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Teacher’s Guide to Using the 
Chapter 3 Resource Masters

The Chapter 3 Resource Masters includes the core materials needed for Chapter 3. These materials include worksheets, extensions, and assessment options. The answers for these pages appear at the back of this booklet.

All of the materials found in this booklet are included for viewing and printing on the TeacherWorks Plus™ CD-ROM.

Chapter Resources

Graphic Organizer (page 2) This master is a tool designed to assist students with comprehension of grade-level concepts. You can use this graphic organizer in coordination with the appropriate lesson. While the content and layout of these tools vary, their goal is to assist students by providing a visual representation from which they can learn new concepts.

Student Glossary (page 3) This master is a study tool that presents the key vocabulary terms from the chapter. You may suggest that students highlight or star the terms they do not understand. Give this list to students before beginning Lesson 3-1. Remind them to add these pages to their mathematics study notebooks.

Anticipation Guide (page 4) This is a survey designed for use before beginning the chapter. You can use this survey to highlight what students may or may not know about the concepts in the chapter. If feasible, interview students in small groups, asking them the interview questions in the guide. There is space for recording how well students answer the questions before they complete the chapter. You may find it helpful to interview students a second time, after completing the chapter, to determine their progress.

Games (page 5) A game is provided to reinforce chapter concepts and may be used at appropriate times throughout the chapter.

Resources for Lessons

Reteach Each lesson has an associated Reteach worksheet. In general, the Reteach worksheet focuses on the same lesson content but uses a different approach, learning style, or modality than that used in the Student Edition. The Reteach worksheet closes with computational practice.

Skills Practice The Skills Practice worksheet for each lesson focuses on the computational aspect of the lesson. The Skills Practice worksheet may be helpful in providing additional practice of the skill taught in the lesson. It also contains word problems that cover the skill. Spaces for students’ answers are provided on the worksheet.

Homework Practice The Homework Practice worksheet provides an opportunity for additional computational practice. The Homework Practice worksheet includes word problems that address the skill taught in the lesson. Spaces for students’ answers are provided on the worksheet.

Problem-Solving Practice The Problem-Solving Practice worksheet presents additional reinforcement in solving word problems that applies both the concepts of the lesson and some review.

Enrich The Enrich worksheet presents activities that extend the concepts of the lesson or offer a historical or multicultural look at the lesson’s concepts. Some enrich materials are designed to widen students’ perspectives on the mathematics they are learning.

Resources for Problem-Solving In recognition of the importance of problem-solving strategies, worksheets for problem-solving lessons follow a slightly different format. For problem-solving lessons, a two-page Reteach worksheet offers a complete model for choosing a strategy. For each Problem-Solving Strategy lesson, Reteach and Skills Practice worksheets offer reinforcement of the strategy taught in the lesson. In contrast, the Problem-Solving Investigation worksheets include a model strategy on the Reteach worksheets and provide problems requiring several alternate strategies on the practice worksheets.
Assessment Options

The assessment masters in the Chapter 3 Resource Masters offer a wide variety of assessment tools for monitoring progress as well as final assessment.

**Individual Progress Checklist** This checklist explains the chapter’s goals or objectives. Teachers can record whether a student’s mastery of each objective is beginning (B), developing (D), or mastered (M). The checklist includes space to record notes to parents as well as other pertinent observations.

**Chapter Diagnostic Test** This one-page test assesses students’ grasp of skills that are needed for success in the chapter.

**Chapter Pretest** This one-page quick check of the chapter’s concepts is useful for determining pacing. Performance on the pretest can help you determine which concepts can be covered quickly and which specific concepts may need additional time.

**Mid-Chapter Test** This one-page chapter test provides an option to assess the first half of the chapter. It includes both multiple-choice and free-response questions.

**Vocabulary Test** This one-page test focuses on chapter vocabulary. It is suitable for all students. It includes a list of vocabulary words and questions to assess students’ knowledge of the words.

**Oral Assessment** This two-page test consists of one page for teacher directions and questions and a second page for recording responses. Although this assessment is designed to be used with all students, the interview format focuses on assessing chapter content assimilated by ELL students. The variety of approaches includes solving problems using manipulatives as well as pencil and paper.

**Listening Assessment** This two-page assessment contains one page for teacher directions and one page for responses/recordings. This assessment, too, is suitable for all students but is designed primarily for use with students who may have difficulty reading test materials. The assessment directions progress in difficulty from simple at the beginning of the year to more extensive at the end of the year.

**Chapter Project Rubric** This one-page rubric is designed for use in assessing the chapter project. You may want to distribute copies of the rubric when you assign the project and use the rubric to record each student’s chapter project score.

**Foldables Rubric** This one-page rubric is designed to assess the chapter Foldable. It is written to the students, telling them what you will be looking for as you evaluate their completed Foldable.

**Leveled Chapter Tests**

- **Form 1** assesses basic chapter concepts through multiple-choice questions and is designed for use with below-level students.
- **Form 2A** is designed for on-level students and is primarily for those who may have missed the Form 1 test. It may be used as a retest for students who received additional instruction following the Form 1 test.
- **Form 2B** is designed for students with a below-level command of the English language.
- **Form 2C** is a free-response test designed for on-level students.
- **Form 2D** is written for students with a below-level command of the English language.

**Cumulative Standardized Test Practice** This two-page test, aimed at on-level students, offers a page of multiple-choice questions and a page of free-response questions.

**Answers**

The answers for the Anticipation Guide and Lesson Resources are provided as reduced pages with answers appearing in black. Full size line-up answer keys are provided for the Assessment Masters.
A suggestion for how to complete this graphic organizer can be found in the answer pages at the back of this book.

Use the number line to help solve the following problems.

