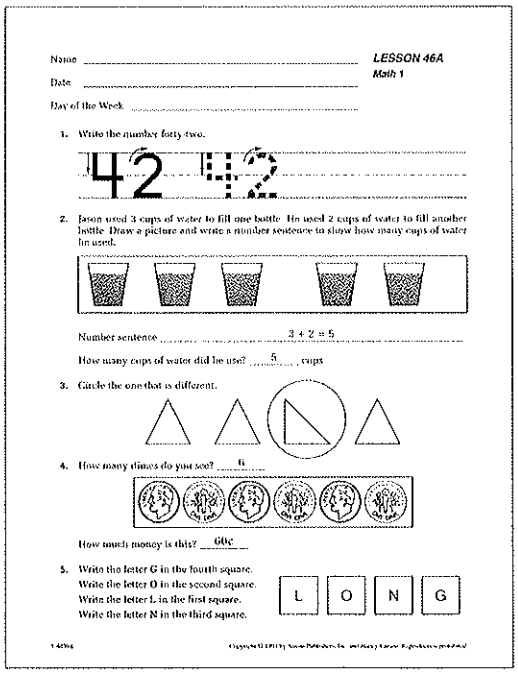
Class Practice

"Let's review the subtracting one facts."

- Hold up one subtracting one fact card at a time as your child says the problem and the answer.
- Repeat several times.
- Give your child **Fact Sheet S 2.0.**
- Allow time for your child to complete the fact sheet.
- Correct the fact sheet with your child.

WRITTEN PRACTICE

- Complete **Worksheet 46A** with your child.
- Complete **Worksheet 46B** with your child later in the day.



Name _____ LESSON 46A
Math 1

Date _____

Day of the Week _____

1. Write the number forty-two.

42 42

2. Jason used 3 cups of water to fill one bottle. He used 2 cups of water to fill another bottle. Draw a picture and write a number sentence to show how many cups of water he used.

Number sentence 3 + 2 = 5

How many cups of water did he use? 5 cups

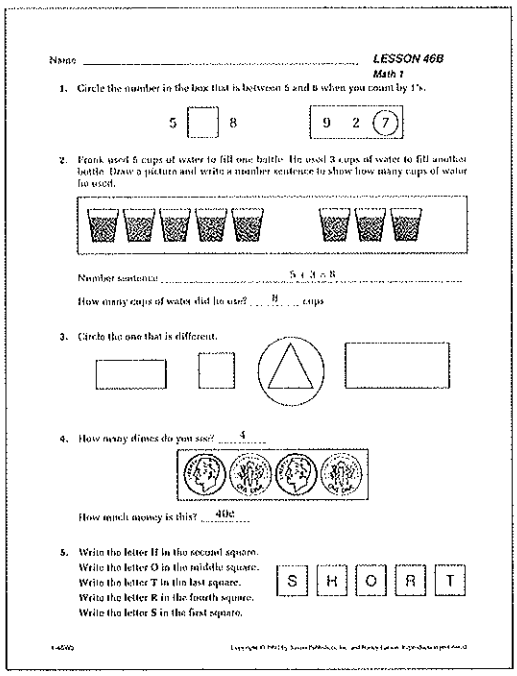
3. Circle the one that is different.

4. How many dimes do you see? 6

How much money is this? 60¢

5. Write the letter G in the fourth square.
Write the letter O in the second square.
Write the letter L in the first square.
Write the letter N in the third square.

L O N G



Name _____ LESSON 46B
Math 1

1. Circle the number in the box that is between 5 and 8 when you count by 1's.

5 [ ] 8 9 2 (7)

2. Frank used 5 cups of water to fill one bottle. He used 3 cups of water to fill another bottle. Draw a picture and write a number sentence to show how many cups of water he used.

Number sentence 5 + 3 = 8

How many cups of water did he use? 8 cups

3. Circle the one that is different.

4. How many dimes do you see? 4

How much money is this? 40¢

5. Write the letter H in the second square.
Write the letter O in the middle square.
Write the letter T in the last square.
Write the letter R in the fourth square.
Write the letter S in the first square.

S H O R T

Lesson 75

writing the number 68
adding two-digit numbers using dimes and pennies (without regrouping)

lesson preparation

materials

Written Assessment #14
sorted store items
Master 1-75
cup of 10 dimes and cup of 10 pennies
large fact cards (addition facts)
Fact Sheet A 4.2

in the morning

- Write the following number pattern on the meeting strip.

25, 30, 35, ___, ___, ___

Answer: 25, 30, 35, 40, 45, 50

- Put **28 pennies** in the coin cup.

The Meeting

calendar

- Ask your child to identify the following:
  - year
  - month
  - shapes on the calendar
  - today's shape
  - shape pattern for the month
- Ask your child to write the date on the calendar.
- Ask your child to do the following:
  - identify today's day of the week
  - identify the days of the week

"What day of the week was it yesterday?"

"What day of the week will it be tomorrow?"

- Ask your child to identify the following:

  number of days in a week

  weekdays

- Ask your child to write the full date on the meeting strip.

weather graph

- Ask your child to report and graph the weather.
- Ask questions about the graph.

counting

"Let's count by 5's to 50."

- Count from 29 to 65 using the hundred number chart.
- Count by 10's to 100.
- Count backward from 100 by 10's.
- Count by 2's to 20.
- Say the odd numbers to 19.
- Add another number to the number line.

"We will count the numbers on the number line by 10's as far as we can and then count by 1's."

- Point to the multiples of 10 as you count together.

"How many 10's did we count?"

- Point to the digit in the tens' place.

"And how many more did we count?"

- Point to the digit in the ones' place.

"What number is _____ tens and _____ more?"

number pattern

- Ask your child to identify and fill in the missing numbers.
- Read the number pattern together.

clock

- Ask your child to set the morning/afternoon/evening/night clock.
- Throughout the day, your child announces the time on the hour, sets the demonstration clock, and writes the digital time for each new hour on the chalkboard.

coin cup

"Stack the pennies from the coin cup in groups of five and make tally marks to show the number of pennies."

- Allow time for your child to do this.
- Point to each group of tally marks as you count by 5's and 1's with your child.
- Ask your child to record the amount of money on the meeting strip.

right/left

- Continue to practice left and right once a week. Practice more often, if necessary.

Assessment

Written Assessment

- Give your child **Written Assessment #14.**
- Read the directions for each problem. Allow time for your child to complete each problem before continuing.
- Correct the paper, noting your child's mistakes on the **Individual Recording Form.** Review the errors with your child.

The Lesson

Writing the Number 68

"The last number we practiced writing was the number 67."

"What number do you think we will learn how to write today?"

- Write the number 68 on the chalkboard.

"What digits do you see in the number 68?"

"How many dimes and pennies will we use to make 68¢?"

- Use dimes and pennies to demonstrate.

"How many groups of 10 are in 68?"

"How many extra 1's do we have?"

"Let's count by 10's and 1's to check."

Adding Two-Digit Numbers Using Dimes and Pennies (Without Regrouping)

"Today you will continue to learn how to add two-digit numbers using dimes and pennies."

"We will buy items at our store."

"We will take turns being the cashier and the customer."

"The customer will choose two items in the store to buy and bring them to the cashier."

"The cashier will write the name of the store, the names of the items, and the prices on the receipt."

"The customer will use dimes and pennies to pay for the items."

"They will work together to count the money the customer spent altogether."

"The cashier will write the total amount of money on the receipt next to the word 'total.' "

"Let's try that."

"You will be the cashier."

- Draw a receipt on the chalkboard.
- Choose 2 items from the classroom store.

"I will buy these two items."

"What will you write on the receipt?" *name of the store, names of the items, prices*

- Allow time for your child to do this.

"Let's predict how many dimes and pennies I will need to buy these items."

"How many pennies do you think I will give you altogether?"

"How do you know?"

"How many dimes do you think I will give you altogether?"

"How do you know?"

"Now I will use dimes and pennies to show the cost of each item."

- Put the money for each item in front of the item.

"Now I will put all the pennies together and all the dimes together."

- Put the pennies together and the dimes together.

"Now we will count to see how many pennies I used altogether."

- Count the pennies with your child.

"Was your prediction correct?"

"Now we will count to see how many dimes I used altogether."

- Count the dimes with your child.

"Was your prediction correct?"

"We have _____ dimes and _____ pennies."

"How much money is this altogether?"

- Record the total amount on the chalkboard receipt.

"Now we will trade jobs."

"I will be the cashier and you will be the customer."

"I will return my two items while you select the two items you want to buy."

"I will fill in the receipt."

"How will I do that?"

- Ask your child to describe what to write on the chalkboard receipt.
- Fill in the name of the store, the names of the items, and the prices on the receipt.

"Let's try to predict how many pennies and dimes you will give me."

"How many pennies do you think you will give me altogether?"

"How do you know?"

"How many dimes do you think you will give me altogether?"

"How do you know?"

"Now you will show each of these amounts using dimes and pennies."

- Ask your child to put the money for each item in front of the item.

"Now you will put all the dimes together and all the pennies together."

"How many pennies did you use?"

"Let's count them together."

"Was your prediction correct?"

"How many dimes did you use?"

"Let's count them together."

"Was your prediction correct?"

"We have _____ dimes and _____ pennies."

"How much money is this altogether?"

"How will I write this on the receipt?"

- Record the total amount on the chalkboard receipt.

"Now we will put the items neatly back on the shelves."

"Let's practice buying some more items from our store."

"We will take turns being the cashier and the customer."

- Use **Master 1-75.**
- Make additional copies of **Master 1-75**, if desired.

Class Practice

- Use the large fact cards to practice the addition facts.
- Give your child **Fact Sheet A 4.2**.

  "What number facts do you see?"

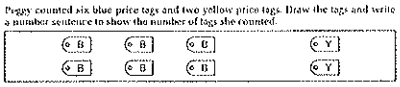
  "What strategies will you use to find the answers?"
- Correct the fact sheet with your child.

Written Practice

- Complete **Worksheet 75A** with your child.
- Complete **Worksheet 75B** with your child later in the day.

Name _____ ASSESSMENT 14
LESSON 75
Date _____ Math 1

1. Peggy counted six blue price tags and two yellow price tags. Draw the tags and write a number sentence to show the number of tags she counted.



Number sentence 6 + 2 = 8

How many tags did Peggy count? 8 tags

2. What day of the week is it today? _____

3. Write a number word that has 3 letters. _____

Write a number word that has 4 letters. _____

4. Write the answers

5	7	9	5	8	6	8
− 0	− 7	+ 1	+ 2	− 8	− 0	+ 2
5	0	10	7	0	6	10

5. Finish the pattern.

45, 46, 47, 48, 49, 50, 51, 52, 53, 54

6. Number the clock face.

Show two o'clock on the clocks.

