## Second Grade

## Color Math

## Teacher's M anual

## Samples

Second Grade Color Math Teacher's Manual Part 1 Lessons 1-80 ISBN 9781592693207 Second Grade Color Math Teacher's Manual Part 2 Lessons 81-160 ISBN 9781592693214

McRuffy Second Grade Color Math Curriculum ISBN 9781592692125
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## McRuffy Second Grade Color Math

The Second Grade Color Math curriculum is arranged into 160 daily lessons. Each lesson plan states lesson objectives, materials, teaching directions, and answers. The objectives briefly state the concepts or exercises covered by the lesson. They are numbered. The numbers correspond to the teaching section. The materials section lists any special materials needed for the lesson. Basic materials such as pencils are not listed. Words typed in bold print can be stated directly to the students.

Although objectives are numbered, for the most part they do not have to be taught in that order. You may also decide to teach one objective during one part of the day and teach another later in the day. Sometimes an objective is simply restated in the teaching section if it is self-explanatory, such as having children write numbers or solve problems. This is not meant to be redundant, just consistent with the format.

Each lesson contains several objectives. This allows for frequent review, also called spiraling of concept. This keeps the skill level of the students up. The workbook pages reflect this approach. Lessons include a workbook page and an auditory response exercise to build both math and listening skills.

The teacher's manual consists of the lesson plans and workbook answers. Unit tests and timed tests are in the Resource Packet. Permission to copy timed tests and unit tests is granted for personal or classroom use (not for resale). Workbook pages are not reproducible. Copies are available from McRuffy Press.

The curriculum consists of a teacher's manual, a workbook, a response book, and a resource packet. The response book can be replaced with the reproducible response form or even a piece of paper with lines labeled with the letters A to J and a pencil. The response book would still be used to check answers, either by the student or the teacher. The response book is designed to be self-checking for the convenience of the teacher and to teach the student responsibility for checking their work. Using the dry erase markers to write answers may also be motivating for students.

Manipulatives are available as a separate kit from McRuffy Press. If you purchased the kindergarten or first grade manipulatives, you may purchase just the additional items needed. McRuffy Press also sells all manipulatives separately, as well as many other math, science, and language arts materials. The list of manipulatives states the largest quantity used (and quantity in math kit). The lessons column states when the manipulative is used.

## M ath Journal

Most lessons feature a small box on the right-hand page with ideas for keeping a math journal. This is an optional activity. The purpose is to allow students to write about math concepts and show examples of new concepts. This can later be used for studying or as reference material for terms and basic math facts. A basic spiral notebook may be used as the journal.

## Timed Tests

Timed tests are introduced in the lesson plans. You may follow the timed test schedule in the lessons, or have students demonstrate mastery of a timed test before introducing a new one. The timed tests are in the resource pack and they are reproducible. The most important facts to master at the second grade level are addition and subtraction. It would also be helpful to look for mastery in the early stages of multiplication (facts for x 0 to x 5 ).

## M anipulatives

## Quantity Manipulative

250 Transparent Chips: These are used as counters and sometimes referred to as counters or circle counters. They provide a greater variety of colors and a greater quantity of counters.

50 Base Ten Cubes (base ten) are one centimeter cubes. They can be used for measuring as well as base ten activities.

## 50 Pattern Blocks

$20 \quad$ Base Ten Rods (base ten) represent 10 cubes
10 Base Ten Flat cards represent 100 cubes
1 Clock dial
2 Tangram Sets: Seven piece sets
1 Fraction Pieces Set
1 Geoboard and rubber bands
1 Pentomino twelve piece set
2 Dice
12 One Inch Cubes
Coins (not included in the manipulative kit)

## Scope and Sequence

## Lessons 1 to 45

Number review
Review addition
Ordinal numbers
Commutative property
Story problems
Visual analysis skills using:
Tangrams
Pentominoes
Geoboards
Skip Counting 2, 5, 10
Subtraction Facts Review
Pattern Recognition
Graphing
Place value $1,10,100$
Adding two 2-digit numbers
Adding three numbers
Attribute recognition
Measuring (cm)
Inequalities
Counting money
Adding three 2-digit numbers
Adding four 1-digit numbers
Reading clocks (half-hour)
Regrouping
Test 1