1. $15 - 8 = \underline{7}$

2. $6 - 6 = \underline{0}$

3. $20 - 10 = \underline{10}$

4. $14 - 7 = \underline{7}$

5. $10 - \underline{\quad} = 4$

Tell a friend what you have learned.
### Student Glossary

<table>
<thead>
<tr>
<th>Vocabulary Term</th>
<th>Definition / Description / Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>count back</td>
<td>![Number Line Diagram] Example: On a number line start at the number 5 and count back 3. [Lesson 3.1]</td>
</tr>
<tr>
<td>difference</td>
<td>The answer to a <em>subtraction</em> problem. Example: $3 - 1 = 2$. The difference is 2. [Lesson 3.1]</td>
</tr>
<tr>
<td>fact family</td>
<td>Addition and subtraction sentences that use the same numbers. Example: $6 + 7 = 13$, $7 + 6 = 13$, $13 - 7 = 6$, $13 - 6 = 7$ [Lesson 3.7]</td>
</tr>
<tr>
<td>inverse operation</td>
<td>Operations that undo each other. Example: Addition and subtraction are inverse or opposite operations. Multiplication and division are also inverse operations. [Lesson 3.5]</td>
</tr>
<tr>
<td>related facts</td>
<td>Basic facts using the same numbers. Sometimes called a fact family. [Lesson 3.5] $4 + 1 = 5$, $5 - 4 = 1$, $1 + 4 = 5$, $5 - 1 = 4$</td>
</tr>
<tr>
<td>subtract</td>
<td>To take away, take apart, separate, or find the difference between two sets. The opposite of addition. Example $5 - 3 = 2$ [Lesson 3.1]</td>
</tr>
</tbody>
</table>
**Anticipation Guide**

**Preparation:** Connecting cubes, counters, and a number line are needed for this activity.

**Directions:** Before you begin Chapter 3, distribute these questions to students. Read questions along with students, giving them time to answer each. You may want to ask the same questions after students complete the chapter.

<table>
<thead>
<tr>
<th>Before Chapter</th>
<th>After Chapter</th>
</tr>
</thead>
</table>
| **1.** | 10 – 4 = 6  
You can use this number line to help ________.  
A) Add on  
B) Count Back  
C) Use Doubles  
[Lesson 3.1] |
| **2.** Use counters to find the answer. 16 – 7 = [ ]  
[Lesson 3.1]  
8 9 10 23 |
| **3.** What doubles addition sentence is related to this subtraction problem? [Lesson 3.1]  
16 – 8 = 8  
___________ |
| **4.** 15  
–7  
The solution to this problem is called the ________. [Lesson 3.1] |
| **5.** Which of the following is a good estimate for the following subtraction problem? [Lesson 3.4]  
31 – 10 =  
about 50 27 22 about 20 |
| **6.** 13 – 0 = [ ] and 13 – 13 = [ ] [Lesson 3.2] |
| **7.** David adds 5 fish to his fish tank every day. How many fish will be in the tank after 7 days?  
_____ fish [Lesson 3.4] |
Chapter 3 Game

Moving Backward

Ready

You will need:

3 index cards
2 different colored markers

Set

Write the numbers 1, 2, and 3 on index cards, one number per card. Place them facedown in a stack. Copy and enlarge the number line.

```
<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

GO!

1. Give each player a different colored marker.

2. Have player 1 draw a card and start at 20. He or she uses the number on the card and says a subtraction sentence with the numbers; for example, \(20 - 3 = 17\). Player 1 circles the difference on the number line.

3. Place the card back on the bottom of the stack.

4. Player 2 chooses a card, uses that number and the last circled number, and says a subtraction sentence; for example, \(17 - 2 = 15\). He or she circles the difference on the number line.

5. Place the card back on the bottom of the stack.

6. The first player to get 0 as a difference wins.
Reteach

Count Back to Subtract

Count back to subtract.

8 − 2 = 6

Count back to subtract.

10 − 4 = 6

Count back to subtract. Show how you use \( \bigcirc \) to help.

1. \( \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \)
   
   7 − 4 = 3

2. \( \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \)
   
   9 − 0 = 9

3. \( \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \)
   
   9 − 9 = 0

4. \( \bigcirc \bigcirc \bigcirc \bigcirc \)
   
   5 − 1 = __________

5. \( \bigcirc \bigcirc \bigcirc \)
   
   6 − 2 = __________

6. \( \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \)
   
   9 − 4 = __________

7. \( \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \)
   
   8 − 6 = __________

8. \( \bigcirc \bigcirc \bigcirc \)
   
   4 − 3 = __________

9. \( \bigcirc \bigcirc \bigcirc \bigcirc \)
   
   7 − 3 = __________
Skills Practice
Count Back to Subtract

Count back to subtract. Use the number line.

1. $12 - 4 = \underline{8}$  
   $11 - 3 = \underline{8}$  
   $7 - 1 = \underline{6}$

2. $8 - 3 = \underline{5}$  
   $6 - 2 = \underline{4}$  
   $10 - 2 = \underline{8}$

3. $9 - 1 = \underline{8}$  
   $7 - 3 = \underline{4}$  
   $12 - 3 = \underline{9}$

4. $8 - 1 = \underline{7}$  
   $11 - 2 = \underline{9}$  
   $8 - 2 = \underline{6}$

5. $\underline{10} - 1$  
   $\underline{7} - 2$  
   $\underline{10} - 3$

Solve.

6. There are 9 dogs playing at the dog park.  
   3 dogs go home.  
   How many dogs are left?  
   $\underline{6}$ dogs

7. There are 11 lions and 2 tigers at the zoo.  
   How many more lions than tigers are at the zoo?  
   $\underline{9}$ lions
Homework Practice

**Count Back to Subtract**

Count back to subtract. Use the number line.

![Number Line]

1. \(6 - 2 = \) _____  
   Start at _____.
   Count back _____.

2. \(12 - 4 = \) _____  
   Start at _____.
   Count back _____.

3. \(11 - 2 = \) _____  
   Start at _____.
   Count back _____.

4. \(7 - 2 = \) _____  
   Start at _____.
   Count back _____.

5. \(9 - 3 = \) _____  
   Start at _____.
   Count back _____.

6. \(12 - 3 = \) _____  
   Start at _____.
   Count back _____.

7. \(10 - 1 = \) _____  
   Start at _____.
   Count back _____.

Count back to solve.

8. A paper clip holder has twelve clips. Alex uses five paper clips.  
   How many paper clips are left?  
   _____ paper clips

   How many pencils does Marty have left?  
   _____ pencils
Problem-Solving Practice

Count Back to Subtract

Count back to solve. Use the number line.

1. Tanya has 12 blocks. She gives 5 away.
   How can you count back to find out how many she has now?
   Start at _____.
   Count back _____ to _____.
   _____ blocks

2. Ricky has 10 oranges. He uses 6 to make juice.
   How can you count back to find out how many are left?
   Start at _____.
   Count back _____ to _____.
   _____ oranges left

3. Madison’s class needs to plant 10 trees. They plant 3 trees.
   Write a number sentence to tell how many trees are left to plant.
   _____ – _____ = _____
   _____ trees

4. Hank needs to wash 9 windows. He washes 6 windows.
   Write a number sentence to tell how many windows are left to wash.
   _____ – _____ = _____
   _____ windows

5. Twelve cars and four trucks come to the car wash.
   How many more cars than trucks are at the car wash?
   _____ cars
Enrich

Say and Think to Subtract

1. $9 - 2 = ?$
   Say 9, then count back two.
   The answer is _____.

2. $6 - 4 = ?$
   Say 6, then count back by 4.
   Write the numbers in the bubble as you say them.
   The answer is ____________.

3. $15 - 3 = ?$
   Say 15, then count back 3.
   Write the numbers in the bubble as you say them.
   The answer is _____.

4. $100 - 5 = ?$
   Say 100, then count back by 5.
   Write the number in the bubble as you say them.
   The answer is _____.
Reteach

Subtract All and Subtract Zero

Subtract 0.
You have the same number left.

Subtract all.
You have 0 left.

Subtract. You can cross out pictures to help.

1.  

\[ 9 - 0 = \underline{9} \]

\[ 9 - 9 = \underline{0} \]

2.  

\[ 6 - 0 = \underline{6} \]

\[ 6 - 6 = \underline{0} \]

3.  

\[ 4 - 0 = \underline{4} \]

\[ 4 - 4 = \underline{0} \]

4.  

\[ 7 - 0 = \underline{7} \]

\[ 7 - 7 = \underline{0} \]

5.  

\[ 8 - 0 = \underline{8} \]

\[ 8 - 8 = \underline{0} \]

6.  

\[ 5 - 0 = \underline{5} \]

\[ 5 - 5 = \underline{0} \]
Skills Practice

Subtract All and Subtract Zero

Subtract.

1. \[
\begin{array}{cccc}
7 & 9 & 8 & 10 \\
-1 & -0 & -8 & -2 \\
\end{array}
\]

2. \[
\begin{array}{cccc}
6 & 9 & 6 & 8 \\
-6 & -3 & -0 & -1 \\
\end{array}
\]

3. \[
\begin{array}{cccc}
9 & 7 & 9 & 10 \\
-1 & -7 & -2 & -1 \\
\end{array}
\]

4. \[
\begin{array}{cccc}
8 & 9 & 7 & 8 \\
-3 & -9 & -2 & -0 \\
\end{array}
\]

Solve.

5. 10 children play ball. After they finish, all 10 go back to class. How many children keep playing ball? _____ children