2:00

Name _____ MASTER 1-75
Math 1

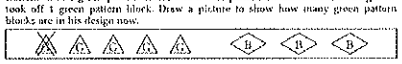
+ _____ Total	+ _____ Total
+ _____ Total	+ _____ Total

Name _____ LESSON 75A
Math 1
(Draw a line segment for your name.)
Date _____
Day of the Week _____

1. Write the number sixty-eight two more times. How many digits are on the line? 8

68

2. Donald used 5 green pattern blocks and 3 blue pattern blocks to make a design. He took off 1 green pattern block. Draw a picture to show how many green pattern blocks are in his design now.



Number sentence 5 − 1 = 4

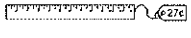
How many green pattern blocks are in his design now? 4 green pattern blocks

3. Draw tally marks to show the number of children in your class.

4. Choose 4 even numbers.
Write them in the circles.
Add 1 to each number.
Find the answers.
Are the answers even or odd numbers? odd

○	○	○	○
+ 1	+ 1	+ 1	+ 1
☐	☐	☐	☐

5. How many dimes and pennies will you need to buy the ruler?



2 dimes 7 pennies

6. Write the answers.

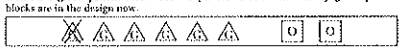
6 − 0 = 6	4 − 1 = 3	14 − 7 = 7
5 − 5 = 0	6 − 3 = 3	8 − 1 = 7

Name _____ LESSON 75B
Math 1

1. Fill in the missing numbers.

61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80

2. Elise used 6 green pattern blocks and 2 orange pattern blocks to make a design. She took off 1 green pattern block. Draw a picture to show how many green pattern blocks are in the design now.



Number sentence 6 − 1 = 5

How many green pattern blocks are in her design now? 5 green pattern blocks

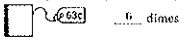
3. Draw tally marks to show the number of people who live in your house.

How many tally marks did you draw? _____

4. Choose 4 odd numbers.
Write them in the circles.
Add 1 to each number.
Find the answers.
Are the answers even or odd numbers? even

○	○	○	○
+ 1	+ 1	+ 1	+ 1
☐	☐	☐	☐

5. How many dimes and pennies will you need to buy the notebook?



6 dimes 3 pennies

6. Write the answers.

9 − 9 = 0	8 − 4 = 4	18 − 9 = 9
5 − 1 = 4	2 − 0 = 2	7 − 1 = 6

Lesson 107

writing the number 97
identifying one half, one third, and one sixth

lesson preparation

materials

pattern blocks

large fact cards (subtracting a number from ten facts)

Fact Sheet S 6.0

in the morning

- Write the following number pattern on the meeting strip:

___, ___, ___, 42, 43, 44

Answer: 39, 40, 41, 42, 43, 44

- Put **3 dimes** and **2 pennies** in the coin cup.

The Meeting

calendar

- Ask your child to identify the following:
  - year
  - month
  - shapes on the calendar
  - today's shape
  - shape pattern for the month
- Ask your child to write the date on the calendar.
- Ask your child to do the following:
  - identify today's day of the week, yesterday's day of the week, and tomorrow's day of the week
  - read the days of the week
  - identify the weekdays
  - identify the number of days in a week
- Ask your child to write the full date on the meeting strip.

weather graph

- Ask your child to report and graph the weather.
- Ask questions about the graph.

counting

- Say the "Counting by 10's Rap" on **Master 1-91** together. Point to the numbers on the hundred number chart as your child counts.
- Count by 100's to 1,000.
- Count by 5's to 50.
- Count by 10's to 100.
- Count backward from 100 by 10's.
- Say the odd numbers to 19.
- Say the odd numbers backward from 19.
- Ask your child to identify the digits to use to write the next number on the number line.
- Ask your child to identify the total number of pennies needed to show this number.

  "We have 100 pennies in this covered container."

  "How many more pennies do we need?"

  "Put the extra pennies in this cup."

- Count on from 100 to count the total number of pennies with your child.

number pattern

- Ask your child to identify and fill in the missing numbers.
- Read the number pattern together.

clock

- Ask your child to set the morning/afternoon/evening/night clock.
- Throughout the day, your child announces the time on the hour and the half hour, sets the demonstration clock to show the time, and writes the digital time on the chalkboard.

coin cup

"Today there are only nickels and pennies in the coin cup."

"How many nickels are there?"

"How many pennies are there?"

"When we count money, we begin with the coin that is worth the most."

"Which coin will you count first?" ***nickel***

- Ask your child to count the nickels and pennies and record the amount of money on the meeting strip.

right/left

- Continue to practice left and right once a week. Practice more often, if necessary.

The Lesson

Writing the Number 97

"The last number we practiced writing was the number 96."

"What number do you think we will learn how to write today?"

- Write the number 97 on the chalkboard.

"What digits do you see in the number 97?"

"How many dimes and pennies will we use to make 97¢?"

- Use dimes and pennies to demonstrate.

"How many groups of 10 are in 97?"

"How many extra 1's do we have?"

"Let's count by 10's and 1's to check."

Identifying One Half, One Third, and One Sixth

"Today you will learn how to identify one half, one third, and one sixth."

- Hold up the yellow pattern block.

"We will pretend that this is a cake."

"The other color pattern blocks are the frosting."

"What color pattern blocks do you think we can use to completely cover the top of the cake with frosting without having any frosting drip over the sides?"

"Let's try it to see."

"Take three yellow cakes."

"Try to cover each cake with frosting of only one color."

"Remember, you can not have empty spaces or frosting dripping over the edges."

- Give your child a basket of pattern blocks.

"What color frosting did you use on your cakes?"

"Do you see the lines on your cakes?"

"Trace the lines on one of your cakes with your finger."

"We'll pretend that the lines show where you cut your cake."

"Do you have a cake with exactly two pieces?"

"What color frosting does the cake have?" *red*

"We call each piece one half."

"Do you have a cake with exactly three pieces?"

"What color frosting does the cake have?" *blue*

"We call each piece one third because the cake has been cut into three equal pieces."

"Do you have a cake with exactly six pieces?"

"What color frosting does the cake have?" *green*

"We call each piece one sixth because the cake has been cut into six equal pieces."

"Wipe the frosting off your cakes."

- Hold up a yellow pattern block covered by one red pattern block.

"How much of my cake did I frost?" *one half*

"Frost one half of your cake."

- Allow time for your child to cover the yellow pattern block with a red pattern block.

"Now frost the other half of your cake."

"How much of the cake is frosted?" *one whole or two halves*

"Wipe the frosting off your cake."

- Hold up a yellow pattern block covered by one blue pattern block.

"I frosted one third of my cake."

"Frost one third of your cake."

- Allow time for your child to cover the yellow pattern block with a blue pattern block.

"Frost another third of your cake."

"How many thirds of your cake are frosted now?" *two thirds*

"Frost another third of your cake."

"How many thirds of your cake are frosted now?" *three thirds*

"Now the whole cake is frosted."

"Wipe the frosting off your cake."

- Hold up a yellow pattern block covered by one green pattern block.

"I frosted one sixth of my cake."

"Frost one sixth of your cake."

- Allow time for your child to cover the yellow pattern block with a green pattern block.

"Frost another sixth of your cake."

"How many sixths of your cake are frosted now?" *two sixths*

- Repeat, adding one sixth at a time.

"If a cake has two equal pieces, what will we call each piece?" *one half*

"If a cake has three equal pieces, what will we call each piece?" *one third*

"If a cake has six equal pieces, what will we call each piece?" *one sixth*

"Put the pattern blocks in the basket."

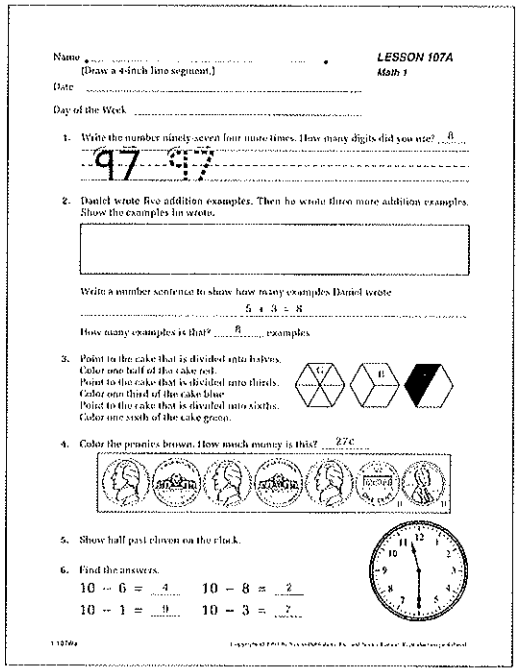
Class Practice

"Let's practice the subtracting a number from ten facts together."

- Use the large subtraction fact cards. Include 10 − 0, 10 − 1, 10 − 2, and 10 − 5 fact cards also.
- Give your child **Fact Sheet S 6.0.**
- Correct the fact sheet with your child.

Written Practice

- Complete **Worksheet 107A** with your child.
- Complete **Worksheet 107B** with your child later in the day.



Name [Draw a 4-inch line segment.] LESSON 107A Math 1

Date

Day of the Week

1. Write the number ninety-seven four more times. How many digits did you use? 8

97 97

2. Daniel wrote five addition examples. Then he wrote three more addition examples. Show the examples he wrote.

Write a number sentence to show how many examples Daniel wrote

5 + 3 = 8

How many examples is that? 8 examples

3. Point to the cake that is divided into halves. Color one half of the cake red. Point to the cake that is divided into thirds. Color one third of the cake blue. Point to the cake that is divided into sixths. Color one sixth of the cake green.

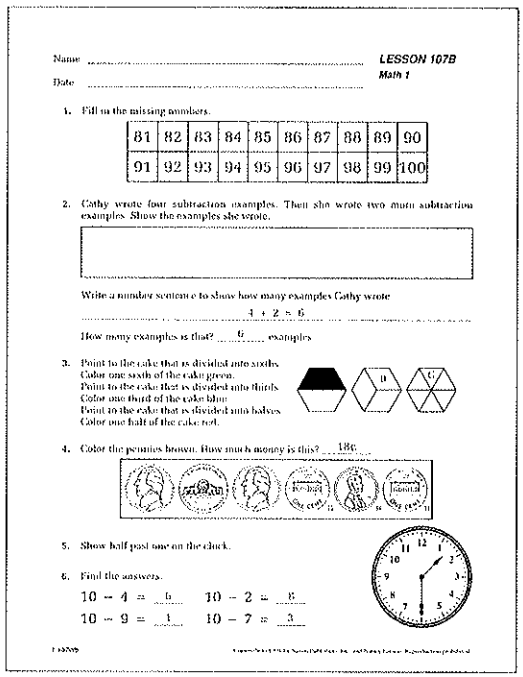
4. Color the pennies brown. How much money is this? 27¢

5. Show half past eleven on the clock.

6. Find the answers.

10 − 6 = 4 10 − 8 = 2

10 − 1 = 9 10 − 3 = 7



Name LESSON 107B Math 1

Date

1. Fill in the missing numbers.

81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

2. Cathy wrote four subtraction examples. Then she wrote two more subtraction examples. Show the examples she wrote.

Write a number sentence to show how many examples Cathy wrote

4 + 2 = 6

How many examples is that? 6 examples

3. Point to the cake that is divided into sixths. Color one sixth of the cake green. Point to the cake that is divided into thirds. Color one third of the cake blue. Point to the cake that is divided into halves. Color one half of the cake red.

