Mental Math
Kids Can't Resist!

Tips, Shortcut Strategies, and 60 Fun Practice Pages That Reinforce Essential Math Skills and Boost Test Scores

by Richard Piccirilli

"My weight equals 76 + 6 + 84. Who can figure out my weight?"

Break down the numbers!

= (70 + 6) + 6 + (80 + 4)
= (70 + 80) + (6 + 4) + 6
= 150 + 10 + 6
= 166 + 6

166!
This work is dedicated to my wife, Fraye, who makes living an exciting adventure.

Acknowledgments

I easily recognize the value of being surrounded by supportive people. To my family, who makes it all worthwhile, I love you. To my parents, Domenico and Frances, who have left an indelible mark on me, thank you for teaching me the meaning of hard work. To my many elementary students with whom I have worked over the last 33 years, thank you for your inspiration, for teaching me how to teach math, and for always bringing out the best in me as a teacher. To Linda Decker, thank you for typing the manuscript.

— RSJP

Cover design by James Sarfati
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ISBN # 0-439-18605-6
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Printed in the U.S.A.
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This book gives teachers practical and easy-to-use ideas for teaching mental-math skills to students in grades 2–4. The activities are designed to teach and reinforce mental-math skills, as well as give students opportunities to use their newly acquired skill.

You'll find the activities easy to integrate into your curriculum either as lessons in mental math or as a supplement to other daily math activity. Most valuable perhaps are the many activities that relate mental-math strategies to learning the basic number facts.

This book helps students become flexible thinkers with numbers and encourages them to be inventive when encountering new number situations. The activities expose students to new opportunities for using mental-math skills in daily situations in and out of school.

With mental math, students develop a positive attitude toward numbers. They visualize numbers, retain them in their heads, and develop a sense of the quantities numbers represent. They also develop other skills important to overall math achievement—place value, spatial ability, number facts, computation, problem solving, estimation, number properties, and writing about math. As a result, mental math boosts students' confidence. In a very short time they can come to feel smart!

What is mental math?

Mental math is finding answers to number problems or situations using only your head. It is a creative process, which requires you to invent unique mental procedures to deal with numbers in very simple ways. Mental math does not use pencil and paper, calculators, or other recording devices. Instead, it employs strategies that help you to see relationships among numbers and compute them mentally.

There are two facets to mental math: First, we use mental math to find estimated answers. Then, we use mental math to find exact answers. This second facet is often referred to as mental computation, which is the focus of this book.
Why is it important to teach young children mental math?

It is important to teach young children mental math because it is a valuable, useful skill and a powerful tool.

The National Council of Teachers of Mathematics (NCTM) has awakened the need to teach mental math. The newly released NCTM Standards 2000 states:

- Students should select appropriate methods and tools for computing with whole numbers from among mental computation, estimation, calculators, and paper and pencil according to the context and nature of the computation, and use the selected method or tool.

What are some noteworthy features of this book?

The activities in this book are appropriate for grades 2–4, as well as for students of varying abilities. Basic exercises help young students build a foundation in math, while more difficult exercises challenge students who are more skillful in math. Clear and simple directions as well as model examples help students understand their tasks very quickly.

Activities cover topics in the primary math curriculum: number sense, number facts, addition and subtraction, with attention to the early concepts of multiplication and division.

You can easily make transparencies from any activity page. Pages that feature this transparency logo at right can be used as a focal point for whole- or small-group lessons using the overhead projector.

“Write About It” questions throughout the book ask students to reflect, integrate, apply, and consolidate what they have learned in mental math.
What is the best way to use this book?

The following suggestions should serve as a guide to help you make the best use of the book, with the least amount of time and effort.

1. Become familiar with the topic you will be teaching. This will help you prepare lessons that are meaningful and fun.

2. Before assigning student activity pages, discuss the topic from the assigned page. Encourage students to share their thoughts and ideas on how to solve practice examples before teaching the strategies. This is where important learning will occur.

3. Encourage students to share their strategies with you, their classmates, and their family.

4. Take advantage of the Skill Builders activities. They introduce children to the usefulness and application of mental math and build confidence early in their math careers.

5. As opportunities arise, refer to ideas previously learned. When assigning practice activities from textbooks, have students look for examples that can be done mentally, or have them estimate some of their answers before completing the assigned examples.

6. Use the activities in this book as models to make your own mental-math worksheets.
The Basic Mental-Math Strategies

The three mental-math strategies for grades 2–4 are:

- MAKE EASY NUMBERS
- BREAK UP NUMBERS
- COMPENSATE

Mental computation may use one strategy or a combination of these three strategies. For example, in making easy numbers, you may have to break up numbers. Or, to make easy numbers you may have to compensate.

Students should be aware of these strategies and be able to identify which ones they’re using. Below are examples of each strategy:

1 MAKE EASY NUMBERS

Easy numbers are numbers that are easy to compute without using a calculator or pencil and paper. Examples of easy numbers are numbers that end in 0, like 10, 20, 30, 40, 50. Here are some examples of numbers that are easy to add, subtract, multiply, and divide:

\[
\begin{align*}
10 + 20 & \quad \text{Add } 1 + 2 = 3 \\
& \quad \text{Put 0 next to the 3} \\
& \quad 10 + 20 = 30 \\

50 – 30 & \quad \text{Subtract } 5 – 3 = 2 \\
& \quad \text{Put 0 next to the 2} \\
& \quad 50 – 30 = 20 \\

96 \times 10 & \quad \text{Multiply } 96 \times 1 = 96 \\
& \quad \text{Put 0 next to the 96} \\
& \quad 96 \times 10 = 960 \\

360 \div 9 & \quad \text{Divide } 36 \div 9 = 4 \\
& \quad \text{Put 0 next to the 4} \\
& \quad 360 \div 9 = 40
\end{align*}
\]

You can regroup numbers to make easy numbers:

\[
\begin{align*}
3 + 76 + 7 & \quad = (3 + 7) + 76 \\
& \quad = 10 + 76 \\
& \quad = 86 \\

5 \times 47 \times 2 & \quad = (5 \times 2) \times 47 \\
& \quad = 10 \times 47 \\
& \quad = 470 \\

87 – 12 & \quad = 87 – 10 – 2 \\
& \quad = 77 – 2 \\
& \quad = 75
\end{align*}
\]
THE BASIC MENTAL-MATH STRATEGIES

2 BREAKING UP NUMBERS
Breaking up numbers means separating numbers to make them easier to compute. Here are some examples:

38 + 46
= (30 + 8) + (40 + 6)
= (30 + 40) + (8 + 6)
= 70 + 14
= 70 + 10 + 4
= 80 + 4
= 84

4 x 18
= 4 x (10 + 8)
= (4 x 10) + (4 x 8)
= 40 + 32
= 40 + 30 + 2
= 70 + 2
= 72

93 – 16
= 93 – 10 – 6
= 83 – 6
= 77

48 ÷ 4
= (40 + 8) ÷ 4
= (40 ÷ 4) + (8 ÷ 4)
= 10 + 2
= 12

46 + 19
Add 1 to 19 to make 20:
19 + 1 = 20
Then add 46 and 20: 46 + 20 = 66
Subtract 1 from 66 to compensate: 66 – 1 = 65
So 46 + 19 = 65

137 – 98
Add 2 to 98 to make 100:
98 + 2 = 100
Then subtract 137 and 100: 137 – 100 = 37
Add 2 to 37 to compensate: 37 + 2 = 39
So 137 – 98 = 39

COMPENSATION
To compensate, you can do one of the following:

• Adjust one of the numbers and then adjust the answer.
• Adjust both numbers. Then it’s not necessary to adjust the answer.

Here are examples when one of the numbers and the answer are adjusted:

46 + 19
Add 1 to 19 to make 20:
19 + 1 = 20
Then add 46 and 20: 46 + 20 = 66
Subtract 1 from 66 to compensate: 66 – 1 = 65
So 46 + 19 = 65

137 – 98
Add 2 to 98 to make 100:
98 + 2 = 100
Then subtract 137 and 100: 137 – 100 = 37
Add 2 to 37 to compensate: 37 + 2 = 39
So 137 – 98 = 39

Here are examples when both numbers in the equation are adjusted:

46 + 19
Add 1 to 19: 19 + 1 = 20
Compensate by subtracting 1 from 46: 46 – 1 = 45
Add 45 + 20 = 65
So 46 + 19 = 65

137 – 98
Add 2 to 98: 98 + 2 = 100
Compensate by adding 2 to 137:
137 + 2 = 139
Subtract 139 – 100 = 39
So 137 – 98 = 39
### Look for Easy Numbers for E-Z Addition

**Directions:** Solve the problems below by making easy numbers. Look for numbers that add to 10, 20, 30, or other easy tens numbers. See the examples here.

**Examples:**

<table>
<thead>
<tr>
<th>Expression</th>
<th>Simplified</th>
<th>Expression</th>
<th>Simplified</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 + 4</td>
<td>20 + 10 + 4</td>
<td>6 + 8 + 4</td>
<td>6 + 4 + 8</td>
</tr>
<tr>
<td>= 24</td>
<td>= 10 + 10 + 4</td>
<td>= 10 + 8</td>
<td>= 10 + 4 + 8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. 7 + 3 + 5 = ______
2. 5 + 9 + 5 = ______
3. 4 + 4 + 6 = ______
4. 9 + 8 + 1 = ______
5. 2 + 7 + 8 = ______
6. 7 + 18 + 2 = ______
7. 29 + 10 + 1 = ______
8. 17 + 6 + 3 = ______
9. 25 + 8 + 5 = ______
10. 36 + 4 + 7 = ______
11. 52 + 7 + 1 + 8 = ______
12. 75 + 3 + 5 = ______

**Write About It**

What do you look for when making easy numbers?
MENTAL-MATH STRATEGIES: MAKE EASY NUMBERS

Look for More Easy Numbers in Addition

Directions: Solve the problems below by making easy numbers. Look for numbers that add to 10, 20, 30, or other easy tens numbers. Before you start, look at the examples.

Examples of easy numbers:

<table>
<thead>
<tr>
<th>60 + 7</th>
<th>6 + 28 + 4</th>
<th>7 + 16 + 3 + 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>= 67</td>
<td>= 6 + 4 + 28</td>
<td>= 10 + 16 + 20</td>
</tr>
<tr>
<td></td>
<td>= 10 + 28</td>
<td>= 26 + 20</td>
</tr>
<tr>
<td></td>
<td>= 38</td>
<td></td>
</tr>
</tbody>
</table>

1. 8 + 12 + 2 = _____  8. 95 + 14 + 5 = _____
2. 8 + 17 + 2 = _____  9. 9 + 110 + 21 = _____
3. 23 + 14 + 6 = _____ 10. 22 + 8 + 160 = _____
4. 14 + 25 + 6 = _____ 11. 37 + 14 + 3 + 6 = _____
5. 32 + 8 + 40 = _____ 12. 5 + 23 + 55 + 10 = _____
6. 87 + 6 + 4 = _____ 13. 6 + 122 + 8 + 4 = _____
7. 25 + 25 + 12 = _____ 14. 340 + 3 + 7 + 12 = _____
8. 13 + 418 + 7 + 4 = _____

Write About It

How did you solve problem 12?
# Make Easy Numbers Using 10 and 100

To make easy numbers, first multiply numbers that result in either 10 or 100. Then multiply the rest of the numbers in the equation.