6. 8 girls take a walk. When they reach the park, they all keep walking. How many girls are still taking a walk? _____ girls
Name ____________________________________________

Chapter Resources

Grade 2

Chapter 3

Subtract All and Subtract Zero

Subtract.

1. \[12 - 3 = \] \[11 - 3 = \] \[6 - 6 = \] \[9 - 0 = \]

2. \[6 - 0 = \] \[9 - 9 = \] \[7 - 3 = \] \[4 - 0 = \]

3. \[3 - 3 = \] \[4 - 4 = \] \[5 - 5 = \] \[10 - 2 = \]

4. \[8 - 0 = \] \[10 - 3 = \] \[7 - 0 = \]

5. \[11 - 2 = \] \[5 - 3 = \] \[7 - 7 = \]

Count back to solve.

6. There are 8 candles on a cake. Javier blows out all 8 candles. How many candles are still burning? _____ candles

7. Eleven children come to the party. Three leave early. How many children are still at the party? _____ children
Write a number sentence for each. Then solve.

1. 3 bees buzz near a flower. None fly away. How many bees are near the flower?
   
   ____ – ____ = ____
   ____ bees

2. 5 sparrows are in the nest. They all fly away. How many sparrows are still in the nest?
   
   ____ – ____ = ____
   ____ sparrows

3. 8 ducks are swimming in a pond. They all fly away. How many ducks are in the pond?
   
   ____ ○ ○ ○ ○ ____ ducks

4. Mrs. Keen feeds 8 squirrels. None run away. How many squirrels are left?
   
   ____ ○ ○ ○ ○ ____ squirrels

5. Miguel catches seven spiders. He lets them all go. How many spiders are left?
   
   ____ spiders

6. Write a story that this number sentence would solve.
   
   5 – 5 = 0.
Enrich

Solve and Color

Subtract All

When you subtract a number by the same number, the answer is always 0.

Subtract None

When you subtract zero from a number, the number does not change.

Solve and draw a line to connect the problems that belong to the same fact family.

14 – 14 = _____

85 – 0 = _____

5 – 5 = _____

75 – 0 = _____

88 – 0 = _____
Reteach

Use Doubles to Subtract

You can use doubles facts to subtract.

Remember, doubles are addends that are the same number.

If you know 6 + 6 = 12, you know 12 − 6 = 6.

Subtract. Use doubles facts to help.

1. 4 + 4 = 8, so 8 − 4 = ______

2. 7 + 7 = _____, so 14 − 7 = ______

3. 3 + 3 = _____, so 6 − 3 = ______

4. 5 + 5 = _____, so 10 − 5 = ______

5. 8 + 8 = _____, so 16 − 8 = ______

6. 9 + 9 = _____, so 18 − 9 = ______
Skills Practice

Use Doubles to Subtract

Subtract. Circle any problems in which you can use doubles to subtract.

1. $\begin{array}{cccc} 7 & 12 & 4 & 8 \\ -7 & -6 & -0 & -3 \\ \end{array}$

2. $\begin{array}{cccc} 10 & 4 & 8 & 8 \\ -5 & -2 & -4 & -0 \\ \end{array}$

3. $7 - 3 = \underline{4} \quad 18 - 9 = \underline{9} \quad 7 - 7 = \underline{0}$

4. $16 - 8 = \underline{8} \quad 10 - 3 = \underline{7} \quad 14 - 7 = \underline{7}$

Solve.

5. Shaun buys 10 erasers. He gives 5 erasers to Fred. How many erasers does Shaun have left? What doubles fact can help you?

$\underline{10} + \underline{5} = \underline{15}$

Write a number sentence to find how many erasers Shaun has left.

$\underline{10} - \underline{5} = \underline{5}$

Shaun has $\underline{5}$ erasers left.

6. Sylvia has 6 markers. She gives 3 markers to Clarice. How many markers does Sylvia have left? What doubles fact can help you?

$\underline{6} + \underline{3} = \underline{9}$

Write a number sentence that tells how many markers are left.

$\underline{6} - \underline{3} = \underline{3}$

Sylvia has $\underline{3}$ markers left.
# Homework Practice

## Use Doubles to Subtract

**Subtract.**

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>10</th>
<th>4</th>
<th>8</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-3</td>
<td>-2</td>
<td>-0</td>
<td>-4</td>
<td>-6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>10</th>
<th>4</th>
<th>18</th>
<th>16</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>-1</td>
<td>-1</td>
<td>-9</td>
<td>-8</td>
<td>-7</td>
</tr>
</tbody>
</table>

3. \[9 - 3 = \] \[8 - 3 = \] \[7 - 1 = \]

4. \[10 - 5 = \] \[10 - 3 = \] \[9 - 9 = \]

**Solve. Write the number sentence.**

5. Brian has 18 CDs. He gives 9 CDs to his brother. How many CDs does Brian still have?

6. Anita checks out 14 library books. She reads seven of the books. How many books does she still have to read?

7. Look back over this page. Circle the problems where you used doubles to subtract. Draw a box around any difference less than 3.
Problem-Solving Practice 2NS2.2, 2MR1.2
Use Doubles to Subtract

Write the number sentence. Use doubles.

1. Fran and her grandmother pick 16 pumpkins. They use 8 pumpkins for pie.
   How many pumpkins are left?
   _____ – _____ = _____ pumpkins

2. Luis picks 14 tomatoes. His dad uses 7 tomatoes for salsa.
   How many tomatoes does Luis have left?
   _____ – _____ = _____ tomatoes

3. Neal has 10 baskets of apples. He gives 5 baskets to his neighbor.
   How many baskets of apples does Neal keep?
   _____ – _____ = _____ baskets

4. The Horn family plants 6 rows of corn. They pick 3 rows of corn.
   How many rows of corn are left to pick?
   _____ – _____ = _____ rows of corn

5. Delia bakes eighteen cherry pies. She sells some pies at a farmer’s market.
   She has nine pies left. How many pies did she sell?
   _____  _____  _____ cherry pies

6. Doug brings 12 peppers to market. At the end of the day, he has six peppers.
   How many peppers did he sell?
   _____  _____  _____ peppers
**Enrich**

**Connecting Numbers**

First add the doubles sums. Then use your answers to subtract.

\[ 6 + 6 = \underline{12} \quad 12 - \underline{6} = \underline{6} \]

\[ 4 + 4 = \underline{8} \quad 8 - \underline{4} = \underline{4} \]

\[ 7 + 7 = \underline{14} \quad 14 - \underline{7} = \underline{7} \]