4. Color the pennies brown. How much money is this? 18¢

5. Show half past one on the clock.

6. Find the answers.

10 − 4 = 6 10 − 2 = 8

10 − 9 = 1 10 − 7 = 3

Math 2
Home Study
Table of Contents

The table of contents indicates the ***order of topics*** *covered in Math 2.*

Examples of the ***development of topics*** *can be seen in the Sample Lessons.*

Math 2 Table of Contents *(continued)*

Notes on Math 2 Sample Lessons

On the following pages you will find three *Math 2* lessons. These are lessons taken from the *Math 2 Home Study Teacher's Manual.* The miniature pages pictured at the end of each lesson show the student materials which accompany each lesson and include answers for your convenience. These materials are found in the Student Workbook.

The charts below identify the components found in each lesson and describe how each component is used.

Lesson 41

Meeting	The Meeting Book is used to practice patterning, graphing, counting, time, temperature, money, and problem solving.
Lesson	Construction paper fraction pieces are used to practice naming fractional parts of a whole.
Fact Sheet	Addition is practiced.
Worksheet	Side A is completed with your assistance immediately following the lesson, while Side B is completed later in the day.

Lesson 88

Meeting	Temperature is plotted on a line graph, and counting and money practice are becoming more complex. Fact family practice has been added.
Lesson	Pennies are used to create a bar graph.
Master 2-88	This master is used to tally and graph the pennies.
Fact Sheet	Subtracting a number from 10 is practiced.
Worksheet	Tallying and graphing (the lesson topic) is practiced, along with concepts taught in earlier lessons.

Lesson 125

Meeting	Counting increments have been added, and patterning and money counting are more complex.
Assessment	A written assessment occurs every five lessons.
Lesson	A geoboard is used to make intersecting and perpendicular lines.
Master 2-125	Geoboard lines are copied on this master.
Fact Sheet	Multiplying by 3 is practiced.
Worksheet	Story problems are practiced every day. Other problems practice old and new concepts.

Lesson 41

naming fractional parts of a whole

lesson preparation

materials

fraction pieces from Lesson 34

Fact Sheet A 6.2

in the morning

- Write the following in the pattern box on the meeting strip:

Answer: ◩, ◪, ◩, ◪, ◩, ◪, ◩, ◪, ◩

- Write 47¢ on the meeting strip. Provide a cup of 10 dimes and a cup of 10 pennies.

The Meeting

calendar

- Ask your child to write the date on the calendar and meeting strip.
- Ask your child the following:

  date _____ days ago, date _____ days from now

  day of the week _____ days ago, day of the week _____ days from now

  months of the year, _____th month, month before, month after

- Record on the meeting strip a special event and the number of days until it occurs.

weather graph

- Ask your child to color the graph and write the temperature to the nearest ten degrees in the box he/she colored.
- Ask questions about the graph.

counting

- Count by 10's to 200 and backward from 200 by 10's.
- Count by 5's to 100 and backward from 50 by 5's.

- Say the even numbers to 30 and backward from 30.
- Say the odd numbers to 29 and backward from 29.

graph questions

- You and your child each ask a question about any of the graphs.

patterning

- Ask your child to do the following:

  identify the pattern (repeating, continuing, or both)

  identify the shapes to complete the pattern

  read the pattern

money

- Ask your child to put the dimes and pennies in the coin cup.
- Count the money in the coin cup together.

clock

- Ask your child to set the clock on the half hour or hour.
- Ask the following:

  time shown on the clock

  time one hour ago and time one hour from now

- Ask your child to write the digital time on the meeting strip.
- Record on the meeting strip the time an activity will occur.

number of the day

- Write three number sentences for the number of the day on the meeting strip.

The Lesson

Naming Fractional Parts of a Whole

"Today you will learn how to name fractional parts of a whole."

"A few days ago we cut and tasted apples."

"When we cut our apples, how did we cut them?"

"Today we will pretend that our circle fraction pieces are apples."

- Give your child the circle fraction pieces from Lesson 34.

"Let's pretend that the yellow circle is the whole apple."

"Which color piece can we use to show one half of the apple?" *blue*

"We call each blue piece one half."

"Which color piece can we use to show one fourth of the apple?" *red*

"We call each red piece one fourth."

"What are two red pieces called?" *two fourths*

"What are three red pieces called?" *three fourths*

"What are four red pieces called?" *four fourths*

"How many green pieces will we need to cover the apple?" *8*

"Use the green pieces to cover the apple."

"What is one green piece called?" *one eighth*

"What are two green pieces called?" *two eighths*

"What are three green pieces called?" *three eighths*

- Continue to eight pieces.

"Cover the yellow apple with two red pieces."

"How much of the whole apple is covered?" *two fourths*

"What other piece is the same size?" *one half (blue)*

"Cover the two fourths with the one half."

"One half of an apple is the same amount as two fourths of an apple."

"Cover the yellow apple with two green pieces."

"How much of the whole apple is covered?" *two eighths*

"What other piece is the same size?" *one red piece*

"Cover the two eighths with the one fourth."

"One fourth of an apple is the same amount as two eighths of an apple."

"Cover the yellow apple with four green pieces."

"How much of the whole apple is covered?" *four eighths*

"What other piece is the same size?" *one blue piece*

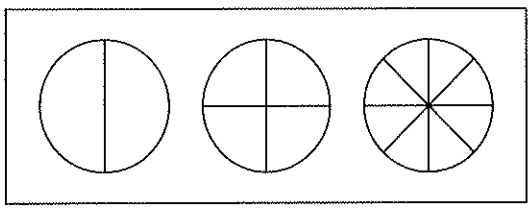
"Cover the four eighths with the one half."

"One half of an apple is the same amount as four eighths of an apple."

"We will use the fraction pieces again."

"Put them back in the bag."

- Draw the following on the chalkboard:



"How many pieces are in my first circle?" *2*

"What will we call each piece?" ***one half***

- Shade one half of the circle.

"How much of my circle is shaded?" ***one half***

- Write "one half" below the first circle.

"How many pieces are in my second circle?" *4*

"What will we call each piece?" ***one fourth***

- Shade two fourths of the circle.

"How much of my circle is shaded?" ***two fourths***

- Write "two fourths" below the second circle.

"How many pieces are in my third circle?" *8*

- Shade four eighths of the circle.

"What will we call each piece?" ***one eighth***

"How much of my circle is shaded?" ***four eighths***

- Write "four eighths" below the third circle.
- Repeat with different amounts shaded, if desired.
- Save the circle fraction pieces for use in Lesson 65.

Class Practice

number fact practice

- Use the fact cards to practice the addition facts with your child.
- Give your child **Fact Sheet A 6.2.**
- Time your child for one minute.
- Correct the fact sheet with your child.
- Record the score.
- Allow time for your child to complete the unfinished facts.

"On the back of the fact sheet, write the numbers from 95 to 120."

Written Practice

- Complete **Worksheet 41A** with your child.
- Complete **Worksheet 41B** with your child later in the day.

Name _____ **LESSON 41A**
Math 2

Date _____

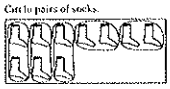
Draw a picture and write a number sentence for the story. Write the answer with a label.

1. Stephanie and four of her friends were playing outside. Three more friends came to play. How many children are playing now?

Number sentence 5 children + 3 children = 8 children

Answer 8 children

2. Circle pairs of socks.



How many socks are in the box? 10

How many pairs of socks are there? 5

Count by 5's to find the number of toes in all of the socks. 50 toes

3. Shade two fourths. Shade four eighths. Shade one half.

4. Make 73¢ using the fewest number of dimes and pennies. 7 dimes 3 pennies.

Make 16 using the fewest number of tens and ones. 1 ten 6 ones

5. Add.

60 + 10 = 70 30 + 10 = 40 10 + 80 = 90

Name _____ **LESSON 41B**
Math 2

Date _____

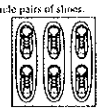
Draw a picture and write a number sentence for the story. Write the answer with a label.

1. Colin and three of his friends were making a puzzle. Colin's two sisters came to help. How many children are working on the puzzle now?

Number sentence 4 children + 2 children = 6 children

Answer 6 children

2. Circle pairs of shoes.



How many shoes are in the box? 6

How many pairs of shoes are there? 3

Count by 5's to find the number of toes in all of the shoes 30 toes

3. Shade three fourths. Shade three eighths. Shade one half.

4. Make 27¢ using the fewest number of dimes and pennies. 2 dimes 7 pennies.

Make 45 using the fewest number of tens and ones. 4 tens 5 ones

5. Add.

70 + 10 = 80 20 + 10 = 30 10 + 90 = 100

Lesson 88

creating a bar graph with a scale of two

lesson preparation

materials

2 cups of 20 pennies
Master 2-88
crayons
Fact Sheet S-8.0

in the morning

- Write the following in the pattern box on the meeting strip:

____, ____, ____, ____, ____, ____, 22, 24, 26, 28

Answer: 10, 12, 14, 16, 18, 20, 22, 24, 26, 28

- Write 43¢ on the meeting strip. Provide a cup of 10 dimes, a cup of 10 nickels, and a cup of 20 pennies.

The Meeting

calendar

- Ask your child to write the date on the calendar and meeting strip.
- Ask your child the following two or three times a week:

  date ____ days ago, date ____ days from now

  day of the week ____ days ago, day of the week ____ days from now

  ____th month, month before, month after
- Record on the meeting strip a special event and the number of days until it occurs.

weather graph

- Ask your child to read and graph today's temperature to the nearest two degrees.
- Count by 10's and 2's to check the temperature on the graph.
- Ask your child to connect the dot for yesterday's temperature to the dot for today's temperature and compare the temperatures.

counting

- Ask your child to choose a number on the hundred number chart. Ask your child to add or subtract ten or one. Repeat 6–10 times. Ask your child to give directions for returning to the starting number.

  "Let's use our patting and clapping pattern to help us count by 3's to 30."