For example:

\[
2 \times 9 \times 5 = (2 \times 5) \times 9 = 10 \times 9 = 90 \
\]

## Directions:
Make easy numbers to solve the problems below. Draw a line to match the problem to the answer.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. (2 \times 9 \times 5) =</td>
<td>a. 300</td>
</tr>
<tr>
<td>2. (10 \times 3 \times 10) =</td>
<td>b. 800</td>
</tr>
<tr>
<td>3. (5 \times 13 \times 2) =</td>
<td>c. 250</td>
</tr>
<tr>
<td>4. (2 \times 5 \times 37) =</td>
<td>d. 600</td>
</tr>
<tr>
<td>5. (50 \times 7 \times 2) =</td>
<td>e. 700</td>
</tr>
<tr>
<td>6. (4 \times 8 \times 25) =</td>
<td>f. 90</td>
</tr>
<tr>
<td>7. (50 \times 9 \times 2) =</td>
<td>g. 500</td>
</tr>
<tr>
<td>8. (5 \times 5 \times 5 \times 2) =</td>
<td>h. 370</td>
</tr>
<tr>
<td>9. (2 \times 2 \times 5 \times 3) =</td>
<td>i. 60</td>
</tr>
<tr>
<td>10. (2 \times 10 \times 5 \times 5) =</td>
<td>j. 900</td>
</tr>
<tr>
<td>11. (1 \times 2 \times 4 \times 2 \times 5) =</td>
<td>k. 130</td>
</tr>
<tr>
<td>12. (2 \times 3 \times 5 \times 4 \times 5) =</td>
<td>l. 80</td>
</tr>
</tbody>
</table>
MENTAL-MATH STRATEGIES: BREAKING UP NUMBERS

Using Patterns of 10

Directions: To solve the problems below, break up the numbers into groups of 10. See the examples here.

Examples:

<table>
<thead>
<tr>
<th>23 + 30</th>
<th>87 – 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Break up 30 into</td>
<td>Break up 20 into</td>
</tr>
<tr>
<td>10 + 10 + 10, or 23 + 10 + 10</td>
<td>10 – 10, or 87 – 10 – 10</td>
</tr>
<tr>
<td>Count forward by 10s:</td>
<td>Count backward by 10s:</td>
</tr>
<tr>
<td>23, 33, 43, 53</td>
<td>87, 77, 67</td>
</tr>
<tr>
<td>23 + 30 = 53</td>
<td>87 – 20 = 67</td>
</tr>
</tbody>
</table>

1. 42 + 20 = ________ 10. 487 – 50 = ________
2. 87 – 20 = ________ 11. 599 – 60 = ________
3. 63 – 30 = ________ 12. 614 + 40 = ________
4. 21 + 40 = ________ 13. 832 + 30 = ________
5. 50 + 30 = ________ 14. 765 – 30 = ________
6. 82 – 20 = ________ 15. 1,425 + 50 = ________
7. 42 + 40 = ________ 16. 3,214 + 60 = ________
8. 111 + 50 = ________ 17. 5,555 – 50 = ________
9. 133 – 30 = ________ 18. 7,892 – 40 = ________

Write About It

Can you think of an even faster way to add or subtract tens numbers?
MENTAL-MATH STRATEGIES: BREAKING UP NUMBERS

Breaking Up Numbers Is Easy to Do!

Directions: Solve each problem by breaking up numbers into easier numbers. Then regroup them for easier addition and subtraction. Look at the examples here.

Examples:

<table>
<thead>
<tr>
<th>32 + 47</th>
<th>32 + 47</th>
<th>65 – 23</th>
</tr>
</thead>
<tbody>
<tr>
<td>= (30 + 2) + (40 + 7)</td>
<td>= (30 + 40) + (2 + 7)</td>
<td>= 65 – 20 – 3</td>
</tr>
<tr>
<td>= (32 + 40) + 7</td>
<td>= 72 + 7</td>
<td>= 45 – 3</td>
</tr>
<tr>
<td>= 79</td>
<td>= 79</td>
<td>= 42</td>
</tr>
</tbody>
</table>

1. 41 + 37 = ______  11. 78 – 43 = ______  
2. 86 + 13 = ______  12. 65 – 32 = ______  
3. 55 + 43 = ______  13. 49 – 36 = ______  
4. 23 + 15 = ______  14. 56 – 25 = ______  
5. 37 + 22 = ______  15. 76 – 41 = ______  
6. 74 + 25 = ______  16. 59 – 36 = ______  
7. 62 + 47 = ______  17. 37 – 21 = ______  
8. 46 + 43 = ______  18. 45 – 24 = ______  
9. 81 + 14 = ______  19. 68 – 43 = ______  
10. 64 + 35 = ______  20. 87 – 62 = ______
**MENTAL-MATH STRATEGIES: BREAKING UP NUMBERS**

## Breaking Up for Multiplication and Division

**Directions:** Solve each problem by breaking up numbers. Then regroup the numbers for easier multiplication and division. Look at the multiplication and division examples here.

### Examples:

<table>
<thead>
<tr>
<th>Multiplication</th>
<th>Division</th>
</tr>
</thead>
<tbody>
<tr>
<td>$4 \times 12$</td>
<td>$36 \div 4$</td>
</tr>
<tr>
<td>$= 4 \times (10 + 2)$</td>
<td>$= (20 + 16) \div 4$</td>
</tr>
<tr>
<td>$= (4 \times 10) + (4 \times 2)$</td>
<td>$= (20 \div 4) + (16 \div 4)$</td>
</tr>
<tr>
<td>$= 40 + 8$</td>
<td>$= 5 + 4$</td>
</tr>
<tr>
<td>$= 48$</td>
<td>$= 9$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Multiplication</th>
<th>Division</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3 \times 56$</td>
<td>$56 \div 4$</td>
</tr>
<tr>
<td>$= 3 \times (50 + 6)$</td>
<td>$= (40 + 16) \div 4$</td>
</tr>
<tr>
<td>$= (3 \times 50) + (3 \times 6)$</td>
<td>$= (40 \div 4) + (16 \div 4)$</td>
</tr>
<tr>
<td>$= 150 + 18$</td>
<td>$= 10 + 4$</td>
</tr>
<tr>
<td>$= 168$</td>
<td>$= 14$</td>
</tr>
</tbody>
</table>

### Write About It

Explain what shortcuts you used for one of the problems.
MENTAL–MATH STRATEGIES: COMPENSATION

10 Is a Friend!

Directions: Solve the problems below by using compensation. Make tens to help you solve each problem. To make a ten, subtract from one number and add it to the other. Look at the examples below.

Here are some number combinations for which a ten can easily be made:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8 (+2)</td>
<td>10</td>
<td>5 (–2)</td>
</tr>
<tr>
<td>+ 5</td>
<td>+ 3</td>
<td>+ 10</td>
</tr>
<tr>
<td>13</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9 (+1)</td>
<td>10</td>
<td>7 (–1)</td>
</tr>
<tr>
<td>+ 7</td>
<td>+ 6</td>
<td>+ 10</td>
</tr>
<tr>
<td>16</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7 (–2)</td>
<td>5</td>
<td>8 (+2)</td>
</tr>
<tr>
<td>+ 8</td>
<td>+ 10</td>
<td>+ 10</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. 9
   + 8
   ___

2. 4
   + 7
   ___

3. 6
   + 8
   ___

4. 4
   + 9
   ___

5. 6
   + 7
   ___

6. 4
   + 8
   ___

7. 9
   + 6
   ___

8. 7
   + 5
   ___

9. 3
   + 8
   ___

10. 9
    + 5
    ___
9 Is Fine!

Look at the numbers being added below:

Examples:

\[
\begin{array}{ccc}
  \text{9} & + & 3 \\
  \hline
  \text{12} \\
\end{array}
\]

\[
\begin{array}{ccc}
  \text{9} & + & 5 \\
  \hline
  \text{14} \\
\end{array}
\]

\[
\begin{array}{ccc}
  \text{8} & + & 9 \\
  \hline
  \text{17} \\
\end{array}
\]

\[
\begin{array}{ccc}
  \text{4} & + & 9 \\
  \hline
  \text{13} \\
\end{array}
\]

What do you notice about the number being added to 9 and the ones-place digit in the answer? Make up a rule for adding 9 to a number and write it in the rule box at right.

Here’s My Rule

**Directions:** Complete problems 1–5 by filling in the ones-place digit in the circle. In problems 6–10, solve the problems using your new rule.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>9</td>
<td>+</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>2</td>
<td>+</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>9</td>
<td>+</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>7</td>
<td>+</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>9</td>
<td>+</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>9</td>
<td>+</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>9</td>
<td>+</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>9</td>
<td>+</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>2</td>
<td>+</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>4</td>
<td>+</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>
MENTAL-MATH STRATEGIES: COMPENSATION

Strategies for Adding 9 to a Number

Ms. Sousa: Adding 9 to a number is really simple.
Tyrone: Really, Ms. Sousa? Tell me more about it.
Ms. Sousa: OK, Tyrone. Watch what I write on the board. All of these examples can be done mentally.

27 + 9 = 36
483 + 9 = 492
756 + 9 = 765

Lattifa: Oh! Oh! Ms. Sousa, I see what you did to add those numbers quickly and mentally!

Ms. Sousa: Great, Lattifa! Please explain what you think I did.
Lattifa: You added 10 to the 27 and then took 1 away. You did the same thing with the others—you added 10 and subtracted 1.
Juan: I just did the endings. For example, with 27 and 9, I add the 7 and 9 and I know it is 16. I keep the 6 and then jump to the next tens number, which is a 3. That gives me 36.
Ms. Sousa: Very good! Both strategies work beautifully.

Directions: Add 9 to the numbers below. Write your answers in the space.

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Write About It
Explain the strategy you used to solve the problems.
**Easy Numbers Make Happy Faces!**

**Directions:** Look at the addition problems below. See how you can make easy numbers by subtracting from one number and adding the same amount to the other? On the next page, fill in the eyes in the happy faces with easier numbers. Then solve the problems and write the correct answers in the space next to the happy face.

**Add: 13 + 9**

\[
13 + 9 = 12 + 10 = 22
\]

Subtract 1 from 13 and add it to 9 to make 10.

12 + 10 is easier!

The answer is 22.

**Add: 12 + 36**

\[
12 + 36 = 10 + 38 = 48
\]

Subtract 2 from 12 to make 10, and add it to 36.

10 + 38 is easier!

The answer is 48.
Easy Numbers Make Happy Faces!

1. \(46 + 19\) = \(45 + \) blank = _____

2. \(21 + 63\) = blank + 64 = _____

3. \(23 + 44\) = 20 + blank = _____

4. \(72 + 21\) = blank + blank = _____

5. \(67 + 12\) = blank + blank = _____

6. \(14 + 81\) = blank + blank = _____
Train Your Eyes to Memorize

Directions: Look at the first number below for about 4 seconds. Then cover it with your hand or a piece of paper. In the blanks next to the number, write the number you remember seeing. Do the same for the rest of the numbers. Do only one number at a time.

347  __  __  __
439  __  __  __
3,621 __  __  __  __
5,556 __  __  __  __
13,579 __  __  __  __  __
87,592 __  __  __  __  __
37,738 __  __  __  __  __
69,971 __  __  __  __  __
132,156 __  __  __  __  __  __
261,008 __  __  __  __  __  __
402,619 __  __  __  __  __  __
796,215 __  __  __  __  __  __

On Your Own
Repeat the activity, except this time write the numbers backward.