\[ 3 + 3 = \underline{6} \quad 6 - \underline{3} = \underline{3} \]

\[ 9 + 9 = \underline{18} \quad 18 - \underline{9} = \underline{9} \]

\[ 5 + 5 = \underline{10} \quad 10 - \underline{5} = \underline{5} \]

\[ 2 + 2 = \underline{4} \quad 4 - \underline{2} = \underline{2} \]

\[ 8 + 8 = \underline{16} \quad 16 - \underline{8} = \underline{8} \]
There are 5 dogs. How many legs are there in all?

**Step 1**
Be sure you understand the problem.

What do you know?
- There are 4 legs on a dog.
- There are 5 dogs.

What do you need to find out?
- I need to find how many legs in all.

**Step 2**
Plan

Choose a strategy from the list.

- Draw a Picture
- Make a Table
- Guess and Check
- Find a Pattern
- Make a List

If you know how many legs one dog has, you can use a pattern to figure out how many legs 2 dogs have. Then, you can keep the pattern going.

**Step 3**
Solve

Make a chart.

<table>
<thead>
<tr>
<th>Number of dogs</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of legs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

There are _____ legs in all.

**Step 4**
Check

Look back.

Does my answer make sense?  Yes  No
Reteach (2)  2SDAP2.1, 2MR1.0

Problem-Solving Strategy: Find a Pattern

Solve.

1. Sam and Andy are stacking blocks. They add blocks 4 at a time. If it does not fall, how high will the stack be after each boy takes 3 turns?

<table>
<thead>
<tr>
<th>Turn</th>
<th>Sam</th>
<th>Andy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The stack will be _____ blocks high.

2. Antonio works on his spelling. These are his scores for the last 5 tests. If this pattern continues for 8 tests, what will Antonio’s highest score be?

<table>
<thead>
<tr>
<th>Test</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>10</td>
<td>12</td>
<td>14</td>
<td>16</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Antonio’s highest score will be _____.

3. Rachel’s school bus takes 14 children home. Two children get off at each stop. If this pattern continues, how many stops will it take until there are no more children on the bus?

<table>
<thead>
<tr>
<th>Stop</th>
<th>School</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>School still on bus</td>
<td>14</td>
<td>12</td>
<td>10</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

There are no more children on the bus after ______ stops.
Find a pattern to solve.

1. One week Max rides his bike 2 miles. Week two he rides 6 miles. Week three he rides 10 miles. In week four, he rides 14 miles. If this pattern continues, how many miles does he ride during week 7?

<table>
<thead>
<tr>
<th>week</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>miles</td>
<td>2</td>
<td>6</td>
<td>10</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Max rides _____ miles.

2. A coach orders shirts for the team. The numbers on the first four shirts are 02, 04, 06, and 08. If the pattern stays the same, what will be the numbers on the next three shirts?

<table>
<thead>
<tr>
<th>shirt</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>number</td>
<td>02</td>
<td>04</td>
<td>06</td>
<td>08</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The shirts have numbers _____, _____, and _____.

3. Nell writes numbers on cards and asks her sister to help her with the pattern. So far, the numbers on the cards are 17, 15, 13, 11. If the pattern stays the same, what will the next three cards be?

<table>
<thead>
<tr>
<th>cards</th>
<th>17</th>
<th>15</th>
<th>13</th>
<th>11</th>
<th></th>
<th></th>
</tr>
</thead>
</table>

The next three cards will be _____, _____, and _____.
1. Kim plants tulips. She plants 3 tulips in row one. She plants 6 tulips in row two. She plants 9 tulips in row 3. If she keeps the same pattern, how many tulips will she plant in row 6?

<table>
<thead>
<tr>
<th>Row</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tulips</td>
<td>3</td>
<td>6</td>
<td>9</td>
</tr>
</tbody>
</table>

There will be _____ tulips in row 6.

2. Terry and Pat play a game with colored squares. The pictures show the game after 1, 2, and 3 turns. If the pattern continues, how many squares will be in the game after 8 turns?

<table>
<thead>
<tr>
<th>Turn</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Squares</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
</tbody>
</table>

There will be ____ squares in the game after 8 turns.

3. Beth’s Bookstore starts with 20 puzzle books. An hour later, they have 17 puzzle books. After 2 hours there are 14 puzzle books. If the pattern stays the same, when will there be only 2 puzzle books left to sell?

<table>
<thead>
<tr>
<th>Puzzle Books</th>
<th>20</th>
<th>17</th>
<th>14</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours</td>
<td>Open</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

There will be only 2 puzzle books after _____ hours.
Joshua tells his friend Jake that he has an amazing trick. He says that if you open a book to any page and tell him the number, he can tell you if the page is on the right or the left side of the book.

Jake opens the book to page 10. Joshua tells him that it is on the left.

Jake opens another book to page 25. Joshua tells him page 25 is on the right.

Jake opens a third book to pages 100, 171, 210. Joshua tells him that those pages are left, right, left.

How does Joshua do this amazing trick?

Here is a table to help you figure out the trick.

<table>
<thead>
<tr>
<th>Number</th>
<th>Side</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>left</td>
</tr>
<tr>
<td>75</td>
<td>right</td>
</tr>
<tr>
<td>120</td>
<td>left</td>
</tr>
<tr>
<td>19</td>
<td>right</td>
</tr>
<tr>
<td>77</td>