- Repeat this several times.
- Do the following once or twice a week:

  count by 10's to 400 and backward from 400 by 10's

  count by 5's to 100 and backward from 50 by 5's

  say the even numbers to 100 and backward from 50

  say the odd numbers to 49 and backward from 49

graph questions

- You and your child each ask a question about any of the graphs.

patterning

- Ask your child to do the following:

  identify the pattern (repeating, continuing, or both)

  identify the numbers to complete the pattern

  read the pattern

money

- Ask your child to put the coins in the coin cup. Count the money in the coin cup together.
- Ask your child for another way to show that amount of money. Count these coins together to check the amount.

clock

- Set the clock to a five-minute interval.
- Ask the following:

  "It's (morning/afternoon/evening). What time is it?"

  time one hour ago

  time one hour from now

- Ask your child to write the digital time on the meeting strip.
- Record on the meeting strip the time an activity will occur.

number of the day

- Write three number sentences for the number of the day on the meeting strip.

fact practice

- Write three fact family numbers (e.g., 2, 7, 9) on the chalkboard.
- Allow time for your child to write the four fact family number sentences on the chalkboard.

The Lesson

Creating a Bar Graph with a Scale of Two

"Today you will learn how to draw a bar graph with a scale of two."

"We will use pennies to make a graph."

"When we looked at pennies before, we noticed that there was a date on each coin."

"Do you know what that date means?" *the year the penny was minted*

"The mint date of a penny is just like a birth date of the penny."

"It tells us the year the penny was made."

- Hold up a cup of 20 pennies.

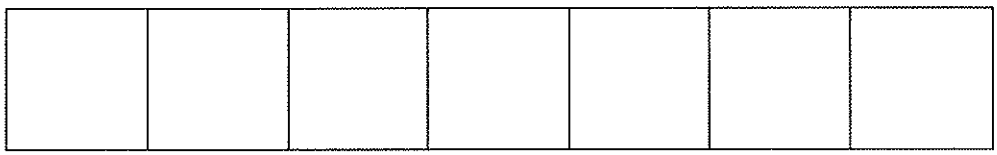
"There are 20 pennies in this cup."

"Do you think that more of these pennies were made before or after you were born?"

"Let's check to see."

"Let's tally and make a graph to show the mint dates of the pennies."

- Give your child the cup of pennies.
- Draw the following on the chalkboard:



"Take a penny out of the cup."

"What is the mint date of the penny?"

"Where will I draw a tally mark to show that?"

- Ask your child to identify where to draw the tally mark.
- Repeat for all the pennies.

"Let's show this information on a graph."

- Draw **Master 2-88** on the chalkboard.

"How many pennies were minted before 1965?"

"How will we show that on our graph?"

- Shade the graph to show this information.
- Repeat with each column on the graph.

"How many pennies were minted between 1985 and 1989?"

"How many pennies were minted between 1975 and 1979?"

"Between what years were most of the pennies minted?"

"Between what years were the fewest of the pennies minted?"

"How many more pennies were minted between _____ and _____ than between _____ and _____?"

- Repeat with several columns.

"Let's circle the column that has the pennies that are just about the same age as you are."

- Circle the dates at the bottom of the appropriate column.

"Where are the older pennies on the graph?" *on the left*

"Where are the younger pennies on the graph?" *on the right*

"Are more pennies older or younger than you?"

"Now you will make your own graph to show the mint dates of 20 different pennies."

"Do you think your graph will look the same as the one we made together?"

- Ask your child to explain why he/she thinks the graphs will or will not look the same.
- Give your child **Master 2-88** and a cup of 20 pennies.

"Tally and draw a graph to show the mint dates of the pennies in your cup."

"Do this just like we did when we worked together."

"Use your crayons to color your graph."

"When you finish, answer the questions about your graph."

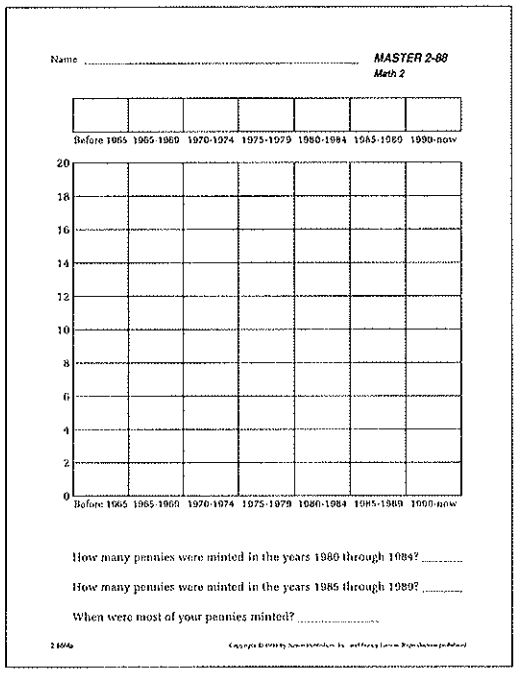
Class Practice

number fact practice

- Use the blue fact cards to practice the subtracting a number from ten facts with your child.
- Give your child **Fact Sheet S 6.0.**
- Time your child for one minute.
- Correct the fact sheet with your child and record the score.
- Allow time for your child to complete the unfinished facts.

Written Practice

- Complete **Worksheet 88A** with your child.
- Complete **Worksheet 88B** with your child later in the day.



Name .....

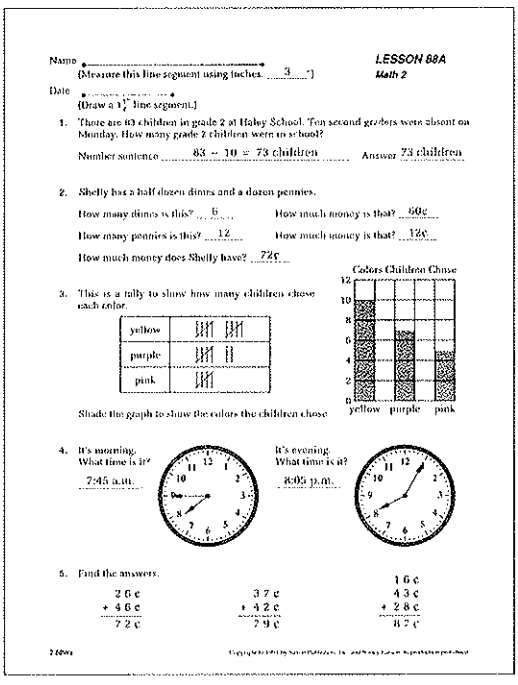
MASTER 2-88
Math 2

Before 1965 | 1965-1969 | 1970-1974 | 1975-1979 | 1980-1984 | 1985-1989 | 1990-now

How many pennies were minted in the years 1980 through 1984? .....

How many pennies were minted in the years 1985 through 1989? .....

When were most of your pennies minted? .....



Name .....
(Measure this line segment using inches. 3 ")

LESSON 88A
Math 2

Date .....
(Draw a $1\frac{1}{2}$" line segment.)

1. There are 83 children in grade 2 at Holey School. Ten second graders were absent on Monday. How many grade 2 children were in school?

   Number sentence 83 − 10 = 73 children Answer 73 children

2. Shelly has a half dozen dimes and a dozen pennies.

   How many dimes is this? 6 How much money is that? 60¢

   How many pennies is this? 12 How much money is that? 12¢

   How much money does Shelly have? 72¢

3. This is a tally to show how many children chose each color.

yellow	𝍸 𝍸
purple	𝍸 𝍸 |
pink	𝍸

Colors Children Chose

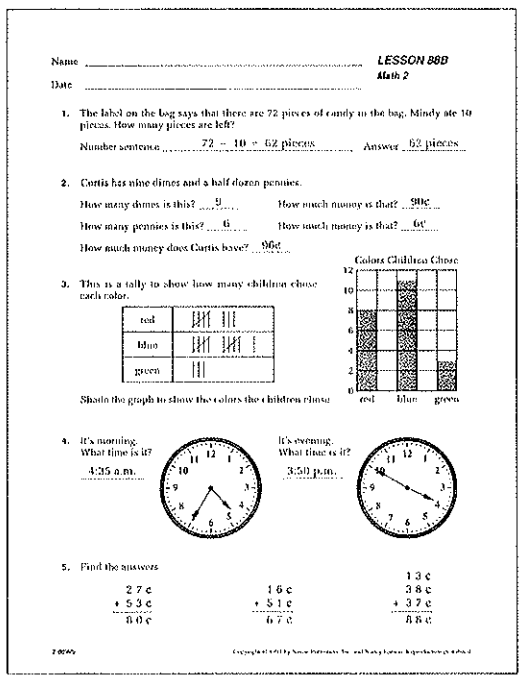
Shade the graph to show the colors the children chose

4. It's morning. What time is it? 7:45 a.m.

It's evening. What time is it? 8:05 p.m.

5. Find the answers.

26¢	37¢	16¢
+ 46¢	+ 42¢	+ 28¢
72¢	79¢	44¢



Name .....

LESSON 88B
Math 2

Date .....

1. The label on the bag says that there are 72 pieces of candy in the bag. Mindy ate 10 pieces. How many pieces are left?

   Number sentence 72 − 10 = 62 pieces Answer 62 pieces

2. Curtis has nine dimes and a half dozen pennies.

   How many dimes is this? 9 How much money is that? 90¢

   How many pennies is this? 6 How much money is that? 6¢

   How much money does Curtis have? 96¢

3. This is a tally to show how many children chose each color.

red	𝍸 𝍸 |
blue	𝍸 𝍸 | |
green	𝍸

Colors Children Chose

red | blue | green

Shade the graph to show the colors the children chose

4. It's morning. What time is it? 4:25 a.m.

It's evening. What time is it? 3:50 p.m.

5. Find the answers.

27¢	16¢	13¢
+ 53¢	+ 51¢	+ 38¢
80¢	67¢	86¢

Lesson 125

identifying intersecting lines
identifying perpendicular lines

lesson preparation

materials

Written Assessment #24
1 geoboard
2 geobands
Master 2-125
Fact Sheet M 17.0

in the morning

- Write the following in the pattern box on the meeting strip:

450, 460, 470, ___, ___, ___, ___, ___, ___

Answer: 450, 460, 470, 480, 490, 500, 510, 520, 530

- Write $2.76 on the meeting strip. Provide a cup of 10 quarters, a cup of 10 dimes, a cup of 10 nickels, and a cup of 20 pennies.