Write About It
What numbers do you use almost every day that you have to memorize?

________________________
________________________
________________________
________________________
________________________
## One-Hundred Chart

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<td>93</td>
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<td>95</td>
<td>96</td>
<td>97</td>
<td>98</td>
<td>99</td>
<td>100</td>
</tr>
</tbody>
</table>
Directions: Use the One-Hundred Chart on page 21 to answer the questions below.

1. Notice that the first row contains numbers ending in 1, 2, 3, 4, 5, 6, 7, 8, 9, and 0. Does the second row have the same pattern? What about row 3? What about each of the remaining rows?

2. Look at the first column. What number appears in each number in the column? Is there a pattern in the column?

3. Look at the second column. What number appears in each number in the column?

4. Are there even-number columns and odd-number columns? Which ones are even? Which ones are odd?

5. If you count by twos starting with 2, are the numbers you count odd or even? What if you started with 3 and counted by twos? Are the numbers you count odd or even?

6. Look at the chart diagonally, going from 1 to 12 to 23, etc. What pattern do you see?

7. Look at the column that starts with 8. From there, count by 10s. For example: 8, 18, 28. How much more is the number below any given number on the chart? Why would you say that counting downward is like counting by 10s? What about counting upward?

8. Starting with 5, count nine spaces more. What number do you land on? Continue to the end of the chart. What pattern do you notice?

9. Starting with 8, count nine spaces more. What number do you land on? Continue to the end of the chart. What pattern do you notice?

10. Find all of the double-digit numbers, such as 11, 22, 33. What pattern do they make?

Write About It

Of all the patterns that you have seen on the One-Hundred Chart, which one interests you the most?
Follow the Pattern

Directions: Look at the numbers in each column below. Can you figure out the pattern? Complete each column, using what you remember of the One-Hundred Chart.
No Looking! What’s Missing?

**Directions:** Use what you remember of the One-Hundred Chart to fill in the squares below with the correct numbers. Look at the example here.

**Example:**

```
43 44 45
51 52 53
```

1. 74

2. 40

3. 85

4. 99

5. 24

6. 69

7. 70

8. 95

9. 13

10. 13
Directions: Use mental math and your knowledge of the One-Hundred Chart to solve the problems below.

<table>
<thead>
<tr>
<th>What number comes</th>
<th>What number comes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 1 after 20? 1</td>
<td>21. 3 before 5?  5</td>
</tr>
<tr>
<td>2. 2 after 44? 2</td>
<td>22. 2 before 8?  6</td>
</tr>
<tr>
<td>3. 3 after 52? 3</td>
<td>23. 5 before 12? 7</td>
</tr>
<tr>
<td>4. 4 after 34? 4</td>
<td>24. 10 before 15? 9</td>
</tr>
<tr>
<td>5. 5 after 67? 5</td>
<td>25. 2 before 22?  8</td>
</tr>
<tr>
<td>6. 2 after 75? 6</td>
<td>26. 2 before 18?  7</td>
</tr>
<tr>
<td>7. 4 after 91? 7</td>
<td>27. 8 before 38?  6</td>
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<td>8. 6 after 80? 8</td>
<td>28. 5 before 30?  5</td>
</tr>
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<td>9. 8 after 96? 9</td>
<td>29. 7 before 49?  9</td>
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<tr>
<td>10. 9 after 100? 9</td>
<td>30. 1 before 51?  1</td>
</tr>
<tr>
<td>11. 3 after 50? 3</td>
<td>31. 5 before 76?  4</td>
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<tr>
<td>12. 5 after 25? 5</td>
<td>32. 4 before 50?  5</td>
</tr>
<tr>
<td>13. 7 after 87? 7</td>
<td>33. 3 before 63?  2</td>
</tr>
<tr>
<td>14. 9 after 61? 9</td>
<td>34. 5 before 72?  3</td>
</tr>
<tr>
<td>15. 8 after 97? 8</td>
<td>35. 4 before 88?  4</td>
</tr>
<tr>
<td>16. 3 after 72? 3</td>
<td>36. 8 before 68?  5</td>
</tr>
<tr>
<td>17. 5 after 87? 5</td>
<td>37. 7 before 70?  5</td>
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<tr>
<td>18. 7 after 53? 7</td>
<td>38. 9 before 81?  8</td>
</tr>
<tr>
<td>19. 8 after 94? 8</td>
<td>39. 6 before 95?  7</td>
</tr>
<tr>
<td>20. 10 after 100? 10</td>
<td>40. 10 before 98? 9</td>
</tr>
</tbody>
</table>

Write About It

How did you use mental math to figure out the number that comes 8 after 96?

__________

__________

__________

__________
Directions: List the next five numbers in each pattern below. Count by 2s. We started the first one for you.

1. 2, 4, 6, ___, ___, ___, ___, ___, ___, ___, 8, 10
2. 20, 22, 24, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, 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Directions: List the next five numbers in each pattern below. Count backward by 2s. We started the first one for you.

1. 16, 14, 12, 10, 8, ___ ,___ ,___ ,___ ,___
2. 40, 38, 36, ___ ,___ ,___ ,___ ,___
3. 88, 86, 84, ___ ,___ ,___ ,___ ,___
4. 100, 98, 96, ___ ,___ ,___ ,___ ,___
5. 108, 106, 104, ___ ,___ ,___ ,___ ,___
6. 150, 148, 146, ___ ,___ ,___ ,___ ,___
7. 17, 15, 13, ___ ,___ ,___ ,___ ,___
8. 21, 19, 17, ___ ,___ ,___ ,___ ,___
9. 37, 35, 33, ___ ,___ ,___ ,___ ,___
10. 65, 63, 61, ___ ,___ ,___ ,___ ,___
Ladders and Chutes

**Directions:** Count by 10s to climb the ladders and slide down the chutes.
Follow the Winding Brick Road!

Directions: Look at the winding roads below. Each one increases or decreases by 25 or 50. Fill in the spaces in each road.
Lucky 7

Directions: There are 19 numbers between 0 and 100 that have a 7 in them. List all of those numbers below.

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

Write About It
How many 7s in all did you find?
Getting to the Price Is Right

Do this activity with a classmate. With your partner, study the shopping list below. Next to each item, you’ll find its cost. Take the list and test your partner to see if he or she remembers the cost of each item.

Ask: How much does the TV set cost? Let your partner keep guessing the price until getting the correct answer. Help your partner by saying whether the guess is lower or higher than the answer.

Let the exchange continue until your partner gives the correct answer. Then move on to the next item. When you’ve gone through the entire list, work with your partner to change the price of each item. Then, give your partner the list and switch places.

Example:

Student 1: How much does the TV cost?
Student 2: $300
Student 1: No. The price is lower.
Student 2: $225
Student 1: Higher.

TV set $268.00
Crayon set $3.25
Bar of soap $2.19
Sneakers $24.95
1-pound jar of peanut butter $2.49
1 gallon of gas $1.41
1 gallon of milk $2.79
Sweater $13.50
Doubles Are No Trouble!

Directions: Find the sums of the doubled numbers below.

1. $5 + 5 = \underline{\hspace{1cm}}$
2. $2 + 2 = \underline{\hspace{1cm}}$
3. $7 + 7 = \underline{\hspace{1cm}}$
4. $3 + 3 = \underline{\hspace{1cm}}$
5. $1 + 1 = \underline{\hspace{1cm}}$
6. $4 + 4 = \underline{\hspace{1cm}}$
7. $8 + 8 = \underline{\hspace{1cm}}$
8. $6 + 6 = \underline{\hspace{1cm}}$
9. $9 + 9 = \underline{\hspace{1cm}}$

The sums below are the results of doubled numbers. Fill in the blanks with the doubled numbers.

10. $\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = 8$
11. $\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = 4$
12. $\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = 18$
13. $\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = 10$
14. $\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = 16$
15. $\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = 6$
16. $\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = 2$
17. $\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = 14$
18. $\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = 12$
Double the Number, Double the Fun!

Directions: Follow the arrows and double each number as you move along. We did the first one for you.
E-Z Strategy Using Doubles

Did you ever try to remember the answer to $8 + 7$ and couldn’t remember what it was? Here is a strategy that can help you remember the answer:

Use doubles to help learn other facts. For example: use $6 + 6 = 12$ to help learn $6 + 7 = 13$ and $6 + 5 = 11$.

If you know that $6 + 6 = 12$, then it's easy to figure out that $6 + 7 = 13$ because 7 is one more than 6.

You’ll also know that $6 + 5 = 11$ because 5 is one less than 6.

## Directions: Solve each problem below.

| 1. $8 + 8 = \underline{\hspace{2cm}}$   | 4. $9 + 9 = \underline{\hspace{2cm}}$   |
| 8 + 9 = \underline{\hspace{2cm}}   | $9 + 8 = \underline{\hspace{2cm}}$   |
| 8 + 7 = \underline{\hspace{2cm}}   | $9 + 10 = \underline{\hspace{2cm}}$   |
| 2. $7 + 7 = \underline{\hspace{2cm}}$   | 5. $6 + 6 = \underline{\hspace{2cm}}$   |
| $7 + 6 = \underline{\hspace{2cm}}$   | $6 + 5 = \underline{\hspace{2cm}}$   |
| $7 + 8 = \underline{\hspace{2cm}}$   | $6 + 7 = \underline{\hspace{2cm}}$   |
| 3. $5 + 5 = \underline{\hspace{2cm}}$   | 6. $10 + 10 = \underline{\hspace{2cm}}$   |
| $5 + 6 = \underline{\hspace{2cm}}$   | $10 + 11 = \underline{\hspace{2cm}}$   |
| $5 + 4 = \underline{\hspace{2cm}}$   | $10 + 9 = \underline{\hspace{2cm}}$   |
You Can Half It!

Directions: Answer the questions below.

1. What is half of 4?

2. What is half of 6?

3. What is half of 10?

4. What is half of 20?

5. What is half of 60?

6. What is half of 80?

7. What is half of 100?

8. What is half of 400?

9. What is half of 600?

10. What is half of 800?
How Many Beans Are in the Pot?

Say there are 4 beans in the first pot. There are a total of 7 beans. How many beans are in the second pot below? Figure out what’s in the second pot by looking at this drawing:

\[ 4 + \underline{?} = 7 \]

Did you figure out the answer? Here’s a strategy we used:
Subtract the number of beans in the first pot from the total number of beans (7 – 4). The answer is the number of beans in the second pot (7 – 4 = 3).
So, there are 3 beans in the second pot.

**Directions:** How many beans are in the blank pots below? Fill in the correct number of beans in each pot.

1. \[ 2 + \underline{?} = 7 \]
2. \[ \underline{?} + 4 = 9 \]
3. \[ \underline{?} + 6 = 11 \]
4. \[ \underline{?} + 7 = 12 \]
5. \[ \underline{?} + 9 = 16 \]
6. \[ 8 + \underline{?} = 17 \]
7. \[ 5 + \underline{?} = 13 \]
8. \[ 7 + \underline{?} = 14 \]
9. \[ \underline{?} + 9 = 12 \]
10. \[ \underline{?} + 6 = 13 \]
**What’s the Missing Number?**

**Directions:** Find the missing number to complete each addition fact. See the example below.

Example:

When you see 3, 4, 7, think \(3 + 4 = 7\).
So when you see 3, ___, 7, think \(3 + \___ = 7\).
The missing number is 4.