<td>right</td>
</tr>
<tr>
<td>20</td>
<td>left</td>
</tr>
</tbody>
</table>

What is the trick?

Complete this chart.

<table>
<thead>
<tr>
<th>Number</th>
<th>Side</th>
</tr>
</thead>
<tbody>
<tr>
<td>41</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td></td>
</tr>
<tr>
<td>53</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td></td>
</tr>
</tbody>
</table>
Reteach

Relate Addition to Subtraction

These addition and subtraction facts have the same three numbers.

Use addition facts to subtract.

1. \[ \begin{align*} 4 + 7 &= 11 \\ 11 - 7 &= 4 \end{align*} \]

2. \[ \begin{align*} 3 + 6 &= \_\_\_ \end{align*} \]

3. \[ \begin{align*} 9 + 3 &= \_\_\_ \end{align*} \]

4. \[ \begin{align*} 2 + 5 &= \_\_\_ \end{align*} \]

5. \[ \begin{align*} 2 + 8 &= \_\_\_ \end{align*} \]

6. \[ \begin{align*} 1 + 6 &= \_\_\_ \end{align*} \]

7. \[ \begin{align*} 10 - 2 &= \_\_\_ \end{align*} \]

8. \[ \begin{align*} 7 - 6 &= \_\_\_ \end{align*} \]
Skills Practice

Relate Addition to Subtraction

Use addition facts to subtract.

1. \(8 + 5 = \underline{13}\)  
   \(13 - 5 = \underline{8}\) 
   \(6 + 8 = \underline{14}\)  
   \(14 - 8 = \underline{6}\) 
   \(6 + 7 = \underline{13}\)  
   \(13 - 7 = \underline{6}\)

2. \(4 + 9 = \underline{13}\)  
   \(13 - 4 = \underline{9}\) 
   \(8 + 8 = \underline{16}\)  
   \(16 - 8 = \underline{8}\) 
   \(6 + 9 = \underline{15}\)  
   \(15 - 6 = \underline{9}\)

3. \(3 \quad 11\)  
   \(+ 8\)  
   \(- 8\) 
   \(4 \quad 12\)  
   \(+ 8\)  
   \(- 8\) 
   \(7 \quad 14\)  
   \(+ 7\)  
   \(- 7\)

4. \(8 \quad 15\)  
   \(+ 7\)  
   \(- 8\) 
   \(9 \quad 16\)  
   \(+ 7\)  
   \(- 9\) 
   \(8 \quad 17\)  
   \(+ 9\)  
   \(- 8\)

5. \(5 \quad 14\)  
   \(+ 9\)  
   \(- 5\) 
   \(3 \quad 12\)  
   \(+ 9\)  
   \(- 3\) 
   \(9 \quad 18\)  
   \(+ 9\)  
   \(- 9\)

Solve.

6. There are 16 stamps. Pete uses 8 of the stamps. How many stamps are left?  
   \(\underline{8}\) stamps

7. Megan writes 4 letters on Monday. She writes 9 letters on Tuesday. How many letters does Megan write?  
   \(\underline{13}\) letters
Use addition facts to subtract.

1. \[ \begin{array}{cc|cc} 7 & 12 & 6 & 15 \\ \hline +5 & -5 & +9 & -9 \\ \end{array} \]

2. \[ \begin{array}{cc|cc} 4 & 11 & 7 & 10 \\ \hline +7 & -7 & +3 & -3 \\ \end{array} \]

3. \[ \begin{array}{cc|cc} 9 & 12 & 6 & 12 \\ \hline +3 & -3 & +6 & -6 \\ \end{array} \]

4. \[ \begin{array}{ccc} 9 + 8 = \_\_\_\_ & 8 + 5 = \_\_\_\_ & 7 + 7 = \_\_\_\_ \\ 17 - 8 = \_\_\_\_ & 13 - 5 = \_\_\_\_ & 14 - 7 = \_\_\_\_ \\ \end{array} \]

Write a number sentence to solve.

5. Dean has 15 books. He reads 8 of them. How many books does Dean have left to read?

6. Fay paints 8 pictures in March. She paints 9 pictures in April. How many pictures does Fay paint?
Problem-Solving Practice  2NS2.1, 2MR3.0

Relate Addition to Subtraction

Write a number sentence to solve. Then write a related fact.

1. 5 children start soccer on Monday. 4 more children start soccer on Wednesday.
   How many children in all play soccer?
   ______ + ______ = ______
   ______ children

2. The tennis team has 16 players. 8 players leave the team.
   How many players are still on the team?
   ______ - ______ = ______
   ______ players

3. Ten boys join the model train club. Two boys move away.
   How many boys are in the club?
   ________ boys

   How many players are in the game club now?
   ________ players

5. Write an addition story. Use the numbers 4, 6, and 10.
   ________________________

6. Write the number sentence for your story.
   Then write a related subtraction fact.
   ________________________
Enrich

Use Addition to Subtract

Subtracting Circles

1. \[ \begin{array}{c}
17 \quad \bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc + \\
- 8 \\
\hline
8 \quad + \quad _____ = 17
\end{array} \]

2. \[ \begin{array}{c}
14 \quad \bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc \quad + \\
- 6 \\
\hline
6 \quad + \quad _____ = 14
\end{array} \]

3. \[ \begin{array}{c}
20 \quad \bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc + \\
- 9 \\
\hline
9 \quad + \quad _____ = 20
\end{array} \]

4. \[ \begin{array}{c}
16 \quad \bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc + \\
- 7 \\
\hline
7 \quad + \quad _____ = 16
\end{array} \]
Reteach

Missing Addends

9 + □ = 14
Related facts use the same three numbers.

Write a related fact.
14 − 9 = □,
so, 9 + □ = 14.

Find the missing addend. Draw pictures to help.

1. \[8 + \square = 12\]
   \[12 - 8 = \square\]

2. \[7 + \square = 12\]
   \[12 - 7 = \square\]

3. \[5 + \square = 13\]
   \[13 - 5 = \square\]

4. \[9 + \square = 17\]
   \[17 - 9 = \square\]

5. \[8 + \square = 14\]
   \[14 -\square = 8\]
## Skills Practice

### Missing Addends

Find each missing addend.

1. \( 3 + \boxed{9} = 12 \)  \( 14 - 7 = \boxed{} \)  \( \boxed{} + 8 = 14 \)

2. \( \boxed{} + 7 = 4 \)  \( \boxed{} + 9 - 8 = 7 \)  \( \boxed{} + 7 - 7 = 15 \)

3. \( \boxed{} + 5 = 13 \)  \( 16 - 8 = \boxed{} \)  \( \boxed{} + 7 - 8 = 14 \)  \( \boxed{} + 9 - 14 = 9 \)

4. \( \boxed{} + 11 = 10 \)  \( 18 - 9 = \boxed{} \)  \( \boxed{} + 4 - 11 = 15 \)

5. \( \boxed{} + 4 = 12 \)  \( 6 - 4 = \boxed{} \)  \( \boxed{} + 6 - 7 = 16 \)  \( 17 + \boxed{} - 9 = 16 \)

### Solve.

6. Jeff has 9 stamps. He gets 3 more. How many stamps does he have now?  
   _____ stamps

7. Gina has 15 postcards. 7 are from the United States. How many are not from the United States?  
   _____ postcards
Find each missing addend.

1. \[ \begin{array}{c}
7 + 8 = \square \\
\square \ - 8 = 8 \\
\square \ + 6 = 15 \\
\square \ - 6 = \square \\
\square \ + 13 = 15
\end{array} \]

2. \[ \begin{array}{c}
4 + \square = 17 \\