## Lessons 47 to 68

Reading graphs
Place value 1000
Odd and even numbers
Skip counting by 3
2-digit number + 3-digit number
Adding 4 numbers
Visual analysis skills
Coins - quarters
Attributes
Adding three 2-digit numbers
Subtraction of 2-digit numbers
Reading clocks (quarter hour)
Reading diagrams
Test 2

## Lessons 69 to 90

Adding 2 and 3-digit numbers
Measuring (inches)
2-digit minus 1-digit numbers
Visual analysis skills
Mixed operations
Reading clocks to 5 minutes
Perimeter
2-digit minus 2 -digit with regrouping
Attributes
Adding two 3-digit numbers
Story problems
Graphing
Test 3

## Lessons 91 to 125

3-digit number minus 1-digit number
Fractions halves, fourths, thirds
Adding two 3-digit numbers
Temperature ( F and C )
Story problems
Adding 4-digit number + 2-digit number
Multiplying by $0,1,2,3,4,5$
3-digit number minus 2-digit number
4-digit number + 3-digit number
Adding 3 numbers
Inequalities
Roman numerals I to X
Skip counting 3, 4
Measure to $1 / 4$ inch
Test 4

## Lessons 126 to 160

Multiplying by 6, 7, 8, 9, 10
Fractions: fifths
Roman numerals to XXXIX
Mixed operations
Adding two 4-digit numbers
Division
4-digit number minus 2 \& 3-digit numbers Test 5

## Response Book

Most lessons feature an opportunity for students to listen and respond. These are short exercises that review concepts. Examples include simple calculations, recognizing place value of a given digit, writing times or dollar amounts, recognizing numbers as odd or even. Responses can be recorded in the Response Book. By using a dry erase marker to write on the clear plastic flip sheet, students can record their answers, then flip the clear sheet to an answer page and check their answers. This also makes the response book a non-consumable item.

Directions for exercises recorded in the Response Book are stated in the lessons. These are usually easier exercises. The emphasis is on listening and responding. Teachers may allow or even encourage students to use the appropriate manipulatives to help visualize and solve the problems. Students may also jot down notes on scrap paper if necessary to help respond.

Most exercises contain ten responses that are recorded in a column of boxes. Some more difficult or time consuming activities may only feature five responses. If students are having difficulty with an exercise, or it is taking too much time for a review activity, you may choose to end the exercise before asking for all ten responses. Responses within an exercise are random in difficulty. There is no planned progression from easiest to hardest.

To make the self-checking feature work properly, two important directions must be followed. The correct form must be used and the correct column must be used. Form 2 is a flipped version of Form 1, otherwise they are identical. Since answers are printed two-sided, the correct form must be used to match the answers. Form 1 also features a small picture of a giraffe. Form 2 features a small picture of a zebra. The pictures were added to make the forms more distinctive. An answer page is designated by a letter in the lesson directions. The same answer sheet is used for 5 lessons (a few are used for 4 lessons on testing weeks).

Columns are designated by shapes in the upper right-hand corner of each response box. Each lesson will use a designated column. The order of shapes are star, circle, triangle, hexagon, and square. At the beginning of the Response exercise, the correct form and correct column will be noted.


1. Flip the clear sheet onto the response form.
2. Students record answers onto the face of the clear sheet. The response form helps students to align and record their responses in the correct area for checking.
3. Find the correct answer page. Flip the clear sheet onto the page and match the answers.


## Games

Games are introduced in various lessons once the concepts in the games have been introduced. You may introduce them sooner if you feel students can play the games. The games may be referred to in only one lesson, but they may be played many times to reinforce skills or simply for fun. The games are designed to be mostly assembled and contain few parts.

## McRuffy's M arket

Players collect money and buy fruit to complete their shopping lists. Introduced in lesson 10.

## The Big Spender

Introduced in lesson 40, The Big Spender reviews coin counting skills. Students will need to be able to add to and subtract from a group of coins.

## Skippy's O utback Adventure

Skippy the Kangaroo hops around the outback. Players skip count by 2, 3, 5, 10, and 100. Skippy's Outback Adventure is introduced in lesson 55.

## Moose Antler Place Value

Players will recognize and write 4-digit numbers in the Moose Antler Place Value game. The Moose Antler Place Value game is introduced in lesson 63.

## Quitting Time

Adding time to clocks in five minute intervals is practiced in Quitting Time. Players complete an 8 hour day on their time cards. The game is introduced in lesson 83 .

## Cat-Fish Coordinate Game

Using color coded cats and fish to locate points on a grid makes for a fun introduction to plotting coordinates. Introduced in lesson 96, the Cat-Fish Coordinate game will have players racing to find coordinates.