The Meeting

calendar

- Ask your child to write the date on the calendar and meeting strip.
- Ask your child to identify the number of days in 1 week, 2 weeks, and 3 weeks.
- Ask your child the following two or three times a week:

  date ____ days ago, date ____ days from now

  day of the week ____ days ago, day of the week ____ days from now

  ____th month, month before, month after

- Record on the meeting strip a special event and the number of days until it occurs.

weather graph

- Ask your child to read and graph today's temperature to the nearest two degrees.
- Count by 10's and 2's to check the temperature on the graph.
- Ask your child to connect the dot for yesterday's temperature to the dot for today's temperature and compare the temperatures.

counting

- Count by 4's to 40 and backward from 40 by 4's.
- Count by 25's to 300 and backward from 300 by 25's.
- Count by 3's to 30 and backward from 30 by 3's.
- Do the following once a week:

  count by 10's to 400 and backward from 400 by 10's

  count by 5's to 100 and backward from 50 by 5's

  say the even numbers to 100 and backward from 50

  say the odd numbers to 49 and backward from 49

graph questions

- You and your child each ask a question about any of the graphs.

patterning

- Ask your child to do the following:

  identify the pattern (repeating, continuing, or both)

  identify the numbers to complete the pattern

  read the pattern

money

- Ask your child to put the coins in the coin cup. Count the money in the coin cup together.
- Ask your child for another way to show that amount of money. Count these coins together to check the amount.

clock

- Set the clock to a five-minute interval.
- Ask the following:

  "It's (morning/afternoon/evening). What time is it?"

  time one hour ago

  time one hour from now

- Ask your child to write the digital time on the meeting strip.
- Record on the meeting strip the time an activity will occur.

number of the day

- Write three number sentences for the number of the day on the meeting strip.

fact practice

- Write three fact family numbers (e.g., 2, 7, 9) on the chalkboard.
- Allow time for your child to write the four fact family number sentences on the chalkboard.

ASSESSMENT

Written Assessment

"Today I would like to see what you remember from what we have been practicing."

- Give your child **Written Assessment #24.**
- Read the directions for each problem. Allow time for your child to complete each problem before continuing.
- Correct the paper, noting your child's mistakes on the **Individual Recording Form.** Review the errors with your child.

THE LESSON

Identifying Intersecting Lines
Identifying Perpendicular Lines

"We have been talking about parallel lines and line segments."

"Where do you see parallel lines or line segments in this room?"

- Give your child a geoboard and two geobands.

"Make parallel line segments on your geoboard."

- Allow time for your child to do this.

"What do we know about parallel lines?" *they never meet; they are an equal distance apart*

"Take the geobands off the geoboard."

"Today you will learn about line segments that do meet."

"You also will learn about lines and line segments that meet in a special way."

"Make two line segments that meet on your geoboard."

- Allow time for your child to do this.

"Put your finger on the point where the line segments meet."

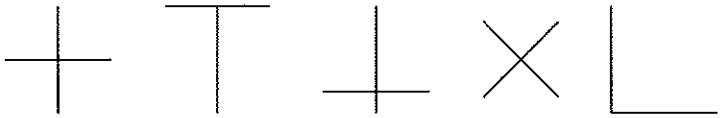
"Mathematicians call this the intersection of the line segments."

"These are intersecting line segments."

"This is why we say that when two streets meet, we have an intersection."

"There are special types of intersecting line segments."

- Draw the following on the chalkboard:



"When two line segments intersect like these line segments do, we call them perpendicular line segments."

"What do you notice about perpendicular line segments?"

- Allow time for your child to offer observations.

"Perpendicular lines and line segments have at least one right angle."

"We can use the corner of a piece of paper to check for perpendicular lines and line segments."

- Demonstrate on the chalkboard examples.

"Where do you see an example of perpendicular lines or line segments in this room?"

- Allow time for your child to locate as many right angles as possible.

"Make perpendicular line segments on your geoboard."

- Allow time for your child to do this.

"Let's check to see if the line segments are perpendicular."

"How can we do this?" *use the corner of a piece of paper*

- Give your child Master 2-125.

"Use the corner of this paper to make sure that you have at least one right angle."

"Copy your perpendicular line segments on the first small geoboard picture."

"Draw a small square in the corner of the right angle."

- Allow time for your child to do this.

"Make a different pair of perpendicular line segments on your geoboard."

- Allow time for your child to do this.

"Check to see if they are perpendicular."

"Copy your perpendicular line segments on the second small geoboard picture."

"Draw a small square in the corner of the right angle."

- Allow time for your child to do this.

"Make two more different examples of perpendicular line segments."

"Copy your perpendicular line segments on the third and fourth small geoboard pictures."

- Allow time for your child to do this.

Class Practice

number fact practice

- Use the pink fact cards to practice the multiplying by three facts with your child.
- Give your child **Fact Sheet M 17.0.**
- Time your child for one minute.
- Correct the fact sheet with your child and record the score.
- Allow time for your child to complete the unfinished facts.

Written Practice

- Complete **Worksheet 125A** with your child.
- Complete **Worksheet 125B** with your child later in the day.

Name _____ MASTER 2-125 Math 2

Perpendicular Line Segments

1.

2.

3.

4.

Name _____ ASSESSMENT 24 LESSON 125 Math 2

Date _____

1. There are 4 children in Paul's group. Each child has 5 markers. Draw the markers.

How many markers do the children in Paul's group have altogether? 20 markers

2. Measure the length of each side of this shape using centimeters.

What is the perimeter? 18 cm

5 cm, 4 cm, 4 cm, 5 cm

3. Use a crayon to trace an example of parallel lines on this paper.

Where do you see parallel lines in the classroom?

4. I have 1 quarter, 4 dimes, 1 nickel, and 2 pennies. Draw the coins. How much money do I have?

Q D N P D D D P

Write the amount two ways.

$0.72 $0.72

5. Find the answers.

6 × 2 = 12 8 × 10 = 80

3 × 5 = 15 9 × 2 = 18

45 − 29 = 16

70 − 34 = 36

38 + 47 + 65 = 150

Name _____ LESSON 125A Math 2

Date _____

(Draw a 3" line segment.)

(Measure this line segment using inches. 4 ")

1. Twenty-six children were in the gym. Seventeen children from another class joined them.

What type of story is this? _____ (some, some more)

How many children are in the gym now?

Number sentence 26 + 17 = 43 children Answer 43 children

2. Circle the perpendicular line segments.

3. About how much might a 7-year-old child weigh?

200 pounds (60 pounds) 15 pounds 2 pounds

4. Round each number to the nearest 10

78 80 13 10 25 30

5. Circle all the geometric solids that have at least one point.

(pyramid) cylinder (cone) sphere (cube)

6. Find the answers.

62 − 38 = 24

68 + 25 = 130

2 × 3 = 6 8 × 10 = 80

7 × 3 = 21 3 × 100 = 300

9 × 3 = 27 5 × 3 = 15

Name _____ LESSON 125B Math 2

Date _____

1. There were forty-three children in the gym. Fifteen children went back to class.

What type of story is this? _____ (some, some went away)

How many children are in the gym now?

Number sentence 43 − 15 = 28 children Answer 28 children

2. Circle the perpendicular line segments.

3. About how much might a 10-year-old child weigh?

25 pounds 300 pounds (90 pounds) 4 pounds

4. Round each number to the nearest 10

31 30 9 10 15 20

5. Circle all the geometric solids that will roll.

pyramid (cylinder) (cone) (sphere)

6. Find the answers.

71 − 25 = 46

79 + 26 + 35 = 140

4 × 3 = 12 7 × 10 = 70

6 × 3 = 18 2 × 100 = 200

3 × 3 = 9 8 × 3 = 24

Math 3
Home Study
Table of Contents

The table of contents indicates the ***order of topics*** *covered in Math 3.*

Examples of the ***development of topics*** *can be seen in the Sample Lessons.*

Math 3 Table of Contents *(continued)*

Notes on Math 3 Sample Lessons

On the following pages you will find three *Math 3* lessons. These are lessons taken from the *Math 3 Home Study Teacher's Manual.* The miniature pages pictured at the end of each lesson show the student materials which accompany each lesson and include answers for your convenience. These materials are found in the Student Workbook.

The charts below identify the components found in each lesson and describe how each component is used.

Lesson 35

Meeting	The Meeting Book is used to practice patterning, problem solving, counting, time, temperature, and money.
Assessment	A written assessment occurs every five lessons.
Lesson	A ruler is used to draw congruent line segments using centimeters.
Master 3-35	This master is used to practice drawing congruent line segments.
Fact Sheet	Multiplication is practiced.
Worksheet	Side A is completed with your assistance immediately following the lesson, while Side B is completed later in the day.

Lesson 61

Meeting	Counting increments have been added, and the pattern rule and various Fahrenheit temperatures must be identified.
Lesson	Two-color chips are used to practice writing a part of a set as a fraction.
Master 3-61	This master is used to record the fractional parts of the sets of chips.
Fact Sheet	Subtraction is practiced.
Worksheet	The lesson topic is practiced, along with concepts taught in earlier lessons.

Lesson 114

Meeting	Towers are used to solve larger, smaller, difference problems, and your child practices making change for a dollar.
Lesson	One-inch color tiles are used to find the missing dimension of a rectangle.
Master 3-114	This master is used to practice finding the missing dimension of a rectangle.
Fact Sheet	One hundred multiplication facts are practiced.
Worksheet	Story problems are practiced every day. Other problems practice old and new facts.

Lesson 35

drawing congruent line segments using centimeters

lesson preparation

materials

Written Assessment #B
piece of paper
ruler
Master 3-35
Fact Sheet M 10.0

in the morning

- Draw a 25-cm line segment on a piece of paper.
- Write the following in the pattern box on the meeting strip.

___, ___, ___, 22, 24, 26, ___, ___, ___	Rule: ____

Answer: 16, 18, 20, 22, 24, 26, 28, 30, 32 Rule: + 2

- Write 2:30 on the meeting strip.
- Write the following "Problem of the Day" on a 3" × 5" card.

> Helen had 80¢. She spent 3 dimes on a pencil. How much money does she have now?

Answer: 80¢ − 30¢ = 50¢

- Put **9 dimes** and **24 pennies** in the coin cup.

The Meeting

calendar

- Ask your child to write the date on the calendar and the meeting strip.

"What day of the week is it today?"

"What are the days of the weekend?"

"What day of the week will it be a week from today?"

"How many days are there in a week?"

- Repeat to ten weeks. Your child can use the 7's counting strip for help.

"What will be the date ____ days from today?"

"What was the date a week ago?"

"What are the months of the year?"

"How many months are there in a year?"

"How many months are there in two years?"

"What month of the year is _____?"

number of the day

- Write today's number on the meeting strip.
- Ask your child to write three number sentences for 35.

temperature

- Ask your child to read and record today's temperature.

"Is it warmer or colder today than it was yesterday?"

"How many degrees warmer or colder is it?"

today's count

- Ask your child to choose a number between 1 and 9 and count by 10's to 200. For example: 2, 12, 22, 32, 42, 52, . . . , 182, 192.
- Ask your child to do the following:

count by 7's to 70 and backward from 70 by 7's

count by 5's to 100 and backward from 50 by 5's

say the odd numbers to 19 and backward from 19

today's pattern

"How can we find the missing numbers in the number pattern?"

- Ask your child to fill in the missing numbers.

"Let's read the pattern together."

"What is the rule for this pattern?"

clock

- Ask your child to read the time on the meeting strip.
- Ask your child to set the demonstration clock.