\square \ - 8 = 9 \\
\square \ + 9 = 16 \\
\square \ - 7 = \square \\
\square \ + 6 = 16
\end{array} \]

3. \[ \begin{array}{c}
9 + \square = 12 \\
\square \ - 5 = \square \\
\square \ + 6 = 14 \\
\square \ + 6 = \square \\
\square \ + 13 = 12
\end{array} \]

4. \[ \begin{array}{c}
9 + \square = 17 \\
8 + 3 = \square \\
\square + 7 = 13
\end{array} \]

Solve. Use related facts.

5. David and his friends are flying 16 kites. Some kites get trapped in trees. 7 kites are still flying. How many kites are in the trees?
   \[ 7 + \square = 16 \]
   \[ 16 - 7 = \square \] 7 kites

6. The scouts have 15 boats. They put some boats in the pond. 9 boats are left on land. How many boats did the scouts put into the pond?
   \[ 9 + \square = 15 \]
   \[ 15 - 9 = \square \] 6 boats
Solve. Use related facts.

1. Anna buys 7 plants. She wants 12 plants. How many more plants does Anna need?

\[
\begin{align*}
7 & + \_ = 12 \\
12 & - 7 = \_
\end{align*}
\]

Anna needs _____ more plants.

2. J.J. needs 14 flower boxes. He has 6 flower boxes. How many more flower boxes does J.J. need?

\[
\begin{align*}
6 & + \_ = 14 \\
14 & - 6 = \_
\end{align*}
\]

J.J. needs _____ more flower boxes.

3. Garden City plans to put 14 trees in a park. The city has 9 trees. How many more trees does the city need?

\[
\begin{align*}
9 & + \_ = 14 \\
14 & - 9 = \_
\end{align*}
\]

The city needs _____ more trees.

4. Louis has 7 roses. He wants 15 roses. How many more roses does Louis need?

\[
\begin{align*}
7 & + \_ = 15 \\
15 & - 7 = \_
\end{align*}
\]

Louis needs _____ more roses.
Enrich
Find the Missing Number

Jamal and Jacob are playing a game called Guess the Card.

Here are the cards that they are using:

1 2 3 4 5 6 7 8 9 10

7 9 ?

Jacob said that the sum of the three cards is 20.
What is the number on the card? ______

? 3 10

Jamal said that his number is the difference between 10 and 3.
What is the number on the card? ______

5 4 ?

Jacob said that the number on the card is the difference between 5 and 4.
What is the number on the card? ______
Some fact families have two addition facts and two subtraction facts.

\[ 9 + 7 = 16 \quad 16 - 7 = 9 \]
\[ 7 + 9 = 16 \quad 16 - 9 = 7 \]

Some fact families have one addition fact and one subtraction fact.

\[ 8 + 8 = 16 \quad 16 - 8 = 8 \]

Complete each fact family.

1. \[ 9 + 4 = 13 \quad 13 - 9 = 4 \]
   \[ 4 + 9 = 13 \quad 13 - 4 = 9 \]

2. \[ 6 + 5 = ____ \quad 11 - 5 = ____ \]
   \[ 5 + 6 = ____ \quad 11 - 6 = ____ \]

3. \[ 9 + 8 = ____ \quad 17 - 9 = ____ \]
   \[ 8 + 9 = ____ \quad 17 - 8 = ____ \]

4. \[ 7 + 7 = ____ \quad 14 - 7 = ____ \]
3-7
Skills Practice
Fact Families

Complete each fact family.

1. \[ \begin{align*}
8 + 6 &= 14 \\
6 + 8 &= \_\_\_ \_ \\
14 - 8 &= \_\_\_ \_ \\
14 - 6 &= \_\_\_ \_ \end{align*} \]

2. \[ \begin{align*}
9 + 4 &= \_\_\_ \_ \\
4 + 9 &= \_\_\_ \_ \\
13 - 9 &= \_\_\_ \_ \\
13 - 4 &= \_\_\_ \_ \end{align*} \]

3. \[ \begin{align*}
8 + 9 &= \_\_\_ \_ \\
9 + 8 &= \_\_\_ \_ \\
17 - 8 &= \_\_\_ \_ \\
17 - 9 &= \_\_\_ \_ \end{align*} \]

4. \[ \begin{align*}
5 + 8 &= \_\_\_ \_ \\
8 + 5 &= \_\_\_ \_ \\
13 - 5 &= \_\_\_ \_ \\
13 - 8 &= \_\_\_ \_ \end{align*} \]

5. \[ \begin{align*}
\_\_\_ + 7 &= 14 \\
14 - 7 &= \_\_\_ \_ \end{align*} \]

6. \[ \begin{align*}
\_\_\_ + 9 &= 18 \\
18 - \_\_\_ &= 9 \end{align*} \]

Solve. Write the number sentences in the fact family.

7. Lucas has 7 toy cars and 8 toy trucks. He has 15 toys in all. Write the number sentences in the fact family.

\[ \begin{align*}
\_\_\_ + \_\_\_ &= \_\_\_ \\
\_\_\_ + \_\_\_ &= \_\_\_ \\
\_\_\_ - \_\_\_ &= \_\_\_ \\
\_\_\_ - \_\_\_ &= \_\_\_ \\
\end{align*} \]
Complete each fact family.

1. \[5 + \_ = 10\]
   \[10 - \_ = 5\]

2. \[6 + \_ = 12\]
   \[12 - \_ = 6\]

3. \[6 + 9 = \_\]
   \[9 + 6 = \_\]
   \[15 - 9 = \_\]
   \[15 - 6 = \_\]

4. \[5 + 9 = \_\]
   \[9 + 5 = \_\]
   \[14 - 9 = \_\]
   \[14 - 5 = \_\]

5. \[7 + \_ = 12\]
   \[\_ + 7 = 12\]
   \[12 - \_ = 7\]
   \[12 - \_ = 5\]

6. \[\_ + 7 = 13\]
   \[7 + \_ = 13\]
   \[13 - \_ = 6\]
   \[13 - \_ = 7\]

Solve. Write the fact family.

7. Lori made 7 bracelets. Then, she made 9 more.
   How many total bracelets did Lori make?

   \[\_ + \_ = \_\]
   \[\_ - \_ = \_\]

   Lori made _____ bracelets in all.
Solve. Write the number sentences in the fact family.

1. Mr. Sims has to fix 14 cars. He has 5 cars left to fix. How many cars has Mr. Sims already fixed?

\[
\begin{align*}
5 + & = \\
+ 5 & = \\
& = \\
& = \\
14 - & = \\
14 - 5 & = \\
\text{____ cars}
\end{align*}
\]

2. Officer Smith visits 17 schools each month. He has 9 schools left to visit. How many schools has he already visited?

\[
\begin{align*}
9 + & = \\
+ 9 & = \\
& = \\
& = \\
14 - & = \\
14 - 9 & = \\
\text{He has visited ____ schools.}
\end{align*}
\]

3. Ms. Grimes is a firefighter. She plans 15 fire drills each month. She has 8 drills left to plan. How many fire drills has she already planned?

\[
\begin{align*}
& + & = \\
+ & = \\
& - & = \\
& - & = \\
\text{She has planned ____ fire drills.}
\end{align*}
\]

4. Doug & Son deliver lunches to 16 schools a day. Today, they have 9 schools left to go to. How many deliveries did they make?

\[
\begin{align*}
& + & = \\
+ & = \\
& - & = \\
& - & = \\
\text{They have made ____ deliveries.}
\end{align*}
\]
The students in the 2nd-grade classes choose their lunch each day.

<table>
<thead>
<tr>
<th></th>
<th>Choice A</th>
<th>Choice B</th>
<th>Number of children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Strong</td>
<td>8</td>
<td>9</td>
<td>?</td>
</tr>
<tr>
<td>Miss Kim</td>
<td>4</td>
<td>5</td>
<td>?</td>
</tr>
<tr>
<td>Mrs. West</td>
<td>5</td>
<td>7</td>
<td>?</td>
</tr>
<tr>