## Objectives

1. Students will identify numbers as odd or even.
2. Students will practice addition.
3. Students will find missing addends.
4. Students will take a timed test.

## Materials

* Workbook
* Counters
* Rods and cubes
* Timed test 19


## Teaching

1. Have students make groups of counters from 1 to 10 .

Now tell students to line up the counters of each group into twos. If the counters of the group each have a "buddy" the number of counters is even. If there is an extra counter left over, the number is odd. What numbers are even? $(2,4,6,8)$ What numbers are odd? $(1,3,5,7,9)$

Pick other numbers at random, such as, 17. Have students make groups of counters, pair up the counters, and identify the number as even or odd. Have students find the odd numbers between 0 and 30 . Ask students if there is a pattern to odd and even numbers.

Response book form 1: Use the column with stars in the boxes. I'll say some numbers. If the number is odd, write $O$ in the box. If the number is even, write $E$ in the box.
A (8), B (3), C (7), D (6), E (9), F (4), G (2), H (10), I (15), J (11)

## Use answer page $K$.

Use the top section of the workbook. Look at the numbers on the workbook page. Write an $\mathbf{O}$ in the blank if the number is odd. Write an $E$ in the blank if the number is even.
2. Find the sums to the addition problems. You may have students demonstrate solving a problem with rods and cubes.
3. Look at the addition problems. A picture is in place of one of the addends. Find the missing addend. Write it next to the matching picture at the bottom of the page. You may use rods and cubes. Make a group that equals the sum. Take away the number of the addend that you know. Recount the group for your answer.
4. Give students timed test 19 . Students will add 2 two-digit numbers with no regrouping.

## Workbook Answers

Write O next to the odd numbers. Write E next to the even numbers.
$\qquad$
$\qquad$

$$
17 \mathrm{O}
$$

$$
44 \mathrm{E}
$$

$$
23 \mathrm{O}
$$

$$
35 \mathrm{O}
$$

$$
49 \mathrm{O}
$$

$$
12 \quad \mathrm{E}
$$

$$
26 \mathrm{E}
$$

$$
50 \quad \mathrm{E}
$$

Solve the problems.

$$
\begin{array}{rrrr}
52 \\
+18
\end{array} \quad \begin{array}{r}
31 \\
\hline 70
\end{array} \quad \begin{array}{r}
74 \\
+62 \\
\hline 93
\end{array} \quad \begin{array}{r}
25 \\
+17
\end{array} \quad \begin{array}{r}
54 \\
+45 \\
\hline 70
\end{array} \begin{aligned}
& 76
\end{aligned}
$$

Find the value of each animal.

$$
5+=26
$$

$$
\text { ) }+2=35
$$

$$
4+=17
$$

$$
\sqrt{6}+4=84
$$

$$
7+\infty=69
$$

$$
+6=98
$$

$$
t=92
$$

$$
=80
$$

$$
\theta=\Phi 3
$$

$$
y_{5}^{6}=33
$$

$$
=62
$$

$$
=2 I
$$

## Objectives

1. Students will review odd and even numbers.
2. Students will subtract single-digit numbers from 2-digit numbers.
3. Students will compare groups.
4. Students will add time to clocks.

## Materials

* Workbook
* Base ten rods and cubes
* Clock dials
* Coins (pennies, nickels, dimes)


## Teaching



1. Review the rules for identifying odd or even numbers. Write or say various numbers. Have students identify the numbers as odd or even.

Response book form 1: Use the column with circles in the boxes. I'll say some numbers. If the number is odd, write $O$ in the box. If the number is even, write $E$ in the box.
A (83), B (35), C (74), D (66), E (92), F (48), G (27), H (109), I (410), J (8211)

Use answer page $K$.
2. Write the problem 36-3=. Have students make a group of rods and cubes equal to 36 . Next, have students take away 3 cubes. Students should count the rods and cubes to find the difference. (33) Repeat with other problems. Students will not deal with regrouping at this time.
3. Compare the groups in each box on the workbook page. Make matching groups with rods, cubes, and coins. Draw a sign in the circles to show how the groups are related, greater than, less than, or equal.
4. Set a time on a clock face to $\mathbf{1 1 : 3 0}$. Add fifteen minutes to it. Don't forget to move both the hour hand and the minute hand. What is the new time? (11:45)

Set the clock to 3:15. Add 45 minutes to the clock. What is the new time? (4:00)
Set the clock to 5:30. Add $\mathbf{1}$ hour and 15 minutes. What is the new time? (6:45)

## Lesson 53

## Objectives

1. Students will solve subtraction problems (two-digit number minus one-digit number, no regrouping)
2. Students will review two-digit addition.
3. Students will solve story problems.