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<td>1. 5, _____, 10</td>
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<td>13. _____, 7, 15</td>
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<td>4. 6, _____, 10</td>
<td>14. 4, _____, 11</td>
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<td>5. _____, 7, 9</td>
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<td>6. 4, _____, 12</td>
<td>16. 8, _____, 13</td>
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<td>7. _____, 8, 12</td>
<td>17. _____, 9, 18</td>
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<tr>
<td>10. 3, _____, 12</td>
<td>20. 8, _____, 17</td>
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</table>
It’s All in the Number Family

Directions: Write in the missing three family members for each equation below. Before you start, look at the examples.

Examples:

Here is the number family for $3 + 4 = 7$:
- $3 + 4 = 7$
- $4 + 3 = 7$
- $7 - 3 = 4$
- $7 - 4 = 3$

Here is the number family for $9 + 5 = 14$:
- $9 + 5 = 14$
- $5 + 9 = 14$
- $14 - 9 = 5$
- $14 - 5 = 9$

1. $5 + 4 = 9$
- __________
- __________
- __________
- __________
- __________
- __________
- $13 - 7 = 6$
- __________
- __________
- __________
- __________

2. $3 + 8 = 11$
- __________
- __________
- __________
- __________
- __________
- __________
- __________
- __________
- __________
- __________

3. $4 + 6 = 10$
- __________
- __________
- __________
- __________
- __________
- __________
- __________
- __________
- __________
- __________

4. _________
- __________
- __________
- __________
- $12 - 4 = 8$
- __________
- __________
- __________
- __________
- __________

7. $9 + 7 = 16$
- __________
- __________
- __________
- __________
- __________

10. _________
- __________
- __________
- __________
- __________
- __________
- __________
- $15 - 8 = 7$
- __________
- __________
- __________

11. $8 + 5 = 13$
- __________
- __________
- __________
- __________
- __________
- __________
- __________
- __________
- __________

12. _________
- __________
- __________
- __________
- __________
- __________
- __________
- __________
- __________
- $11 - 4 = 7$
Here’s an addition-and-subtraction flash card:

The number at the top of the triangle is the sum of the two numbers along the bottom of the triangle: 14 = 6 + 8

Directions: Complete the triangles below by filling in the missing number. Notice that some of the triangles are upside down.

On Your Own

When you’ve finished filling in the missing number, cut out the triangles, including the sample above. For more addition practice, cover the top number of a completed triangle with your thumb. Have a classmate guess the number hidden by your thumb. For subtraction practice, cover one of the corner numbers, and have a classmate guess the hidden number.
**x/÷ Flash Cards**

Here’s a multiplication-and-division flash card:

The number at the top of the triangle is the product of the two numbers along the bottom: $18 = 3 \times 6$.

The number in either the left corner or right corner of the triangle is the quotient of the number at the top of the triangle divided by the number at the other corner: $18 \div 3 = 6$ and $18 \div 6 = 3$.

**Directions:** Complete the triangles below by filling in the missing number. Notice that some of the triangles are upside down.

**On Your Own**

When you’ve finished filling in the missing number, cut out the triangles, including the sample above. For more multiplication practice, cover the top number of a completed triangle with your thumb. Have a classmate guess the number hidden by your thumb. For division practice, cover one of the corner numbers, and have a classmate guess the hidden number.
Do n’t Carry That 10!

Say you’re adding a one-digit number, like 5, to a two-digit number, like 27. You probably add the ones column first, then carry over to the tens column. Try this mental-math strategy of jumping to the next 10 instead:

Take 27 + 5:

First, add 7 + 5 = 12. Instead of 12, think 2 (the ones column). Then, think of the next 10s: 20 → 30. The final answer is 32.

Directions: Mentally add the number inside the circle to each of the numbers outside. Instead of carrying over, jump to the next 10s.
## Adding 100s And 1,000s

**Directions:** Add 100 to each of the numbers below. Write the answers in the spaces. We did the first one for you.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>32</td>
<td>132</td>
</tr>
<tr>
<td>2.</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>67</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>107</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>313</td>
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<tr>
<td>7.</td>
<td>601</td>
<td></td>
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<tr>
<td>8.</td>
<td>728</td>
<td></td>
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<tr>
<td>9.</td>
<td>899</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>524</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>900</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>2,614</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>1,405</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>8,888</td>
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<tr>
<td>15.</td>
<td>5,421</td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>5,015</td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>4,900</td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>3,027</td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>1,111</td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>6,490</td>
<td></td>
</tr>
</tbody>
</table>

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Add 1,000 to each of the numbers below.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>21.</td>
<td>37</td>
</tr>
<tr>
<td>22.</td>
<td>195</td>
</tr>
<tr>
<td>23.</td>
<td>440</td>
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<tr>
<td>24.</td>
<td>99</td>
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<td>25.</td>
<td>457</td>
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<tr>
<td>26.</td>
<td>53</td>
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<tr>
<td>27.</td>
<td>4,516</td>
</tr>
<tr>
<td>28.</td>
<td>5,041</td>
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<tr>
<td>29.</td>
<td>6,507</td>
</tr>
<tr>
<td>30.</td>
<td>3,007</td>
</tr>
<tr>
<td>31.</td>
<td>1,234</td>
</tr>
<tr>
<td>32.</td>
<td>3,773</td>
</tr>
</tbody>
</table>
Hit the Target Number

Directions: Look at the target number in each bull’s-eye. Then fill in the blank with the missing number that will add up to the target number. See the example:

Example:

\[
\begin{array}{c}
50 + 50 \\
30 + 70 \\
45 + 55
\end{array}
\]

100

1. 200 + ___
250 + ___
150 + ___

2. 100 + ___

3. 800 + ___
100 + ___

600 + ___
50 + ___

550 + ___
300 + ___

4. 825 + ___
750 + ___
725 + ___
700 + ___

5. 690 + ___
680 + ___
650 + ___
675 + ___

600 + ___
**NUMBER FACTS**

**Subtracting From 100 Is Easy!**

**Brian:** I wish there were an easy way to subtract numbers from 100.

**Bella:** There is!

**Brian:** Really?

**Bella:** Yes, and I can teach it to you in a minute!

**Brian:** How are you going to do that?

**Bella:** There's a pattern. Let me show you. I'll write some problems on the board. See if you can find the pattern.

<table>
<thead>
<tr>
<th>Examples:</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 - 38</td>
</tr>
<tr>
<td>62</td>
</tr>
</tbody>
</table>

**Brian:** I see part of the pattern. For the tens-place number, you think 3 plus what number makes 9. The answer is 6. But how do you get the ones-place number so quickly?

**Bella:** Easy! Just think 8 plus what number makes 10. The answer is 2.

**Brian:** Wait, Bella. Let me do the next example. For the tens digit, 5 plus what number makes 9? The answer is 4. Then, for the ones digit, 3 plus what number makes 10? The answer is 7. The final answer then is 4 and 7, or 47.

**Bella:** Does the pattern work for the next two examples?

**Brian:** It sure does! See for yourself.

**Write About It**

Explain how Brian got 14 for the third problem and 76 for the last problem.
### Subtracting From 100 Is Easy – Part 2

**Directions:** Use the pattern strategy from page 44 to solve the subtraction problems below.

<p>| | | |</p>
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<thead>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>100</td>
<td>- 43</td>
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<tr>
<td>2.</td>
<td>100</td>
<td>- 51</td>
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<tr>
<td>3.</td>
<td>100</td>
<td>- 87</td>
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<tr>
<td>4.</td>
<td>100</td>
<td>- 68</td>
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<tr>
<td>5.</td>
<td>100</td>
<td>- 35</td>
</tr>
<tr>
<td>6.</td>
<td>100</td>
<td>- 22</td>
</tr>
<tr>
<td>7.</td>
<td>100</td>
<td>- 17</td>
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<tr>
<td>8.</td>
<td>100</td>
<td>- 39</td>
</tr>
<tr>
<td>9.</td>
<td>100</td>
<td>- 71</td>
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<tr>
<td>10.</td>
<td>100</td>
<td>- 58</td>
</tr>
<tr>
<td>11.</td>
<td>100</td>
<td>- 26</td>
</tr>
<tr>
<td>12.</td>
<td>100</td>
<td>- 77</td>
</tr>
</tbody>
</table>
SKILL BUILDERS

Pick a Pair of Pears

Directions: Fill in the blanks with a number from a pear at right. You can use each number more than once.

1. $15 + _____ = 25$
2. $16 + _____ = 46$
3. $5 + _____ = 75$
4. $_____ + 30 = 40$
5. $_____ + 43 = 93$
6. $31 + _____ = 61$
7. $29 + _____ = 79$
8. $_____ + _____ = 80$
9. $_____ + _____ = 60$
10. $_____ + _____ = 100$
11. $_____ + _____ = 100$
12. $_____ + _____ = 120$
13. $_____ + _____ = 120$
14. $_____ + _____ = 160$

Write About It

Tell why it’s impossible to pick 2 pears to make 75.
**Number Chain Links**

**Directions:** Follow the numbers and signs on each chain link, then write the correct answer in the last, empty link.

1. \(4 + 2 + 5 - 2 = \) 9
2. \(3 + 2 + 4 - 7 = \)
3. \(10 - 6 + 4 - 2 = \)
4. \(10 + 20 + 5 - 10 = \)
5. \(15 - 7 + 8 + 4 = \)
6. \(25 - 5 + 10 - 8 = \)
7. \(40 - 8 - 2 - 10 = \)
8. \(80 + 20 + 200 + 300 = \)

**On Your Own**

On a separate sheet of paper, make your own number chain links.
Follow the Finger

Directions: Practice addition and subtraction with the following activity: Point to one of the numbers in the chart below. Then, point to either the plus sign or the minus sign. Next, point to a second number in the chart. What’s the answer? For example, point to the number 4. Then, point to the plus sign. Now, point to the number 3. You’ve created the problem 4 + 3. The answer is 7.

On Your Own
Make this activity more challenging by adding or subtracting more than three numbers. You can also replace the plus and minus signs with the multiplication (x) and division (÷) signs.
### SKILL BUILDERS

#### Mental Math Can Save Time

**Directions:** Which of the problems below can you solve in your head? Circle the ones you can do mentally, and then write in the answers.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>100</td>
<td></td>
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<td></td>
<td>– 1</td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
<td>99</td>
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<td></td>
<td>+ 1</td>
<td></td>
<td></td>
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<tr>
<td>3.</td>
<td>92</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>+ 2</td>
<td></td>
<td></td>
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<tr>
<td>4.</td>
<td>98</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>+ 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>150</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>+ 151</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>1,000</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>– 300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>– 90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>+ 44</td>
<td></td>
<td></td>
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<tr>
<td>9.</td>
<td>100</td>
<td></td>
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<tr>
<td></td>
<td>+ 400</td>
<td></td>
<td></td>
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<tr>
<td>10.</td>
<td>400</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>+ 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>– 60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>125</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>+ 25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>– 20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>100</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>– 50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>50</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>+ 50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>1,000</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>– 200</td>
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<td></td>
</tr>
</tbody>
</table>

**Write About It**

Explain how you solved problem #16 mentally.
Letters Have Values, Too!