"What time was it an hour ago?"

"What time was it two hours ago?"

"What time will it be an hour from now?"

"What time will it be two hours from now?"

problem of the day

"Read today's problem."

"What type of story is this?" *some, some went away*

"What is a number sentence for this story?"

- Ask your child to write the number sentence and the answer on the meeting strip.

coin cup

- Ask your child to do the following:

  identify the coins in the coin cup

  record the number of each coin on the meeting strip

  write the amount on the meeting strip

Assessment

Written Assessment

"Today I would like to see what you remember from what we have been practicing."

- Give your child **Written Assessment #6.**
- Ask your child to read the directions for each problem.
- Allow time for your child to complete the problems.
- Correct the paper, noting your child's mistakes on the **Individual Recording Form**. Review the errors with your child.

The Lesson

Drawing Congruent Line Segments Using Centimeters

"Today you will learn how to draw congruent line segments using centimeters."

- Give your child the paper with the 25-cm line segment and a ruler.

"Measure my line segment using centimeters."

"What is the length of my line segment?"

- Write "25 cm" on the line segment.

"Now I will draw another line segment that looks the same as the first line segment."

- Demonstrate on the same piece of paper as you say the following:

"I will begin by putting an endpoint on the paper."

"I will put the beginning of the ruler at the endpoint."

"Now I will hold the ruler with the fingers of the hand I don't write with."

"I will spread my fingers like this and press down to keep the ruler steady."

"I will not move my ruler until I finish drawing my line segment."

"Now I will draw a line along the ruler until I reach the same number on the ruler as the length of the first line segment."

"I will lift up my ruler and put an endpoint at the end of the line segment."

"When I am finished, I will remeasure my line segment to make sure it is the same length as the other line segment."

"We can say that these are congruent line segments."

"Congruent line segments are the same length."

- Note: Congruent line segments need not be parallel.
- Give your child **Master 3-35** and a ruler.

"Now you will have a chance to draw congruent line segments."

"Point to the line segment in the first box."

"Why did I call this a line segment?" *because it has endpoints*

"Use your ruler to measure the line segment."

"How many centimeters long is it?" *7 cm*

"Write the length on the line segment."

"Now you will draw a line segment beneath it that looks just like that line segment."

"There is an endpoint on the paper."

"Put the left end (0) of your ruler on the endpoint."

"Hold the ruler with the fingers of the hand you don't write with."

"Spread your fingers and press down to keep the ruler steady."

- Allow your child to stand up, if necessary.

"Do not move your ruler until you finish drawing your line segment."

"Now draw a line along the ruler until you reach the same number on the ruler as the length of the line segment you measured."

"Lift up your ruler and put an endpoint at the end of the new line segment."

"Measure your new line segment to make sure it is the same length as the other line segment."

"What is the special name for two line segments that are the same length?" congruent

"These are congruent line segments."

- Repeat for the line segment in box 2.

"Draw congruent line segments in boxes three and four."

- Assist your child if necessary.

Class Practice

"Use the back of Master 3-35 to do these problems."

- Write the following on the chalkboard:

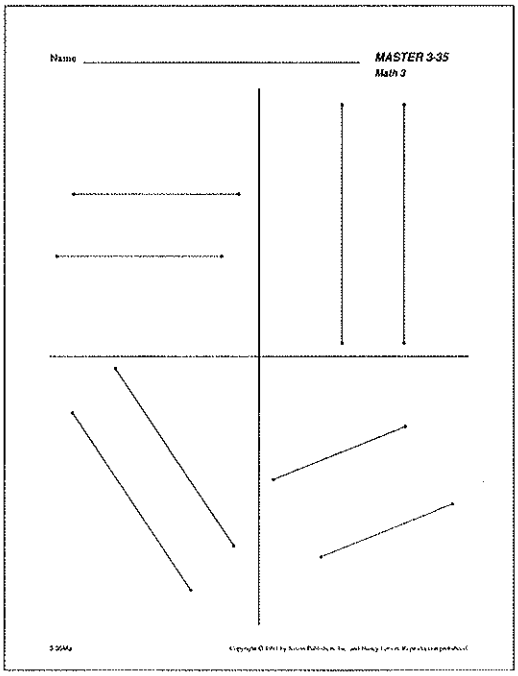
1. Round today's temperature to the nearest 10 degrees.
2. Draw 3 dimes and 3 nickels. How much money is this?
3. Draw a square and shade three fourths.
4. Round these numbers to the nearest 10.

52, 19

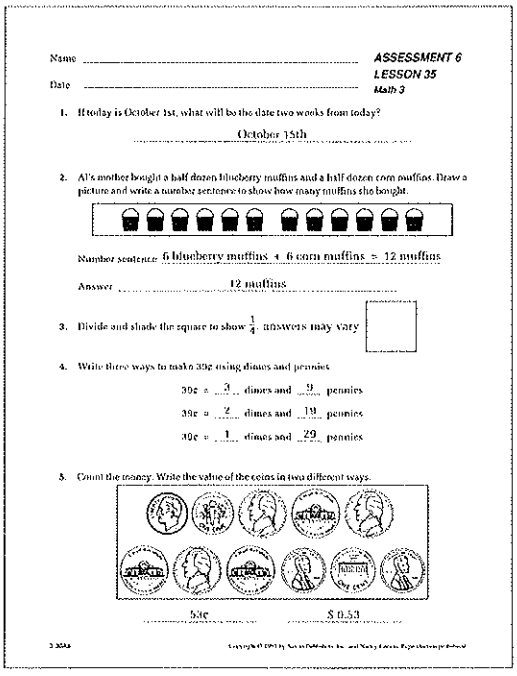
- Review the answers with your child.
- Give your child **Fact Sheet M 10.0.**
- Time your child for 45 seconds.
- Correct the fact sheet together and record the score.
- Allow time for your child to complete the unfinished facts.

Written Practice

- Complete **Worksheet 35A** with your child.
- Your child completes **Worksheet 35B** later in the day.



Name _____ **MASTER 3-35**
Math 3



Name _____ **ASSESSMENT 6**
LESSON 35
Date _____ *Math 3*

1. If today is October 1st, what will be the date two weeks from today?

   October 15th

2. Al's mother bought a half dozen blueberry muffins and a half dozen corn muffins. Draw a picture and write a number sentence to show how many muffins she bought.

   Number sentence 6 blueberry muffins + 6 corn muffins = 12 muffins

   Answer 12 muffins

3. Divide and shade the square to show $\frac{1}{4}$. answers may vary

4. Write three ways to make 39¢ using dimes and pennies.

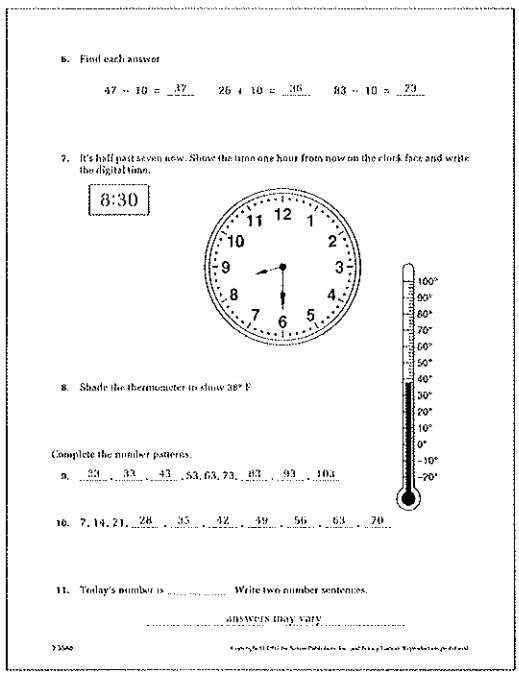
   39¢ = 3 dimes and 9 pennies

   39¢ = 2 dimes and 19 pennies

   39¢ = 1 dimes and 29 pennies

5. Count the money. Write the value of the coins in two different ways.

   54¢ $ 0.53



6. Find each answer.

   47 − 10 = 37 26 + 10 = 36 83 − 10 = 73

7. It's half past seven now. Show the time one hour from now on the clock face and write the digital time.

   8:30

8. Shade the thermometer to show 38° F.

Complete the number patterns.

9. 23, 33, 43, 53, 63, 73, 83, 93, 103

10. 7, 14, 21, 28, 35, 42, 49, 56, 63, 70

11. Today's number is _____. Write two number sentences.

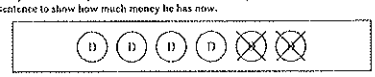
    answers may vary

Name .....
(Draw a 12-centimeter line segment.)

LESSON 35A
Math 3

Date .....
(Draw a congruent line segment.)

1. Corey had 60¢. He spent 2 dimes for an eraser. Draw a picture and write a number sentence to show how much money he has now.

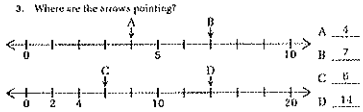


Number sentence 60¢ − 20¢ = 40¢ Answer 40¢

2. Find each answer.

7 × 10 = 70 10 × 5 = 50 34 × 10 = 340 19 × 10 = 190

3. Where are the arrows pointing?

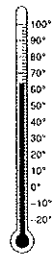


A 4
B 7
C 8
D 14

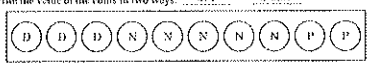
4. Round each number to the nearest 10.

37 → 40 76 → 80
13 → 10 29 → 30

5. Shade the thermometer to show 64° F.



6. Draw coins to show 3 dimes, 5 nickels, and 2 pennies.
Write the value of the coins in two ways. 57¢ $0.57



Name .....

LESSON 35B
Math 3

Date .....

1. Louise had 80¢. She spent 5 dimes for a snack. Draw a picture and write a number sentence to show how much she has now.

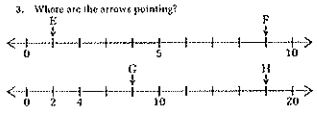
Number Sentence 80¢ − 50¢ = 30¢

Answer 30¢

2. Find each answer.

6 × 10 = 60 10 × 4 = 40 16 × 10 = 160 42 × 10 = 420

3. Where are the arrows pointing?

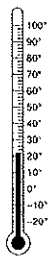


E 1
F 9
G 6
H 18

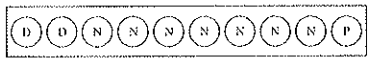
4. Round each number to the nearest 10.