## Materials

* Workbook
* Response book
* Base Ten rods and cubes


## Teaching

1. Review subtracting single digit numbers from two-digit
 minuends. Use rods and cubes if necessary.

Practice with these problems: 44-2, 68-5, 89-8.
Response book form 1: Use the column with triangles in the boxes. Listen to the problems. Write the differences in the boxes.

$$
\begin{aligned}
& \text { A (89-5) , B (46-1), C (77-7), D(68-2), E (39-6), } \\
& \text { F (18-1) , G (95-4) , H (24-2) , I (59-1), J (78-3) }
\end{aligned}
$$

Use answer page $K$.
2. Have students solve the problems on the workbook page.
3. Read the following stories to the children. Have students answer the questions. Children should model the stories using rods and cubes. More stories are on the workbook page. Jose had $57 \boldsymbol{c}$. He spent $6 \not \subset$ on gum. How much money does he now have? Have students state the problem and answer (57 $\phi$ $6 \phi=51 \phi)$. Sandra had two books. One was 47 pages long. The other was 38 pages long. How many pages will she read if she reads both books? $(47+38=85$ pages $)$

## Workbook Answers

| Solve the problems. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 58 | 37 | 93 | 75 | 29 |
| - 2 | - 6 | - 2 | - 1 | $\begin{array}{r}7 \\ -\quad 7 \\ \hline\end{array}$ |
| 56 | 31 | 91 | 74 | 22 |
| 37 | 56 | 16 | 75 | 81 |
| + 22 | + 40 | + 63 | +13 | +15 |
| 59 | 96 | 79 | 88 | 96 |
| Read the stories. Answer the questions. |  |  |  |  |
| I. Jeff had $87 \not \subset$. He lost a nickel. How much money does he now have? |  |  |  |  |
| 2. Liz baked 23 chocolate chip cookies. She also baked 42 sugar cookies. How many cookies did she have? |  |  |  |  |
| 3. There were 26 cars in a parking lot. Five drove away. How many are left? |  |  |  |  |
| 4. There are 53 boys in the soccer league. There are 42 girls in the soccer league. How many children are in the soccer league? |  |  |  |  |
| 5. We grew 25 carrots in the garden. A rabbit ate three of them. How many were left? |  |  |  |  |

## Math Journal:

Write two story problems.
One should contain a problem subtracting a single-digit from a double-digit number (no regrouping).
The other should contain a problem adding two double-digit numbers with regrouping.
. Jeff had 87¢ி. He lost a nickel. How much money does he now have?
. Liz baked 23 chocolate chip cookies. She also baked 42 sugar cookies. How many cookies did she have?
3. There were 26 cars in a parking lot. Five drove away. How many are left?
4. There are 53 boys in the soccer league.

There are 42 girls in the soccer league. How many children are in the soccer league?
ate three of them. How many were left?


## Objectives

1. Students will add two-digit and three-digit numbers.
2. Students will review odd and even numbers.
3. Students will skip count by threes.
4. Students will take a timed test.

## Materials

* Workbook
* Response book
* Counters
* Base Ten rods, cubes, and flats
* Timed test 20


## Teaching



1. Have students use flats, rods, and cubes to model the problem $156+32$. Repeat with other problems. Students will not regroup at this time.

Find the sums of the problems on the workbook page.
2. Review the rules for determining odd and even numbers. Have students determine if various numbers are even or odd.

Response book form 1: Use the column with hexagons in the boxes. I'll say some numbers. If the number is odd, write $O$ in the box. If the number is even, write $E$ in the box.

$$
\begin{aligned}
& \text { A (5678), B (3005), C (7321), D (9237), E (9999), } \\
& \text { F (3586), G (1792), H (4623), I (2544), J (8000) }
\end{aligned}
$$

## Use answer page K .

3. Have students put 30 counters into groups of three. Have students count the first group of counters and write the number 3 . Keep counting with the second group $(4,5,6)$ and write the number 6 . Continue to thirty. Have students practice counting by threes.