Directions: The chart here gives number values to letters. Use the chart to figure out the value of the words listed below.

Example:

\[ \text{f a c e} \]
\[ f = 25, a = 10, c = 50, e = 100 \]

Add the numbers in your head. One way is to add numbers to make easy numbers: \(25 + 50 = 75\). Then, add \(10: 75 + 10 = 85\). Finally, add \(100: 85 + 100 = 185\). Or, you can add the numbers from largest to smallest to get the answer: \(100 + 50 + 25 + 10 = 185\).

<table>
<thead>
<tr>
<th>Letter</th>
<th>Number Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>10</td>
</tr>
<tr>
<td>b</td>
<td>25</td>
</tr>
<tr>
<td>c</td>
<td>50</td>
</tr>
<tr>
<td>d</td>
<td>10</td>
</tr>
<tr>
<td>e</td>
<td>100</td>
</tr>
<tr>
<td>f</td>
<td>25</td>
</tr>
<tr>
<td>g</td>
<td>50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Word</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. fad</td>
<td></td>
</tr>
<tr>
<td>2. add</td>
<td></td>
</tr>
<tr>
<td>3. ebb</td>
<td></td>
</tr>
<tr>
<td>4. fade</td>
<td></td>
</tr>
<tr>
<td>5. ace</td>
<td></td>
</tr>
<tr>
<td>6. cad</td>
<td></td>
</tr>
<tr>
<td>7. deaf</td>
<td></td>
</tr>
<tr>
<td>8. fed</td>
<td></td>
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<tr>
<td>9. café</td>
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</tr>
<tr>
<td>10. deed</td>
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<td>11. gab</td>
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<td>12. fee</td>
<td></td>
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<td>13. bag</td>
<td></td>
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<td>14. dead</td>
<td></td>
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<td>15. gag</td>
<td></td>
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<tr>
<td>16. feed</td>
<td></td>
</tr>
<tr>
<td>17. dad</td>
<td></td>
</tr>
<tr>
<td>18. bee</td>
<td></td>
</tr>
<tr>
<td>19. cab</td>
<td></td>
</tr>
<tr>
<td>20. bad</td>
<td></td>
</tr>
</tbody>
</table>

On Your Own

Make up your own letter-values activity on a separate sheet of paper. Remember to use numbers that can easily be added mentally.
SKILL BUILDERS

Calculate on Your Calculator

Directions: Look at how the number changes in each box. Circle the plus or minus sign to show whether you add or subtract to get the new number. Finally, write the number that you add or subtract to get the new number in the space. Look at the example below.

Example: To change \(346\) to \(376\),
\[+ / - \ 30\]

1. To change \(346\) to \(347\),
   \[+ / - \ \_\]

2. To change \(632\) to \(652\),
   \[+ / - \ \_\]

3. To change \(9876\) to \(9976\),
   \[+ / - \ \_\]

4. To change \(5123\) to \(5103\),
   \[+ / - \ \_\]

5. To change \(3778\) to \(1778\),
   \[+ / - \ \_\]

6. To change \(4295\) to \(7295\),
   \[+ / - \ \_\]

7. To change \(1243\) to \(1249\),
   \[+ / - \ \_\]

8. To change \(6820\) to \(6880\),
   \[+ / - \ \_\]

9. To change \(9876\) to \(9800\),
   \[+ / - \ \_\]

10. To change \(4378\) to \(4078\),
    \[+ / - \ \_\]

Write About It

Explain how you solved problem #9.
**Exercise Your Number Sense**

**Directions:** Change each number below by mentally adding and subtracting. We did the first one for you. Finish one column completely before you move on to the next.

<table>
<thead>
<tr>
<th>+ 10</th>
<th>− 10</th>
<th>+ 5</th>
<th>− 5</th>
<th>+ 9</th>
<th>− 9</th>
<th>+ 11</th>
<th>− 11</th>
<th>+ 100</th>
<th>+ 99</th>
<th>+ 1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>34</td>
<td>14</td>
<td>29</td>
<td>19</td>
<td>33</td>
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<td>82</td>
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<td>51</td>
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<td>90</td>
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<td>105</td>
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</table>

**Write About It**

What strategy did you use to find the answer to 90 minus 11?
### Directions:
For each number, circle the equation with the largest answer. You should be able to explain why you chose your answer.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>
| 1. | $35 + 1$ |   | $8. | $100 + 30$
|   | $35 + 0$ |   | $19 + 5$ | $100 + 20$
|   | $35 + 2$ |   | $17 + 5$ | $100 + 40$
| 2. | $13 – 6$ |   |   | $9. | $95 + 5$
|   | $13 – 5$ |   | $25 + 10$ | $100 – 0$
|   | $13 – 7$ |   | $25 + 2 + 3$ | $11 + 90$
| 3. | $145 – 6$ |   | $100 – 10$ | $10. | $1,000 + 50$
|   | $145 – 16$ | $100 – 20$ | $1,000 – 50$
|   | $145 + 0$ | $100 – 30$ | $1,000 – 100$
|   | $20 + 30$ |   |   |   | $20 + 40$
|   | $20 + 20$ |   |   |   |
The Largest Number in a Diamond

**Directions:** Look at the problems and numbers in each diamond below. Circle the one that has the largest answer. Remember to solve the problems using mental math.
1. Circle the examples that have answers greater than 100.
   a. $4 \times 50$
   b. $505 \div 5$
   c. $10 \times 12$
   d. $342 - 200$
   e. $8 \times 12$

2. Circle the examples that have answers greater than 2,000.
   a. $543 + 678 + 925$
   b. $1,256 + 324$
   c. $5,000 - 4,125$
   d. $872 + 100 + 562 + 129$
   e. $3,215 - 1,214$

3. Write the number of digits (not the actual answer) that would be in the answer for each problem in the blank.
   a. $25 + 50 + 975$
   b. $345 + 50 + 692$
   c. $(3 \times 50) + 25$
   d. $25 + 50 + 25$
   e. $3,000 - 275$
   f. $5,000 - 4,526$

4. Circle the plus sign if the estimated answer is an overestimate. Circle the minus sign if the estimated answer is an underestimate.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Estimated Answer</th>
<th>Over</th>
<th>Under</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. $4 \times 39$</td>
<td>120</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>b. $501 \times 4$</td>
<td>2,000</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>c. $648 + 250$</td>
<td>1,000</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>d. $4,325 - 2,951$</td>
<td>1,000</td>
<td>+</td>
<td>-</td>
</tr>
</tbody>
</table>
Shape Up With Numbers!

**Directions:** Fill in the geometric shapes with numbers that will make each equation correct. In each problem, a shape stands for the same number in both equations. See the example below.

Example: 

\[ \triangle + \bigcirc = 12 \]
\[ \triangle - \bigcirc = 2 \]

The numbers that solve the first equation are the same numbers that solve the second equation:

\[ 7 + 5 = 12 \]
\[ 7 - 5 = 2 \]

1. \[ \square \times \triangle = 24 \]
   \[ \square + \triangle = 11 \]

2. \[ \square \times \bigcirc = 28 \]
   \[ \square - \bigcirc = 3 \]

3. \[ \bigcirc \times \bigcirc = 81 \]
   \[ \bigcirc + \bigcirc = 18 \]

4. \[ \bigcirc \times \triangle = 56 \]
   \[ \bigcirc - \triangle = 1 \]

5. \[ \triangle \times \square = 15 \]
   \[ \triangle - \square = 2 \]

6. \[ \square \times \square = 49 \]
   \[ \square - \square = 0 \]

7. \[ \bigcirc \times \square = 54 \]
   \[ \bigcirc + \square = 15 \]

8. \[ \bigtriangledown \times \square = 32 \]
   \[ \bigtriangledown - \square = 4 \]

9. \[ \bigcirc \times \square = 48 \]
   \[ \bigcirc - \square = 2 \]
**CONCENTRATION: Mental-Math Style**

**Directions:** Play this game with a friend. First, cut out the cards below. Some cards contain problems, while others have answers to those problems. Place the cards facedown in three rows on a table. With players taking turns, flip over two cards. If you turn over a card with a problem and another card with its matching answer, you get to keep both cards. Take another turn. Otherwise, turn the cards facedown again and the other player takes a turn. Keep playing until no cards remain. The person with the most matching cards wins.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td><strong>B</strong></td>
<td><strong>C</strong></td>
<td><strong>D</strong></td>
</tr>
<tr>
<td>((7 \times 6) + 5)</td>
<td>59</td>
<td>((6 \times 6) + 3)</td>
<td>49</td>
</tr>
<tr>
<td><strong>E</strong></td>
<td><strong>F</strong></td>
<td><strong>G</strong></td>
<td><strong>H</strong></td>
</tr>
<tr>
<td>27</td>
<td>((8 \times 5) + 9)</td>
<td>37</td>
<td>((7 \times 7) + 2)</td>
</tr>
<tr>
<td><strong>I</strong></td>
<td><strong>J</strong></td>
<td><strong>K</strong></td>
<td><strong>L</strong></td>
</tr>
<tr>
<td>((5 \times 4) + 7)</td>
<td>80</td>
<td>47</td>
<td>((8 \times 9) + 8)</td>
</tr>
<tr>
<td><strong>M</strong></td>
<td><strong>N</strong></td>
<td><strong>O</strong></td>
<td><strong>P</strong></td>
</tr>
<tr>
<td>39</td>
<td>((7 \times 4) + 9)</td>
<td>((9 \times 6) + 5)</td>
<td>51</td>
</tr>
</tbody>
</table>
## What’s Left?

**Directions:** When you solve the division problems here, each will have a remainder that’s equal to one of the numbers below. Write the remainder for each problem in the space provided.

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7 ÷ 2</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>6 ÷ 3</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>10 ÷ 3</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>12 ÷ 5</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>12 ÷ 6</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>7 ÷ 3</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>14 ÷ 4</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>10 ÷ 5</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>20 ÷ 6</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>15 ÷ 6</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>27 ÷ 5</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>15 ÷ 7</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>5 ÷ 2</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>16 ÷ 4</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>11 ÷ 2</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>6 ÷ 4</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>21 ÷ 5</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>10 ÷ 6</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>9 ÷ 9</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>12 ÷ 4</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>24 ÷ 5</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>14 ÷ 7</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>6 ÷ 4</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>9 ÷ 4</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>5 ÷ 3</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>13 ÷ 5</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>30 ÷ 6</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>40 ÷ 6</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>15 ÷ 3</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>25 ÷ 6</td>
<td>____</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
MONEY MATH

What’s Your Change?

Directions:
How much change will you get from $1.00 if you spend 5¢ on a piece of bubble gum? ________

How much change will you get from $1.00 if you . . .

1. 10¢
2. 80¢
3. 75¢
4. 98¢
5. 90¢
6. 8¢
7. 85¢
8. 30¢
9. 15¢
10. 50¢
11. 25¢
12. 20¢
13. 99¢
14. 94¢
15. 91¢
16. 60¢
17. 61¢
18. 40¢

Write About It
Say you have $1.00. Would you get more or less change if you spend 61¢ instead of 60¢? Explain your answer.
How Much Is in the Piggy Bank?

Directions: Six students in Mrs. Ramon’s class save money in a piggy bank. Below are the students’ piggy banks. How much does each student have in his or her piggy bank? Write your answer in the blank.