45 → 50 21 → 20
88 → 90 34 → 30

5. Shade the thermometer to show 22° F.



6. Draw coins to show 2 dimes, 2 nickels, and 1 penny.
Write the value of the coins in two ways. 56¢ $0.56



Lesson 61

writing a part of a set as a fraction

lesson preparation

materials

10 two-color chips

Master 3-61

Fact Sheet S-50

in the morning

- Write the following in the pattern box on the meeting strip:

___, ___, ___, 49, 42, 35, ___, ___, ___ Rule: _____

Answer: 70, 63, 56, 49, 42, 35, 28, 21, 14 Rule: −7

- Set the demonstration clock at **4:10**.
- Write the following "Problem of the Day" on a 3" × 5" card:

> Scott has soccer practice on Mondays, Wednesdays, and Fridays. Soccer practice lasts for 10 weeks. How many practice sessions are there?

Answer: 10 × 3 practice sessions = 30 practice sessions

- Put **1 quarter, 9 dimes, 1 nickel,** and **2 pennies** in the coin cup.

The Meeting

calendar

- Ask your child to write the date on the calendar and the meeting strip.
- Ask your child to identify the following two or three times a week:

  number of days in 1 to 10, 100, and 1000 weeks (ask in random order)

  date _____ days ago, _____ days from now, week ago, week from now

  number of months in 1–10 years, 100 years, 1000 years

  month before, month after, _____th month of the year

"How many weeks is 35 days?" . . . 49 days?" . . . _____ days?"

number of the day

- Write today's number on the meeting strip.
- Ask your child to write three number sentences for 61.

temperature

- Ask your child to do the following:

  read and record today's temperature

  compare today's temperature with yesterday's temperature

  identify the Fahrenheit temperature at which water freezes, water boils, and for normal body temperature

today's count

- Count by 4's to 40 and backward from 40 by 4's.

  "Today we will count by 8's to 80."

  "We can use the 4's counting strip to help us count by 8's."

  "How do you think we will do that?" ***read every other number***

- Point to every other number on the counting strip for 4's as your child counts by 8's.

  "Let's count by 8's to 80."

  "I will write the numbers we say on a counting strip."

- Ask your child to do the following:

  count by 12's to 120 and backward from 120 by 12's

  say the odd numbers to 49 and backward from 49

  count by 7's to 70 and backward from 70 by 7's

today's pattern

- Ask your child to do the following:

  identify the numbers to complete the pattern

  read the pattern

  identify the rule of the pattern

clock

"What time is shown on the clock?"

"It's morning."

"Write the digital time on the meeting strip."

"What time was it two hours ago?"

"What time will it be three hours from now?"

problem of the day

- Ask your child to read today's problem.

  "What type of story is this?"

- Ask your child to do the following:

  write the number sentence on the meeting strip

  write the answer on the meeting strip

coin cup

- Ask your child to count the coins and record their value on the meeting strip.

The Lesson

Writing a Part of a Set as a Fraction

"Today you will learn how to write a part of a set as a fraction."

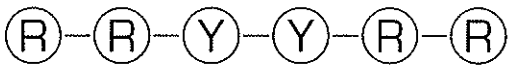
- Show your child 6 two-color chips.

"Let's pretend that these chips are beads on a necklace."

"Shake the chips in your hands and gently put them on the table."

"Now arrange them like beads on a necklace."

- Allow time for your child to do this.
- Draw a chalkboard picture to match the colors of the chips. Record the colors on the chalkboard in the following way:

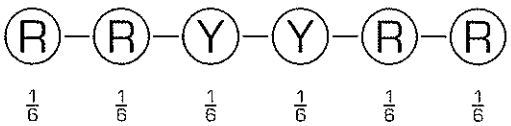


"We can write what part of the whole necklace each bead is by using a fraction."

"How many beads do we have?" *6*

"What fractional part is each bead?" $\frac{1}{6}$

- Record fractions below each bead on the chalkboard:



"What fractional part is red?" $\frac{4}{6}$

"What fractional part is yellow?" $\frac{2}{6}$

"Together we have six sixths or one whole."

- Write the following on the chalkboard:

red	yellow	total
$\frac{4}{6}$	$\frac{2}{6}$	$\frac{6}{6}$

"Let's try this again."

"Shake the chips carefully in your hands."

"Gently put them on the table."

"Arrange them like beads on a necklace."

- Draw the "necklace" on the chalkboard.

"What fractional part is red?"

"What fractional part is yellow?"

"Together you have six sixths or one whole."

- Write the results on the chalkboard chart.
- Repeat several times.
- Give your child **Master 3-61** and 10 two-color chips.

"Now you will have a chance to make a ten-bead necklace."

"Shake the chips in your hands."

"Gently put them on the table."

"What fractional part is red?"

"Write that answer under 'fractional part that is red.' "

"What fractional part is yellow?"

"Write that answer under 'fractional part that is yellow.' "

"What is your total sum of the fractional parts?" $\frac{10}{10}$

"Write that answer under 'total fractional parts.' "

"Now gently shake the chips and record the fractional parts nine more times."

- When your child finishes, continue.

"What did you notice?"

- Repeat with different numbers of two-color chips, if desired.

Class Practice

"Use the pink fact cards to practice the subtraction facts."

- Give your child **Fact Sheet S 5.0.**
- Time your child for 45 seconds.
- Correct the fact sheet together and record the score.
- Allow time for your child to complete the unfinished facts.

Written Practice

- Complete **Worksheet 61A** with your child.
- Your child completes **Worksheet 61B** later in the day.

Name _____ *Master 3-61* *Math 3*

Fractional Parts of a Set

Fractional Part that is RED	Fractional Part that is YELLOW	Total Fractional Parts

Answers will vary.

Name _____ *LESSON 61A* *Math 3*

Date _____

(Draw a 9 cm line segment. It is about 3.5 inches long.)

(Draw a 14 cm line segment. It is about 5.5 inches long.)

1. Alberto has piano lessons on Tuesdays and Thursdays. How many lessons will he have in ten weeks?

   Number sentence: 2 lessons × 10 = 20 lessons. Answer: 20

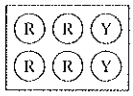
2. How many color chips are shown? 6

   How many are red (R)? 4

   What fractional part is that? $\frac{4}{6}$

   How many are yellow (Y)? 2

   What fractional part is that? $\frac{2}{6}$



3. Use the correct comparison symbol. (<, >, =)

   2 tens and 15 ones [>] 3 tens and 4 ones 80 + 10 [>] 18 + 10

   1 + 5 + 3 + 0 + 2 + 7 [<] 1 + 3 + 5 + 9 + 7 + 2

   400 + 500 [<] 950 27 × 10 [=] 180 + 100 2 × 8 [<] 6 × 10

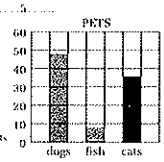
4. What fractional part of the rectangle is shaded? $\frac{2}{5}$

5. Use the bar graph to answer the questions.

   About how many children chose dogs? about 48

   About how many children chose fish? about 8

   Shade the graph to show that 36 children chose cats.



6. Write 70 divided by 10 in three ways. What is the answer? 7

Name _____ *LESSON 61B* *Math 3*

Date _____

1. Angela has dance class on Tuesdays, Wednesdays, and Saturdays. How many dance classes will she have in ten weeks?

   Number sentence: 3 classes × 10 = 30 classes. Answer: 30

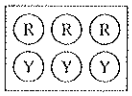
2. How many color chips are shown? 6

   How many are red (R)? 3

   What fractional part is that? $\frac{3}{6}$

   How many are yellow (Y)? 3

   What fractional part is that? $\frac{3}{6}$



3. Use the correct comparison symbol. (<, >, =)

   4 tens and 6 ones [<] 3 tens and 16 ones 90 + 10 [<] 12 + 2

   2 + 7 + 4 + 5 + 3 + 6 [=] 4 + 7 + 2 + 6 + 3 + 5

   300 + 400 [>] 670 27 × 10 [=] 180 + 100 2 × 9 [>] 8 + 9

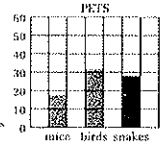
4. What fractional part of the rectangle is shaded? $\frac{5}{6}$

5. Use the bar graph to answer the questions.

   About how many children chose mice? about 17

   About how many children chose birds? about 32

   Shade the graph to show that 24 children chose snakes.



6. Write 30 divided by 10 in three ways. What is the answer? 3

Lesson 114

finding a missing dimension of a rectangle

lesson preparation

materials

bag of 25 color tiles
Master 3-114
Fact Sheet M-100

in the morning

- Write the following in the pattern box on the meeting strip:

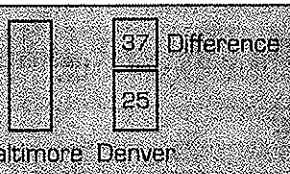
___, ___, ___, ___, ___, ___, 66, 72, 78 Rule: ___

Answer: 30, 36, 42, 48, 54, 60, 66, 72, 78 Rule: + 6

- Write 7:58 p.m. on the meeting strip.
- Write the following "Problem of the Day" on a 3" × 5" card:

At 9:00 a.m. on March 12th the temperature in Denver was 25°F. It was 37° warmer in Baltimore. What was the temperature in Baltimore?

Answer: 25°F + 37°F = 62°F



- Write 69¢ on the chalkboard.

The Meeting

calendar

- Ask your child to write the date on the calendar and the meeting strip.
- Ask your child to identify the following:

  month before _____, month after _____, ____th month of the year

  number of days in (month)

  number of days in a year, number of days in a leap year

number of the day

- Write today's number on the meeting strip.
- Ask your child to write three number sentences for 114.

temperature

- Ask your child to do the following:

  read and record today's temperature in Fahrenheit and Celsius

  compare today's temperature with yesterday's temperature

  identify the Celsius and Fahrenheit temperatures at which water freezes and water boils

today's count

- Ask your child to do the following:

  count by $\frac{1}{2}$'s to 6 and backward from 6 by $\frac{1}{2}$'s

  count by 9's to 90 and backward from 90 by 9's

  say the odd numbers from 101 to 149 and backward from 149 to 101

  count by 7's to 70 and backward from 70 by 7's

  count by 4's to 40 and backward from 40 by 4's

today's pattern

- Ask your child to do the following:

  identify the numbers to complete the pattern

  read the pattern

  identify the rule of the pattern

clock

- Ask your child to show the time on the clock.

  "Is it morning or afternoon?"

- Ask your child the following:

  number of minutes until the next hour

  time two hours from now

  time three hours ago

  time one half hour ago

problem of the day

- Ask your child to do the following:

  read today's problem

draw the towers and write the number sentence on the meeting strip

write the answer on the meeting strip

coin cup

- Point to the money amount on the chalkboard.

"Let's pretend that I spent this amount of money."

"Write my change from $1.00 on the meeting strip under 'Coin Cup.' "

"Show the change using the fewest number of coins."

"Record the coins you use on the meeting strip."

- Allow time for your child to do this.

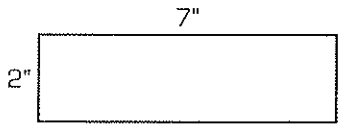
"Count back my change."

"Begin with the smallest coin."