Look at the workbook page. Skippy the Kangaroo is back. This time, count by threes to fill in the blanks on each row.
4. Give students the timed test. The test contains two-digit addition problems with regrouping.

## Workbook Answers

Solve the problems.

$$
\left.\begin{array}{rrrrr}
164 \\
+\quad 34
\end{array} \begin{array}{r}
22 \\
\hline 198
\end{array} \begin{array}{r}
347 \\
+405 \\
\hline 427
\end{array} \begin{array}{r}
26 \\
+\quad 12
\end{array}\right) \begin{array}{r}
846 \\
\hline 41
\end{array}
$$



## Math Journal:

Write the numbers counting by threes to 100 .

## Lesson 55

## Objectives

1. Students will review skip counting by threes.
2. Students will add two-digit numbers to three-digit numbers.
3. Students will make symmetrical designs.
4. Students will play a skip counting game.

## Materials

* Workbook
* Response book
* Rods and cubes (optional)
* Geoboard
* Skippy's Outback Adventure game board
* Skippy's Outback Adventure player cards
* Dice

* Playing pieces
* Dry-erase marker


## Teaching

1. Say a number used for counting by threes. Students say the next number for example: 33 (36), 21 (24), 57 (60), 15 (18).

Response book form 1: Use the column with squares in the boxes. I'll say a number. Write the next number counting by threes.
A (12), B (6), C (21), D (33), E (9), F (42), G (93), H (69), I (15), J (84)

## Use answer page $K$.

2. Solve the problems in the workbook.
3. The geoboard designs show half of the shapes. Draw a second symmetrical half on all $\mathbf{4}$ designs. The first two designs show red dots to the points you will use. Next, make the designs on geoboards.
4. Use Skippy's Outback Adventure game board, player cards, playing pieces, marker, and dice. Cut apart the 4 player cards. Cut on the dashed lines.

The teacher can decide on a starting number for each row on the player card. Write starting numbers on each row.

Place one playing piece on the circle on the game board with the number 100. This marks the row players will use on the player card.

Begin on the space with the large kangaroo. Players take turns rolling and moving around the path. If a player lands on a kangaroo space, the player can write the next number on the player card, skip counting. Start on the hundred row.

If a player lands on a skink, move the playing piece down one circle. This is to indicate that players will now write numbers on the next row of the player card whenever they land on a kangaroo. When the playing piece reaches 2 , the next move will be back up to 100 .

If a player lands on a dingo, the player must erase a number from the end of any of their rows. Players can never erase the first number in the row, the number that was assigned at the beginning of the game. If there are no other numbers to erase, the player does nothing.

The first player to complete any one row of the player card is the winner.

Game board


Player card
Skipys's Outback Adventure Player Card

## Workbook Answers



Math J ournal:
No assignment.

## Objectives

1. Students will review counting coins.
2. Students will add 4 numbers.
3. Students will compare problems.
4. Students will review thousands place value.

## Materials

* Workbook
* Response book
* Coins (dimes, nickels, pennies)
* Counters


## Teaching

1. Have students count out groups of coins. Give students an amount, such as $75 \phi$. Have students count out coins to make the total. You may also ask students to make a group of coins and count them. For example, 4 dimes, 3 nickels, 7 pennies. Students count the coins to find the total, $62 \phi$.
2. Solve the problems in the workbook.
3. Write two problems. For example: $234+43$ and $221+55$. Students will use the greater than $(>)$ or less than $(<)$ sign to show the relationship between the problems. Repeat with other sets of problems. Include other types of problems (two-digit addition with regrouping, subtraction).
4. Say a four-digit number. Ask students what number is in each place value. For example: 4623, 4 thousands, 6 hundreds, 2 tens, 3 ones.
Response book form 2: Use the column with stars in the boxes. I'll say a number. Write the numbers in the boxes.

$$
\begin{aligned}
& \text { A (7834), B (9036), C (6111), D (8282), E (1674), } \\
& \text { F (5585), G (3951), H (4893), I (2431), J (7408) }
\end{aligned}
$$

## Use answer page $L$.

Complete the chart at the bottom of the workbook page. Write each digit to show its place value.

## Lesson 57

## Objectives

1. Students will review odd and even numbers.
2. Students will add four numbers.
3. Students will count coins including quarters.
4. Students will take a timed test.

## Materials

* Workbook
* Response book
* Coins
* Counters
* Timed test 21
* Red and blue crayons



## Teaching

1. Review the rules for determining odd and even numbers. Say or write various numbers, include numbers in the thousands. Have students determine if the numbers are even or odd.