Karen’s piggy bank

Thomas’s piggy bank

Alvin’s piggy bank

Rosita’s piggy bank

Ricky’s piggy bank

Marta’s piggy bank
Calculator-Free Shopping

**Directions:** Below are items found in a grocery and their cost. Read each person’s shopping list and use mental math to figure out how much each person spent.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereal O’s</td>
<td>$2.00</td>
</tr>
<tr>
<td>Soda</td>
<td>$1.50</td>
</tr>
<tr>
<td>Milk</td>
<td>$1.25</td>
</tr>
<tr>
<td>Peanut butter</td>
<td>$1.50</td>
</tr>
<tr>
<td>Coffee</td>
<td>$3.00</td>
</tr>
<tr>
<td>Bread</td>
<td>$1.50</td>
</tr>
<tr>
<td>Chewing gum</td>
<td>$0.25</td>
</tr>
<tr>
<td>Toothpaste</td>
<td>$2.50</td>
</tr>
</tbody>
</table>

**Ken’s Shopping List**
- 2 liters of soda
- 1 carton of milk

**Total cost:**

**Olivia’s Shopping List**
- 1 jar of peanut butter
- 1 box of cereal
- 1 can of coffee
- 1 loaf of bread

**Total cost:**

**Annette’s Shopping List**
- 1 jar of peanut butter
- 1 box of cereal
- 1 carton of milk
- 1 loaf of bread

**Total cost:**

(Continued on next page)
Bella’s Shopping List
1 tube of toothpaste
1 carton of milk
1 box of cereal
Total cost: __________

Todd’s Shopping List
2 packs of chewing gum
2 liters of soda
Total cost: __________

Marianne’s Shopping List
2 boxes of cereal
2 cartons of milk
Total cost: __________

Ben’s Shopping List
2 liters of soda
2 packs of chewing gum
1 can of coffee
Total cost: __________

Brian’s Shopping List
3 cans of coffee
2 boxes of cereal
2 tubes of toothpaste
Total cost: __________

Tucker’s Shopping List
1 liter of soda
4 packs of chewing gum
1 jar of peanut butter
Total cost: __________

Write About It
Explain how you figured out how much Brian spent at the supermarket.
Directions: Each of the shoppers below has $25 to spend at a store. The store receipts show how much each person spent on the items he or she bought. Use estimation to help you decide who has enough money to pay for the purchases. Circle the names of the people who have enough money.

Write About It
How did you estimate how much Andrea spent?
### September Savings

<table>
<thead>
<tr>
<th>FAMILY MEMBER</th>
<th>NUMBER OF COINS SAVED</th>
<th>TYPE OF COIN SAVED</th>
<th>TOTAL AMOUNT SAVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Zuk</td>
<td>16</td>
<td>Half dollar (50¢)</td>
<td>$8.00</td>
</tr>
<tr>
<td>Mrs. Zuk</td>
<td>13</td>
<td>Quarter (25¢)</td>
<td>$3.25</td>
</tr>
<tr>
<td>Frannie</td>
<td>39</td>
<td>Dime (10¢)</td>
<td></td>
</tr>
<tr>
<td>Stella Ann</td>
<td>11</td>
<td>Nickel (5¢)</td>
<td></td>
</tr>
<tr>
<td>Tyrone</td>
<td>160</td>
<td>Penny (1¢)</td>
<td></td>
</tr>
</tbody>
</table>

### October Savings

<table>
<thead>
<tr>
<th>FAMILY MEMBER</th>
<th>NUMBER OF COINS SAVED</th>
<th>TYPE OF COIN SAVED</th>
<th>TOTAL AMOUNT SAVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Zuk</td>
<td>30</td>
<td>Quarter</td>
<td></td>
</tr>
<tr>
<td>Mrs. Zuk</td>
<td>10</td>
<td>Nickel</td>
<td></td>
</tr>
<tr>
<td>Frannie</td>
<td>98</td>
<td>Penny</td>
<td></td>
</tr>
<tr>
<td>Stella Ann</td>
<td>8</td>
<td>Half dollar</td>
<td></td>
</tr>
<tr>
<td>Tyrone</td>
<td>10</td>
<td>Dime</td>
<td></td>
</tr>
</tbody>
</table>

### November Savings

<table>
<thead>
<tr>
<th>FAMILY MEMBER</th>
<th>NUMBER OF COINS SAVED</th>
<th>TYPE OF COIN SAVED</th>
<th>TOTAL AMOUNT SAVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Zuk</td>
<td>25</td>
<td>Nickel</td>
<td></td>
</tr>
<tr>
<td>Mrs. Zuk</td>
<td>316</td>
<td>Penny</td>
<td></td>
</tr>
<tr>
<td>Frannie</td>
<td>10</td>
<td>Half dollar</td>
<td></td>
</tr>
<tr>
<td>Stella Ann</td>
<td>20</td>
<td>Dime</td>
<td></td>
</tr>
<tr>
<td>Tyrone</td>
<td>12</td>
<td>Quarter</td>
<td></td>
</tr>
</tbody>
</table>

### Write About It

Explain how you figured out how much 13 quarters are worth.
Unmasking Numbers

A bunch of numbers went to a masquerade ball. The host, Count Numero Uno, decided to have a contest and award a prize to any guest who could name every other guest. Each number was required to provide a clue about his or her identity. See how many numbered guests you can name using the clues provided.

<table>
<thead>
<tr>
<th>MASKED GUEST #1:</th>
<th>MASKED GUEST #6:</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 more than me would give you 10. Who am I?</td>
<td>You can name me if you multiply 6 and 8, then add 2 more to that number. Who am I?</td>
</tr>
<tr>
<td>________</td>
<td>________</td>
</tr>
</tbody>
</table>

| MASKED GUEST #2: | |
|----------------| |
| One half of me is 8. Who am I? | |
| ________ | |

| MASKED GUEST #3: | |
|----------------| |
| I am 12 more than 15. Who am I? | |
| ________ | |

| MASKED GUEST #4: | |
|----------------| |
| 20 years ago, I was 8 years old. Who am I? | |
| ________ | |

| MASKED GUEST #5: | |
|----------------| |
| I am one half of 24. Who am I? | |
| ________ | |

| MASKED GUEST #7: | |
|----------------| |
| I am 30 minus 12. Who am I? | |
| ________ | |

| MASKED GUEST #8: | |
|----------------| |
| If you know 7 x 7, then you know me. Who am I? | |
| ________ | |

| MASKED GUEST #9: | |
|----------------| |
| I am 15 less than 36. Who am I? | |
| ________ | |

| MASKED GUEST #10: | |
|----------------| |
| Double me and I’m 30. Who am I? | |
| ________ | |
### Mental Math: Lightning Round!

**Directions:** Answer each question below as quickly as you can.

1. How many dimes equal a dollar?  
   __________________
2. How many legs do 7 hippopotamuses have?  
   __________________
3. How many quarters equal $5?  
   __________________
4. How many fingers do 12 people have?  
   __________________
5. How many paws do 10 dogs have?  
   __________________
6. How many tires do 300 cars have?  
   (Include the spare tire in the trunk.)  
   __________________
7. How many eggs are in 4 dozen eggs?  
   __________________
8. How many nickels equal $2?  
   __________________
9. How many ounces are in 2 pounds?  
   (16 ounces equal 1 pound)  
   __________________
10. How tall is Richard if Bob is 6 feet tall and Richard is half his size?  
    __________________
11. How many eyes do 9 bees have if each bee has 5 eyes?  
    __________________
12. How many teeth do two average people have if the average person has 32 teeth?  
    __________________
13. How many pages did I read if I started at the beginning of page 41 and stopped at the end of page 91?  
    __________________
14. How much will Leon spend on 3 bunches of flowers that cost $2.95 a bunch?  
    __________________
15. How many faces are there on 7 dice if each die has 6 faces?  
    __________________

**Write About It**

How did you use mental math to solve problem 14?
Name

PROBLEM SOLVING

Number Search

Directions: Look at the group of numbers below. For each problem, search through the numbers and list those that solve the problem. There can be more than one answer for each problem.

10  7  18  5  1  6
  
  8  3  19  2  9  12

1. Which numbers have a sum of 15?
2. Which numbers have a difference of 7?
3. Which numbers have a product of 21?
4. Which numbers have a sum that is 2 less than 12?
5. Which numbers have a product of 70?
6. Which numbers have a sum of 8 and a product of 15?
7. Which numbers have a sum that is equal to 3 x 9?
8. Which three numbers have a sum of 13?
9. Which numbers have a sum that is an odd number ending in 1?
10. Which three numbers have a product of 21?
11. If you divide one number by another number, the answer is 6. What are the two numbers?
12. If you divide these two numbers and multiply the quotient by 2, you get 8. What are the two numbers?
**Directions:** Solve the baseball problems below.

1. There are 5 baseball players. The numbers on their uniforms are 1, 2, 3, 4, and 5. Arrange them in the field so that if you add their uniform numbers going across or up and down, the sum is 8. There are four ways to arrange the numbers.

2. Arrange the same players so that when you add their uniform numbers across or up and down, the sum is 10.

3. Arrange the same players so that when you add their uniform numbers across or up and down, the sum is 9.
Time, Please?

Look at the clock here. What time does it say?

________________________

Directions: Write the answer in the space provided.

1. If it is 8:00 now, what time will it be in
   a. 10 minutes? __________
   b. 15 minutes? __________
   c. 55 minutes? __________
   d. 1 hour and 10 minutes? __________
   e. 2 hours and 10 minutes? __________
   f. 1 hour and 2 minutes? __________
   g. 45 minutes ago? __________
   h. 1 hour and 5 minutes ago? __________
   i. 1 hour and 45 minutes ago? __________
   j. 3 hours ago? __________

2. If it is 8:00 now, what time was it
   a. 10 minutes ago? __________
   b. 15 minutes ago? __________
   c. 13 minutes ago? __________
   d. 1 hour and 30 minutes ago? __________
   e. 25 minutes ago? __________
   f. 30 minutes ago? __________
   g. 45 minutes ago? __________
   h. 1 hour and 5 minutes ago? __________
   i. 1 hour and 45 minutes ago? __________
   j. 3 hours ago? __________

3. If it is 8:06 now, what time will it be in
   a. 5 minutes? __________
   b. 10 minutes? __________
   c. 25 minutes? __________
   d. 30 minutes? __________
   e. 33 minutes? __________

4. If it is 8:06 now, what time was it
   a. 5 minutes ago? __________
   b. 10 minutes ago? __________
   c. 25 minutes ago? __________
   d. 30 minutes ago? __________
   e. 33 minutes ago? __________

Write About It

Explain how you subtracted 30 minutes from 8:06 to get the answer.
What Page Is Zeena on?

Directions: Answer each question below. Write your answer in the blanks.

1. Zeena is reading an exciting story about spaceships. She is on page 46 of the story. What page would Zeena be on if she read
   a. 3 more pages? __________
   b. 10 more pages? __________
   c. 20 more pages? __________
   d. 40 more pages? __________
   e. 50 more pages? __________

2. What page was Zeena on for each day of the week?
   a. On Friday, she was 10 pages back from page 46. She was on page __________.
   b. On Thursday, she was 20 pages back from page 46. She was on page __________.
   c. On Wednesday, she was 25 pages back from page 46. She was on page __________.
   d. On Tuesday, she was 28 pages back from page 46. She was on page __________.
   e. On Monday, she was 36 pages back from page 46. She was on page __________.