The Lesson

Finding a Missing Dimension of a Rectangle

- Draw the following on the chalkboard:



"What is the length and width of this rectangle?" *the length is 7" and the width is 2"*

"The length and width are called the dimensions of a rectangle."

"Today you will learn how to find a missing dimension of a rectangle."

"How many one-inch square tiles will we need to make this rectangle?" *14*

"How do you know?"

- Record "14 square inches" inside the rectangle.
- Give your child a bag of 25 tiles.

"Use your color tiles to make a two-inch by seven-inch rectangle that looks like my chalkboard rectangle."

- Allow time for your child to make the rectangle.

"Mathematicians have a special way of describing the tiles in this rectangle."

"They say that there are two rows of tiles with seven tiles in each row."

"This is the same as 'groups of,' except now the tiles are arranged in neat rows like the seats in a movie theater."

"Pretend the tiles in your rectangle are seats in a movie theater for insects and your face is the screen."

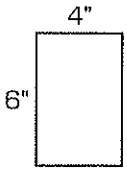
"Point to the first row of seats in your theater."

"How many insects can sit in the first row?" *7*

"How many rows of seats are in the theater?" *2*

"How many seats are in the theater altogether?" *14*

- Draw the following on the chalkboard:



"What are the dimensions of this rectangle?" *6" × 4"*

"Make a six-inch by four-inch rectangle that looks like my chalkboard rectangle."

- Allow time for your child to make the rectangle.

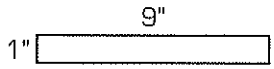
"How many one-inch tiles did you use to make this rectangle?" *24*

- Write "24 square inches" inside the rectangle.

"How many rows are in the theater this time?" *6*

"How many seats are in each row?" *4*

- Draw the following on the chalkboard:



"What are the dimensions of this rectangle?" *1" × 9"*

"How many one-inch tiles will you need to make this rectangle?" *9*

- Write "9 square inches" inside the rectangle.

"How many rows of seats will there be in this rectangle?" *1*

"How many seats will there be in each row?" *9*

"Make a one-inch by nine-inch rectangle that looks like my chalkboard rectangle."

- Allow time for your child to make the rectangle.

"Now make a theater with four rows."

"Put three seats in each row."

- Allow time for your child to make the rectangle.

"How many seats do you have?" *12*

"What are the dimensions of this rectangle?" *4" × 3"*

- Draw and label a chalkboard picture.

"Now make a theater with five rows."

"Put two seats in each row."

- Allow time for your child to make the rectangle.

"How many tiles did you use?" *10*

"What are the dimensions of this rectangle?" *5" × 2"*

- Draw and label a chalkboard picture.

"Take fifteen tiles."

"Make a theater that has three rows."

- Allow time for your child to make the rectangle.

"How many seats are in each row?" *5*

"What are the dimensions of this rectangle?" *3" × 5"*

- Draw and label a chalkboard picture.

"Take 21 tiles."

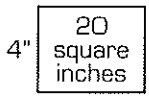
"Make a theater that has three rows."

- Allow time for your child to make the rectangle.

"How many tiles are in each row?" *7*

"What are the dimensions of this rectangle?" *3" × 7"*

- Draw the following on the chalkboard:



"How many tiles will you use to make this rectangle?" *20*

"How many rows does the picture tell you to make?" *4*

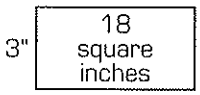
"Make a rectangle to match this picture."

"How many tiles are in each row?" *5*

- Fill in the missing dimension on the chalkboard rectangle.

"This is the missing dimension of the rectangle."

- Record "4" × 5" = 20 square inches" below the chalkboard rectangle.
- Draw the following on the chalkboard:



"How many tiles will you use to make this rectangle?" *18*

"How many rows does the picture tell you to make?" *3*

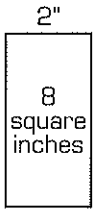
"Make a rectangle to match this picture."

"How many tiles are in each row?" *6*

- Fill in the missing dimension on the chalkboard rectangle.

  "This is the missing dimension of the rectangle."

- Record "3" × 6" = 18 square inches" below the chalkboard rectangle.
- Draw the following on the chalkboard:



"How many tiles will you use to make this rectangle?" *8*

"How many rows does the picture tell you to make?" *we don't know*

"How many tiles are in each row?" *2*

"Make a rectangle to match this picture."

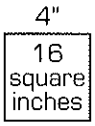
"How many rows did you make?" *4*

- Fill in the missing dimension on the chalkboard rectangle.

  "This is the missing dimension of the rectangle."

  "What are the dimensions of this rectangle?" *4" × 2"*

- Record "4" × 2" = 8 square inches" below the chalkboard rectangle.
- Draw the following on the chalkboard:



"How many tiles will you use to make this rectangle?" *16*

"How many rows does the picture tell you to make?" *we don't know*

"How many tiles are in each row?" *4*

"Make a rectangle to match this picture."

"How many rows did you make?" *4*

"This is the missing dimension of the rectangle."

- Fill in the missing dimension on the chalkboard rectangle.

  "What are the dimensions of this rectangle?" *4" × 4"*

- Record "4" × 4" = 16 square inches" below the chalkboard rectangle.

  "What do you notice about our rectangle this time?" *it's a square*

  "A square is a special type of rectangle."

- Give your child **Master 3-114.**

"Use your tiles to find the missing dimension or the area of each of these rectangles."

"Make each rectangle using your tiles."

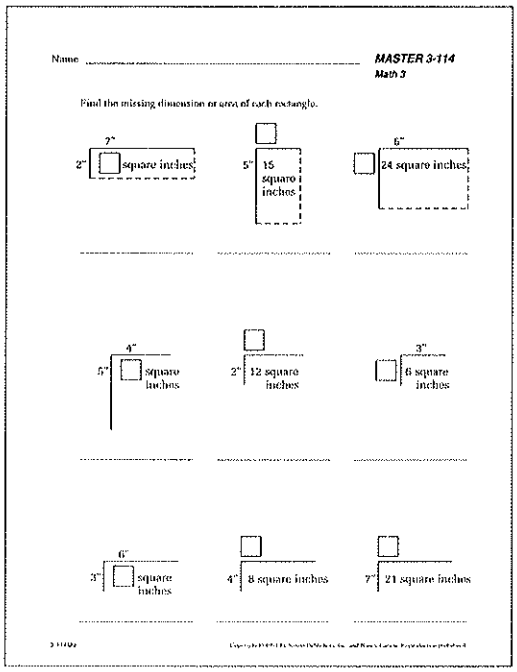
"When you finish, write a multiplication number sentence to match each picture."

Class Practice

- Use the fact cards to practice the multiplication facts with your child.
- Give your child **Fact Sheet M-100.**
- Time your child for 4 minutes.
- Correct the fact sheet together and record the score.
- Allow time for your child to complete the unfinished facts.

Written Practice

- Complete **Worksheet 114A** with your child.
- Your child completes **Worksheet 114B** later in the day.



Name _____ **MASTER 3-114** *Math 3*

Find the missing dimension or area of each rectangle.

2" × ☐ = 7 square inches

5" × ☐ = 15 square inches

☐ × 6" = 24 square inches

5" × ☐ = 4 square inches

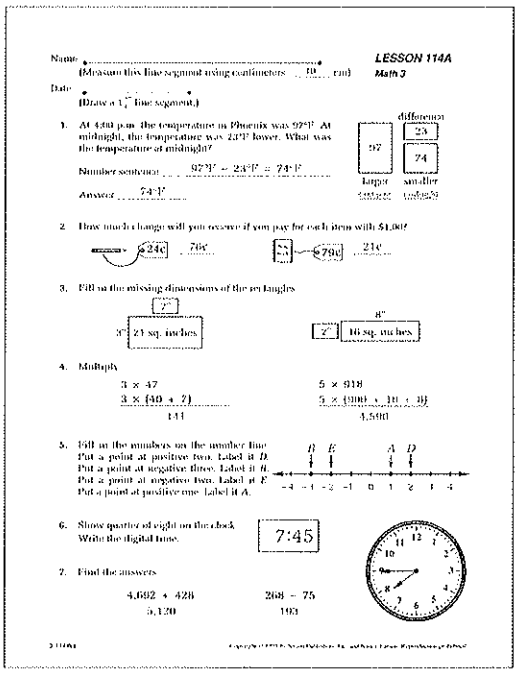
2" × ☐ = 12 square inches

☐ × 3" = 6 square inches

3" × ☐ = 6 square inches

4" × ☐ = 8 square inches

7" × ☐ = 21 square inches



Name _____ **LESSON 114A** *Math 3*

Date _____

(Measure this line segment using centimeters: 10 cm)

(Draw a $1\frac{1}{2}$" line segment.)

1. At 4:00 p.m. the temperature in Phoenix was 92°F. At midnight, the temperature was 23°F lower. What was the temperature at midnight?

Number sentence: 92°F − 23°F = 74°F

Answer: 74°F

92 (larger) | difference 23 | 74 (smaller)

2. How much change will you receive if you pay for each item with $1.00?

24¢ — 76¢

79¢ — 21¢

3. Fill in the missing dimensions of the rectangles.

7" × ☐ = 21 sq. inches

☐ × 8" = 16 sq. inches

4. Multiply.

3 × 47

3 × (40 + 7)

141

5 × 918

5 × (900 + 10 + 8)

4,590

5. Fill in the numbers on the number line.
Put a point at positive two. Label it *B*.
Put a point at negative three. Label it *E*.
Put a point at negative two. Label it *A*.
Put a point at positive one. Label it *D*.

6. Show quarter of eight on the clock. Write the digital time.

7:45

7. Find the answers.

4,692 + 428 = 5,120

268 − 75 = 193

Name _____ **LESSON 114B** *Math 3*

Date _____

1. At 2:00 p.m. the temperature in Atlanta was 78°F. At 6:00 p.m. the temperature was 12°F lower. What was the temperature at 6:00 p.m.?

Number sentence: 78°F − 12°F = 66°F

Answer: 66°F

78°F (larger) | difference 12°F | 66°F (smaller)

2. How much change will you receive if you pay for each item with $1.00?

47¢ — 53¢

81¢ — 19¢

3. Fill in the missing dimensions of the rectangles.

7" × ☐ = 42 sq. inches

☐ × 5" = 20 sq. inches

4. Multiply.

9 × 62

9 × (60 + 2)

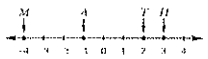
558

2 × 807

2 × (800 + 7)

1,614

5. Fill in the numbers on the number line.
Put a point at negative four. Label it *M*.
Put a point at positive three. Label it *H*.
Put a point at negative one. Label it *A*.
Put a point at positive two. Label it *T*.



6. Show quarter of two on the clock. Write the digital time.

1:45

7. Find the answers.

293 + 3,157 = 3450

542 − 81 = 461