Response book form 2: Use the column with circles in the boxes. I will say numbers. If the number is odd, write $O$ in the box. If the number is even, write E in the box.

$$
\begin{aligned}
& \text { A (1234), B (8958), C (6001), D (2463), E (5555), } \\
& \text { F (4289), G (3732), H (7777), I (8246), J (6345) }
\end{aligned}
$$

## Use answer page $L$.

Workbook page: Color the boxes with even numbers in them red. Color the boxes with odd numbers in them blue.
2. Workbook: Add four numbers. Write the sums.
3. Introduce counting quarters. Practice counting by 25 to 300 hundred. Have students count groups of coins. It will probably be easiest to count by starting with quarters, then dimes, then nickels, then pennies. Count the value of the coins on the workbook page. Write the total in the boxes. Remember to use the cents sign.
4. Timed test: Students will add 2 two-digit numbers with regrouping.

## Workbook Answers

Color the squares with even numbers red. Color the boxes with odd numbers blue.


Solve the problems.

| 9 | 4 | 1 | 8 | 5 |
| :---: | :---: | :---: | :---: | :---: |
| 3 | 7 | 6 | 2 | 5 |
| 3 | 2 | 5 | 3 | 1 |
| $\begin{array}{r} \\ +\quad 3 \\ \hline\end{array}$ | $\begin{array}{r}\text { a } \\ +\quad 3 \\ \hline\end{array}$ | a <br> $+\quad 2$ | $\begin{array}{r} \\ +\quad 4 \\ \hline\end{array}$ | $\begin{array}{r} \\ +\quad 2 \\ \hline\end{array}$ |
| 18 | 16 | 14 | 17 | 13 |

Coin the coins. Write the total in the box.


## Objectives

1. Students will subtract one-digit from two-digit numbers.
2. Students will count coins, including quarters.
3. Students will estimate lengths (centimeters).

## Materials

* Workbook
* Response book
* Rulers (centimeters)
* Coins


## Teaching

1. Have students solve the problems in the workbook.


Work examples with the students if necessary.
Response book form 2: Use the column with triangles in the boxes. I will read subtraction problems. Write the differences in the boxes. Give time for students to write the answers in the boxes before reading the next problem.

$$
\begin{aligned}
& \text { A (26-3), B }(85-4), \text { C ( } 99-2), \text { D }(58-4), \text { E (19-3), } \\
& \text { F }(47-1), G(74-4), \text { H (35-3), I (69-7), J (88-0) }
\end{aligned}
$$

## Use answer page $L$.

2. Review counting quarters and other coins.

Students may use coins to help model the story problems. Read the following stories to the students. Other stories are in the workbook. Joe had 56¢. He earned another quarter. How much money does he now have? (81申)

Carol has $\mathbf{3}$ quarters, 2 dimes, 1 nickel, and 8 pennies. How much money does she have? (108ф or \$1.08)

Larry has 78c. He has $\mathbf{2}$ dimes, 1 nickel, and 3 pennies. The rest of the coins are quarters. How many quarters does he have? (2)

Solve the story problems on the workbook page.
3. Have students estimate and write their estimates for measuring various objects.

Next, have students check their estimates with rulers.

## Workbook Answers



Read the stories. Write a problem and answer for each story.
Jake had $86 \not \subset$. He had a dime and a penny.
The rest of the coins were quarters. How many
quarters did Jake have?


Susan had $79 \not \subset$. She gave two quarters away.
How much money does she now have?


A candy bar costs a quarter more than gum.
The gum costs 23டC. How much does the candy bar cost?


Pat has a quarter, a dime, 2 nickels, and 7 pennies. Larry has $36 \not \subset$. How much would they

have altogether?


[^0]
## Objectives

1. Students will skip count by threes.
2. Students will add three two-digit numbers.
3. Students will read a graph and answer questions.
4. Students will take a timed test.

## Materials

* Workbook
* Response book
* Timed test 22


## Teaching

1. Review counting by threes. Have students count orally by threes to 100 . Next, pick a specific number,
 such as 42 , and ask students to tell you the next number counting by threes (45) or the number that comes before 42 counting by threes (39). Repeat several times.