3. Justin is reading a book about caring for a pet dog. He is on page 95.
   a. If he reads 15 more pages, he will be on page __________.
   b. If he reads 10 more pages, he will be on page __________.
   c. If he reads 23 more pages, he will be on page __________.
   d. If he reads 39 more pages, he will be on page __________.
   e. If he reads 50 more pages, he will be on page __________.
   f. When he was 5 pages back from page 95, he was on page __________.
   g. When he was 10 pages back from page 95, he was on page __________.
   h. When he was 25 pages back from page 95, he was on page __________.
   i. When he was 50 pages back from page 95, he was on page __________.
   j. When he was 65 pages back from page 95, he was on page __________.

Write About It

Explain how you figure out what page Justin was on 50 pages ago, if he is on page 95 now.
Once Upon a Math

**Directions:** Solve each problem using mental math. Write the answer in the blank after each problem.

1. Little Red Riding Hood bought 5 bouquets for her grandmother, Mrs. Wolf. Each bouquet cost $3. How much did she spend on the bouquets for Granny Wolf? ______________

2. A Fredmobile holds 4 students going on a field trip to the dinosaur museum. How many Fredmobiles will Fred Flintstone need to transport Pebble’s class of 28 students to the museum? ______________

3. Snow White won $35 playing Bingo. She wants to give an equal amount of her winnings to each of the 7 dwarfs. How much does each dwarf receive? ______________

4. Each page of Cinderella’s photo album can hold 8 pictures. How many photos can she put in her album if the album has 9 pages? ______________

5. Miss Piggy decided to buy Kermit a scarf and Elmo a hat for their birthdays. The scarf cost $6 and the hat cost $5. She gave the store clerk $15. How much change did she get back? ______________

6. Pinocchio is having a pizza party. If one pizza feeds 6 people, how many pizzas are needed to feed 54 people? ______________

7. Goldilocks is saving money for a new red cape that costs $27. She has saved $15 so far. How much more money does she need to save to buy her new red cape? ______________

8. Sleeping Beauty needs her beauty sleep. She sleeps an average of 9 hours a day. At that rate, how many hours of beauty sleep does she get in one week? ______________

9. Hansel and Gretel walk at the rate of 3 miles per hour. If they walked for 7 hours in the forest, did they walk more or less than 20 miles? ______________

10. Humpty Dumpty measured his waist and found that it was 350 centimeters around. Old King Cole, the merry old soul, did the same. He measured 310 centimeters around. How many centimeters smaller around the waist is Old King Cole than Humpty Dumpty? ______________
Write About It

How would you use mental math to find out how old 25-year-old Peter Piper was 13 years ago?
Name

ProBLEM SOlvinG

Be a Number Detective

Directions: Read each clue carefully and figure out the secret number for each set of clues.

1. The number is less than 160.
The number is greater than $145 + 5$.
The last digit is between 0 and 3.
The number is odd.

What is the number? _________

2. The number is more than $3 \times 25$.
The number is less than $8 \times 10$.
The sum of the digits is 14.
The number is odd.

What is the number? _________

3. The number is more than $2 \times 17$.
The number is less than $2 \times 19$.
The number is even.
The number ends in a figure greater than 4.
The number can be divided by 9.

What is the number? _________

4. The number is greater than $3 \times 100$.
The number is less than $400 - 50$.
The number is odd.
The number does not end in 1, 3, 7, 9.
The second digit is an even number less than 4, but more than 1.

What is the number? _________

5. The number has two digits.
The number’s digits are the same.
The number is odd.
The sum of the digits in the number is less than 20, but greater than 17.

What is the number? _________

6. The number is more than $4 \times 6 \times 25$.
The number ends in two zeros.
The number is less than 800.
The first digit is odd.

What is the number? _________

7. The number is more than $7 \times 9$.
The number is less than $8 \times 9$.
The ones-place digit is greater than 6.
The number is even.

What is the number? _________

8. The number is less than 1,000.
The number’s digits are triplets.
The digits are greater than 6.
The number is even.

What is the number? _________
Subtraction Magic

Check out this subtraction magic. Amaze your friends by instantly subtracting a number from 1,000,000! Here’s an example of how it’s done:

Example:
Think: $2 + ? = 9$
Think: $7 + ? = 10$

$1,000,000$
$- 246,087$

$753,913$

Step 1: Start on the left. You get the first digit in your answer by thinking $2 + ? = 9$. The answer is 7.

Step 2: For the next digit, think $4 + ? = 9$. The answer is 5.

Step 3: For the next digit, think $6 + ? = 9$. The answer is 3.

Step 4: For the next digit, think $0 + ? = 9$. The answer is 9.

Step 5: For the next digit, think $8 + ? = 9$. The answer is 1.

Step 6: For the last digit, think $7 + ? = 10$. The answer is 3.

Directions: Try solving these problems using the trick above.

1. $10,000$
   $- 4,862$

2. $1,000$
   $- 348$

3. $100$
   $- 12$

4. $100,000$
   $- 36,987$

5. $1,000,000,000$
   $- 427,678,914$

6. $10,000$
   $- 7,461$
**Magic Mind-Reading Cards**

Here’s an easy trick for you to do for your friends.

**Step 1:** Give a friend a copy of the magic cards below.

**Step 2:** Ask your friend to pick a number from 1 to 31, but not to tell you.

**Step 3:** Tell your friend to point to all of the cards that have his or her number.

**Step 4:** Wave your hands over the magic cards and, in a mysterious voice, chant these words:

“Oh magic cards! Oh magic cards! Tell me which number my friend is thinking. Give me an inkling. Lucky 7, rabbit’s foot, the owl says give me a hoot! Hocus Pocus let me find what’s in my friend’s mind, if you would be so kind.”

How will you know what number your friend has picked?

It’s easy! Just add up the first numbers in each card that your friend pointed to. The sum of those first numbers is the number that your friend chose!

**Here’s an example:** Say your friend, Joe, chose the number 9. He will point to the cards that have the number 9 in them. One of those cards starts with the number 1 and the other card starts with the number 8. You add 1 + 8 and get the answer 9! After you make your chant, tell Joe that he picked the number 9.

Now, try the trick on your friends and family. Remember: To do the trick successfully, you should practice adding the first numbers on each card.
Magic Number Cards

Here’s an easy number trick you can do for your friends.

Step 1: Cut out the cards below and give them to a friend.

Step 2: Ask your friend to pick a card and tell you the number above the box. Tell him or her that you will then reveal the number that is in the box.

Here’s how the trick is done:
Add 8 to the number your friend gives you. Then reverse the digits of the answer you get. If you get a 0 in an answer after you add 8, keep the 0 when you reverse the digits. For example, 20 becomes 02. Next, add the two digits to get the third and last digit of the number in the box.

Example: Your friend picks card #10. Add 8 + 10 to get 18. Then reverse the digits so 18 becomes 81. 8 and 1 are the first two digits of the number in the box. Finally, add 8 + 1 to get the last digit of the number: 9. So, the number in the box that your friend picked is 819.

<table>
<thead>
<tr>
<th>#19</th>
<th>#8</th>
<th>#3</th>
<th>#9</th>
</tr>
</thead>
<tbody>
<tr>
<td>729</td>
<td>617</td>
<td>112</td>
<td>718</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>#23</th>
<th>#1</th>
<th>#15</th>
<th>#17</th>
</tr>
</thead>
<tbody>
<tr>
<td>134</td>
<td>909</td>
<td>325</td>
<td>527</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>#7</th>
<th>#21</th>
<th>#10</th>
<th>#22</th>
</tr>
</thead>
<tbody>
<tr>
<td>516</td>
<td>921</td>
<td>819</td>
<td>033</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>#18</th>
<th>#2</th>
<th>#4</th>
<th>#24</th>
</tr>
</thead>
<tbody>
<tr>
<td>628</td>
<td>011</td>
<td>213</td>
<td>235</td>
</tr>
</tbody>
</table>
Math Marvel

Here’s a fun addition trick you can do for your friends. You will be able to give the answer to a problem before the numbers in the problem are added together! Here’s how:

**Step 1:** You’ll need at least four people to do this trick.

**Step 2:** Ask Person A to write a three-digit number on a piece of paper. Make sure everyone can see the number he or she wrote. Say, Person A wrote the number 847.

**Step 3:** On another piece of paper, you write 2,845. Fold it and give it to Person B to hold. Tell Person B not to look at the number. No one should look at the number until you complete the trick. Why do you write 2,845?

To do the trick, you need to put the number 2 in front of the first digit of Person A’s number. Then repeat the first two numbers of Person A’s number (8 and 4). Finally, subtract 2 from the last digit of Person A’s number (7 – 2) and write the difference (5) as the last digit of your number.

**Step 4:** Ask Person C to write a three-digit number on the same piece of paper that Person A wrote his or her number. Make sure that Person C’s number is below Person A’s number. Say Person C wrote 258. So the piece of paper would look like this:

847
258

**Step 5:** Write 741 underneath 258. Why? You need to subtract each of the digits in Person C’s number from 9. So you subtract 9 – 2 to get 7, 9 – 5 to get 4, and 9 – 8 to get 1. Your number is 741.

**Step 6:** Ask Person D to write a three-digit number below your number. Say Person D writes 307.

**Step 7:** Using the same strategy you used in Step 5, you write 692 underneath 307. To get 692, you subtract 9 – 3, 9 – 0, and 9 – 7.

**Step 8:** Ask all the people participating to add all the numbers on the first piece of paper together:

<table>
<thead>
<tr>
<th>847</th>
<th>(Person A’s number)</th>
</tr>
</thead>
<tbody>
<tr>
<td>258</td>
<td>(Person C’s number)</td>
</tr>
<tr>
<td>741</td>
<td>(Your first number)</td>
</tr>
<tr>
<td>307</td>
<td>(Person D’s number)</td>
</tr>
<tr>
<td>+ 692</td>
<td>(Your second number)</td>
</tr>
<tr>
<td>_________</td>
<td></td>
</tr>
<tr>
<td>2,845</td>
<td>(Sum)</td>
</tr>
</tbody>
</table>

**Step 9:** Ask Person B to unfold the piece of paper you gave him or her and read the number on it. Your audience will be amazed that it’s the same number as the sum of all the other numbers.