Response book form 2: Use the column with hexagons in the boxes. I will say a number. Write the number counting by threes that comes before the number I say. For example if I said 18, you would write 15.
A (33), B (21), C (12), D (42), E (81), F (51), G (69), H (75), I (96), J (6)

## Use answer page $L$.

2. Write the problem $32+41+14$. Start by adding the numbers in the ones place. Next, add the numbers in the tens place. Have students solve the problem. Work other examples if necessary. Solve the addition problems on the workbook page.
3. Use the graph to answer the questions.
4. Give students the timed test. Students will add 2 two-digit numbers with regrouping.

## Workbook Answers

| Solve the problems. |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| 14 | 22 | 5 | 50 | 33 |
| 42 | 12 | 30 | 23 | 33 |
| $+\quad 13$ |  |  |  |  |
| 69 | $+\quad 3$ |  |  |  |
| 37 | +41 |  |  |  |

Use the graph and coins to answer the questions. Fill in the squares to mark your answers.


1. Which group has the least amount of coins?
2. Which group of coins is worth the least?

| $\square \mathrm{Q}$ | $\square \mathrm{D}$ | $\square \mathrm{N}$ | $\square \mathrm{P}$ |
| :--- | :--- | :--- | :--- |
| $\square \mathrm{Q}$ | $\square \mathrm{D}$ | $\square \mathrm{N}$ | $\square \mathrm{P}$ |
| $\square \mathrm{Q}$ | $\square \mathrm{D}$ | $\square \mathrm{N}$ | $\square \mathrm{P}$ |
| $\square \mathrm{Q}$ | $\square \mathrm{D}$ | $\square \mathrm{N}$ | $\square \mathrm{P}$ |
| $\square \mathrm{Q}$ | $\square \mathrm{D}$ | $\square \mathrm{N}$ | $\square \mathrm{P}$ |
| $\square \mathrm{Q}$ | $\square \mathrm{D}$ | $\square \mathrm{N}$ | $\square \mathrm{P}$ |
| $\square \mathrm{Q}$ | $\square \mathrm{D}$ | $\square \mathrm{N}$ | $\square \mathrm{P}$ |
| $\square \mathrm{Q}$ | $\square \mathrm{D}$ | $\square \mathrm{N}$ | $\square \mathrm{P}$ |

## Objectives

1. Students will count coins.
2. Students will label patterns.
3. Students will solve addition and subtraction problems.
4. Students will make pattern block designs with symmetry.

## M aterials

* Workbook
* Response book
* Pattern blocks, counters, or other objects to make patterns
* Coins


## Teaching



1. Response book form 2: Use the column with squares in the boxes. Find the value of the groups of coins I describe.
Write the values in the boxes. You will not have space to write the cent sign.
Write only the numbers. Students may use coins.
A ( 3 dimes and 1 quarter), B ( 2 quarters and 6 pennies), C ( 5 nickels and 1 quarter), D ( 3 quarters), E ( 2 quarters and 1 dime), F (4 quarters and 1 dime), G (1 nickel, 1 dime, 1 quarter), $\mathbf{H}$ ( 5 dimes), I (1 quarter and 4 pennies), J ( 2 dimes and 1 quarter)

Use answer page $L$.
2. Make patterns of objects. Have students use letters to describe the patterns. Next, make a pattern. Have students make the same pattern using different objects.
3. Solve the problems in the workbook. Some are subtraction problems and some are addition problems.
4. Make the pattern block designs. Next add a symmetrical half. You can find more than one line of symmetry.

## Workbook Answers

Solve the problems.

$$
\begin{aligned}
& \begin{array}{r}
45 \\
-\quad 1 \\
\hline 44
\end{array} \begin{array}{r}
23 \\
\hline 20
\end{array} \quad \begin{array}{r}
97 \\
\hline 91
\end{array} \quad \begin{array}{r}
59 \\
\hline \quad 62
\end{array} \quad \begin{array}{r}
67 \\
\hline 64
\end{array} \\
& \begin{array}{rrrrr}
52 & 24 & 70 & 43 & 15 \\
21 & 41 & 10 & 32 & 50 \\
+\quad 13 \\
\hline 86
\end{array}+\quad 24-\quad 19 \begin{array}{r}
+\quad 23 \\
\hline
\end{array}
\end{aligned}
$$

## Math Journal:

Write a money story problem (and answer) involving quarters.

The symmetrical flips may have different answers. Sample answers are below.



[^0]:    A pen costs a quarter. How many pens can be bought with 75 7 ?
    $\qquad$