**Step 10:** Take a bow and enjoy the applause.
Look for Easy Numbers for E-Z Addition (page 9)
1. 18  7. 40
2. 19  8. 26
3. 14  9. 38
4. 18 10. 47
5. 17 11. 68
6. 27 12. 83

Look for More Easy Numbers in Addition (page 10)
1. 22  9. 140
2. 27 10. 190
3. 43 11. 80
4. 45 12. 93
5. 80 13. 140
6. 97 14. 362
7. 62 15. 442
8. 114

Make Easy Numbers Using 10 and 100 (page 11)
1. f 7. j
2. a 8. c
3. k 9. i
4. h 10. g
5. e 11. l
6. b 12. d

Using Patterns of 10 (page 12)
1. 62 10. 437
2. 67 11. 539
3. 33 12. 654
4. 61 13. 862
5. 80 14. 735
6. 62 15. 475
7. 82 16. 3274
8. 161 17. 5505
9. 103 18. 7852

Breaking Up Numbers Is Easy to Do! (page 13)
1. 78 11. 35
2. 99 12. 33
3. 98 13. 13
4. 38 14. 31
5. 59 15. 35
6. 99 16. 23
7. 109 17. 16
8. 89 18. 21
9. 95 19. 25
10. 99 20. 25

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8. 89 18. 21
9. 95 19. 25
10. 99 20. 25

Break Up for Multiplication and Division (page 14)
1. 36 11. 6
2. 155 12. 7
3. 248 13. 6
4. 86 14. 8
5. 96 15. 13
6. 54 16. 12
7. 180 17. 15
8. 104 18. 12
9. 168 19. 16
10. 216 20. 12

10 Is a Friend! (page 15)
1. 17 6. 12
2. 11 7. 15
3. 14 8. 12
4. 13 9. 11
5. 13 10. 14

9 Is Fine! (page 16)
1. 15 6. 14
2. 11 7. 12
3. 13 8. 17
4. 16 9. 11
5. 18 10. 13

Strategies for Adding 9 to a Number (page 17)
1. 23 11. 883
2. 37 12. 991
3. 46 13. 1872
4. 54 14. 2453
5. 75 15. 6295
6. 92 16. 7656
7. 106 17. 5244
8. 215 18. 5523
9. 426 19. 4467
10. 534 20. 1312

Easy Numbers Make Happy Faces! (page 19)
1. 45 + 20 = 65
2. 20 + 64 = 84
3. 20 + 47 = 67
4. 73 + 20 = 93
5. 69 + 10 = 79
6. 15 + 80 = 95

Patterns in the One-Hundred Chart (page 22)
1. Yes; yes; The pattern continues.
2. 1
3. 2; yes
4. Yes; Even-number columns are those that start with 2,
4, 6, 8, and 10, while the odd-number columns start
1, 3, 5, 7, and 9.
5. If you count by twos starting with 2, the numbers
you count are even. If you start with 3 and count by
twos, the numbers you count are odd.
6. Answers will vary.
7. Each number is 10 more
than the number above it.
8. Answers will vary.
9. Answers will vary.
10. A diagonal

Follow the Pattern (page 23)
1. 2, 12, 22, 32, 42, 52, 62,
72, 82, 92
2. 10, 20, 30, 40, 50, 60, 70,
80, 90, 100
3. 5, 15, 25, 35, 45, 55, 65,
75, 85, 95
4. 8, 18, 28, 38, 48, 58, 68,
78, 88, 98
5. 4, 14, 24, 34, 44, 54, 64,
74, 84, 94

No Looking! What’s Missing? (page 24)

Skip to My 2s (page 26)
1. 6, 4, 2
2. 34, 32, 30, 28, 26
3. 82, 80, 78, 76, 74
4. 94, 92, 90, 88, 86
5. 102, 100, 98, 96, 94
6. 144, 142, 140, 138, 136
7. 11, 9, 7, 5, 3
8. 15, 13, 11, 9, 7
9. 31, 29, 27, 25, 23
10. 59, 57, 55, 53, 51

Ladders and Chutes (page 28)

Chutes:

Follow the Winding Brick Road! (page 29)
1. 7 11 73
2. 17 12 74
3. 27 13 75
4. 37 14 76
5. 47 15 77
6. 57 16 78
7. 67 17 79
8. 70 18 87
9. 71 19 97
10. 72

There are twenty 7s in all.

**Double the Number, Double the Fun! (page 33)**
1. 2. 9, 18, 36
3. 4. 8, 16, 32
5. 5. 1, 2, 4
6. 6. 10, 20, 40
7. 7. 5, 10, 20
8. 8. 6, 12, 24
9. 9. 3, 6, 12
10. 10. 4, 8, 16

**E-Z Strategy Using Doubles (page 34)**
1. 16. 17, 15 4. 18, 17, 19
2. 14, 13, 15 5. 12, 11, 13
3. 10, 11, 9 6. 20, 21, 19

**You Can Half It! (page 35)**
1. 1. 2 6. 40
2. 2. 3 7. 50
3. 3. 5 8. 200
4. 4. 10 9. 300
5. 5. 30 10. 400

**How Many Beans Are in the Pot? (page 36)**
1. 1. 5 6. 9
2. 2. 5 7. 8
3. 3. 5 8. 7
4. 4. 5 9. 3
5. 5. 7 10. 7

**What’s the Missing Number? (page 37)**
1. 1. 5 11 77
2. 2. 2 12 8
3. 3. 3 13 8
4. 4. 4 14 7
5. 5. 2 15 9
6. 6. 8 16 5
7. 7. 4 17 9
8. 8. 3 18 9
9. 9. 7 19 6
10. 10. 9 20 9

**It’s All in the Number Family! (page 38)**
1. 5. 4 + 9 = 9 7. 9 + 7 = 16
4. 4 + 5 = 9 7 + 9 = 16
2. 9 - 5 = 4 16 - 9 = 7
9 - 4 = 5 16 - 7 = 9
2. 3 + 8 = 11 8 + 9 = 15
8 + 3 = 11 6 + 9 = 15
11 - 3 = 8 15 - 9 = 6
11 - 8 = 3 15 - 6 = 9
3. 4 + 6 = 10 9 + 7 = 16
4. 6 + 4 = 10 7 + 6 = 13
6 + 4 = 10 6 + 7 = 13
10 - 4 = 6 13 - 7 = 6
10 - 6 = 4 13 - 6 = 7
4. 7 + 6 = 13 10 + 7 = 18
6 + 7 = 13 8 + 7 = 15
13 - 7 = 6 15 - 8 = 7
13 - 6 = 7 13 - 7 = 6
5. 8 + 4 = 12 11. 8 + 5 = 13
4 + 8 = 12 5 + 8 = 13
12 - 8 = 4 13 - 8 = 5
12 - 4 = 8 13 - 5 = 8
6. 6 + 5 = 11 11 - 7 = 11
6 + 5 = 11 7 + 4 = 11
11 - 6 = 5 11 - 4 = 7
11 - 5 = 6 11 - 7 = 4

**Hit the Target Number! (page 43)**
1. 100 + 200 4. 800 + 50
200 + 100 825 + 25
250 + 50 750 + 100
150 + 150 725 + 125
50 + 250 700 + 150
125 + 75 600 + 250
2. 300 + 200 5. 600 + 92
5. 600 + 40 90 + 2
100 + 400 680 + 42
450 + 50 650 + 42
475 + 25 675 + 17
425 + 75 686 + 6
3. 100 + 900 800 + 200
800 + 400 550 + 450
300 + 700 50 + 950
2. 9. 100 + 200
3. 8. 800 + 100
4. 7. 750 + 100
5. 6. 525 + 25
6. 5. 325 + 25
7. 4. 225 + 25
8. 3. 125 + 25
9. 2. 50 + 25
10. 1. 10 + 25

**Calculate on Your Calculator (page 51)**
1. 1. + 1 6. 6,000
2. + 10 7. 6
3. + 100 8. + 60
4. + 20 9. – 76
5. – 2,000 10. – 300

**Exercise Your Number Sense (page 52)**
1. 1. 100 + 400
2. 2. 800 + 200
3. 3. 500 + 300
4. 4. 700 + 200
5. 5. 1,000 + 100
6. 6. 1,200 + 200
7. 7. 1,400 + 300
8. 8. 1,600 + 400
9. 9. 1,800 + 500
10. 10. 1,000 + 600

**Letter Have Values, Too! (page 50)**
1. 1. 45 11. 85
2. 2. 30 12. 225
3. 3. 150 13. 85
4. 4. 145 14. 130
5. 5. 160 15. 110
6. 6. 70 16. 235
7. 7. 145 17. 70
8. 8. 135 18. 225
9. 9. 185 19. 85
10. 10. 220 20. 45
The Largest Number in a Diamond (page 54)
1. 350 – 2
2. 25
3. 5 x 25
4. 301 x 4
5. 500 + 400
6. 6 x 7
7. 50 + 25
8. 60 – 8
9. 600 – 150
10. 20 + 20
11. 13,000 – 200
12. $3.95 + $3.95

What's Your Change? (page 59)
1. 90 cents 10. 50 cents
2. 20 cents 11. 75 cents
3. 25 cents 12. 80 cents
4. 2 cents 13. 1 cent
5. 10 cents 14. 6 cents
6. 92 cents 15. 9 cents
7. 15 cents 16. 40 cents
8. 70 cents 17. 39 cents
9. 85 cents 18. 60 cents

How Much Is In the Piggy Bank? (page 60)
Karen $2.27
Thomas $7.55
Alvin $1.01
Rosita $7.38
Ricky $17.30
Marta $3.52

Calculator-Free Shopping (pages 61–62)
Ken $4.25
Olivia $8.00
Annette $6.25
Bella $5.75
Todd $3.50
Marianne $6.50
Ben $6.50
Brian $18.00
Tucker $4.00

Who Has Enough Money? (page 63)
TJ, Patty, Sally, and Andrea

Counting Coins (page 64)
September
Frannie saved $3.90
Stella Ann saved $5.55
Tyrone saved $1.60
October
Mr. Zuk saved $7.50
Mrs. Zuk saved $5.50
Frannie saved $5.98
Stella Ann saved $5.40
Tyrone saved $1.00
November
Mr. Zuk saved $1.25
Mrs. Zuk saved $3.16
Frannie saved $6.00
Stella Ann saved $2.00
Tyrone saved $3.00

Unmasking Numbers (page 65)
Masked Guest #1: 6
Masked Guest #2: 16
Masked Guest #3: 27
Masked Guest #4: 28
Masked Guest #5: 12
Masked Guest #6: 50
Masked Guest #7: 18
Masked Guest #8: 49
Masked Guest #9: 21
Masked Guest #10: 15

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1. 350 – 2
2. 25
3. 5 x 25
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Masked Guest #9: 21
Masked Guest #10: 15

Mental Math: Lightning Round (page 66)
1. 10 dimes
2. 28 legs
3. 20 quarters
4. 120 fingers
5. 40 paws
6. 1,500 tires
7. 48 eggs
8. 40 nickels
9. 32 ounces
10. 3 feet
11. 45 eyes
12. 64 teeth
13. 50 pages
14. $8.85
15. 42 faces

Number Search (page 67)
1. Answers will vary
2. Answers will vary
3. 7 x 3, 7 x 3 x 1
4. Answers will vary
5. 10 x 7
6. 3 and 5
7. 8 x 19 and 9 + 18
8. Answers will vary
9. Answers will vary
10. 1 x 3 x 7
11. 12 and 2 or 18 and 3
12. 12 and 3 or 8 and 2

Batter Up! (page 68)
1. 12 and 3 or 8 and 2
2. 12 and 2 or 18 and 3
3. 1 x 3 x 7
4. Answers will vary
5. Answers will vary
6. 3 and 5
7. 80
1. 350 – 2
2. 25
3. 5 x 25
4. 301 x 4
5. 500 + 400
6. 6 x 7
7. 50 + 25
8. 60 – 8
9. 600 – 150
10. 20 + 20
11. 13,000 – 200
12. $3.95 + $3.95

What Page Is Zeena On? (page 70)
1. a. page 49
2. a. page 56
3. a. page 110
b. page 56
b. page 105
c. page 66
c. page 118
d. page 86
d. page 134
e. page 96
e. page 145
f. page 26
f. page 90
g. page 21
g. page 70
h. page 18
h. page 45
i. page 10
i. page 30
j. page 10
j. page 30