<td>Miss White</td>
<td>6</td>
<td>8</td>
<td>?</td>
</tr>
</tbody>
</table>

Use the numbers from the chart to write a fact family.

**Mr. Strong’s class**

\[ \begin{align*}
\_ \_ \_ \_ + \_ \_ \_ \_ &= \_ \_ \_ \_ \\
\_ \_ \_ \_ + \_ \_ \_ \_ &= \_ \_ \_ \_ \\
\_ \_ \_ \_ - \_ \_ \_ \_ &= \_ \_ \_ \_ \\
\_ \_ \_ \_ - \_ \_ \_ \_ &= \_ \_ \_ \_ 
\end{align*} \]

**Mrs. West’s class**

\[ \begin{align*}
\_ \_ \_ \_ + \_ \_ \_ \_ &= \_ \_ \_ \_ \\
\_ \_ \_ \_ + \_ \_ \_ \_ &= \_ \_ \_ \_ \\
\_ \_ \_ \_ - \_ \_ \_ \_ &= \_ \_ \_ \_ \\
\_ \_ \_ \_ - \_ \_ \_ \_ &= \_ \_ \_ \_ 
\end{align*} \]

**Miss Kim’s class**

\[ \begin{align*}
\_ \_ \_ \_ + \_ \_ \_ \_ &= \_ \_ \_ \_ \\
\_ \_ \_ \_ + \_ \_ \_ \_ &= \_ \_ \_ \_ \\
\_ \_ \_ \_ - \_ \_ \_ \_ &= \_ \_ \_ \_ \\
\_ \_ \_ \_ - \_ \_ \_ \_ &= \_ \_ \_ \_ 
\end{align*} \]

**Miss White’s class**

\[ \begin{align*}
\_ \_ \_ \_ + \_ \_ \_ \_ &= \_ \_ \_ \_ \\
\_ \_ \_ \_ + \_ \_ \_ \_ &= \_ \_ \_ \_ \\
\_ \_ \_ \_ - \_ \_ \_ \_ &= \_ \_ \_ \_ \\
\_ \_ \_ \_ - \_ \_ \_ \_ &= \_ \_ \_ \_ 
\end{align*} \]
Reteach (1)  
2AF1.2, 2MR1.1

Problem-Solving Investigation: Choose a Strategy

1. Kim’s mom makes 13 blueberry pancakes. Kim eats some. There are 9 pancakes left when she finishes. How many pancakes did Kim eat?

Choose a problem-solving strategy to solve.

**Step 1**  
Understand

What do you know?
- Mom makes 13 pancakes.
- 9 pancakes are left.

What do I need to find?
- How many pancakes Kim ate.

**Step 2**  
Plan

How will I find how many Kim ate?
- I can write a number sentence.

**Step 3**  
Solve

13 - 9 = 
Kim ate ____ pancakes.

**Step 4**  
Check

Did I write a number sentence?  yes
Does my answer make sense? yes
Reteach (2)  2AF1.2, 2MR1.1

Problem-Solving Investigation: Choose a Strategy

Problem-Solving Strategies
Find a Pattern
Logical Reasoning
Write a Number Sentence

Solve.

1. Kyra has 17 stickers. She loses 9 stickers. How many stickers does she have left?
   Kyra has ______ stickers.

2. Julia makes a pattern with stars.
   If the pattern continues, how many stars will be in row 8?
   ______ stars

3. Eldon had 15 fish. He gave some to his brother. Now Eldon has 6 fish.
   How many fish did Eldon give to his brother?
   ______ fish
3-8

Skills Practice

Problem-Solving Investigation: Choose a Strategy

Problem-Solving Strategies
Find a Pattern
Logical Reasoning
Write a Number Sentence

Solve.

1. At the toy store there are 3 toys on the top shelf. Six toys are on shelf two. Nine toys are on shelf 3. If the pattern continues, how many toys will be on shelf 6?
   _____ toys.

2. There are 20 toys in the store window. Five toys are trains. Four toys are dolls. Six toys are airplanes. The rest of the toys are games. How many toys are games?
   _____ games

3. Three children are in line to pay for toys. Anna is not second. Ben is in line after Juan. Juan is not first. In what order will the children pay for their toys?
   _____; _____; _____

Show your work here.
Problem-Solving Investigation: Choose a Strategy

Problem-Solving Strategies
Find a Pattern
Logical Reasoning
Write a Number Sentence

Solve.

1. Ray is painting red, yellow, and blue stripes. He paints a yellow stripe next to the blue stripe. The red stripe is not first. He paints a red stripe next to the blue stripe. What is the order of the stripes?
   __________, ______, ______

2. Mrs. Ash buys 16 rolls of wallpaper. Nine rolls are for the downstairs. The rest are for the bedrooms. How many rolls of wallpaper are for the bedrooms?
   ______ rolls

3. Sue buys 17 cans of paint. Four cans are blue. Three cans are green. Two cans are red. The rest of the cans are white. How many cans of paint are white?
   ______ cans of white
Frank the frog likes to play a game with the lily pads in his pond. Each lily pad has a number. As he hops from pad to pad, Frank adds the numbers along the path until he is back home again.

Find one path for Frank that adds up to 17.

Find one path that adds up to 18.

Find one path that adds up to 20.
# Individual Progress Checklist

<table>
<thead>
<tr>
<th>Mastery Level</th>
<th>Lesson</th>
<th>Learning Goals</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>D</td>
<td>M</td>
<td>3-1</td>
</tr>
<tr>
<td>3-2</td>
<td>Find the difference when subtracting all and when subtracting zero.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-3</td>
<td>Use doubles to find the difference between two whole numbers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-4</td>
<td>Recognize and extend patterns, and solve problems involving simple number patterns.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-5</td>
<td>Use the inverse relationship between addition and subtraction to solve problems.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-6</td>
<td>Find the missing number in addition and subtraction sentences.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-7</td>
<td>Identify and write fact families.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-8</td>
<td>Choose a strategy to solve problems.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note to Parents**

B = Beginning; D = Developing; M = Mastered
Are you ready for Chapter 3?

Write the number.

1. 

2. 

Subtract.

3. 

4. 

5. 

6. 

Draw an X over the triangles to solve.

7. 

8. 

9. Mikey had 6 marbles. Two marbles rolled away. How many marbles does he have now?

_____ marbles
Chapter Pretest

Preparation: Cubes are needed for this activity.

Use a number line to count back. [Lesson 3.1]

0 1 2 3 4 5 6 7 8 9 10 12 13 14 15 16 17 18 19 20

1. 4
2. 9
3. 8

Use doubles facts to help you subtract. You may use to help. [Lesson 3.3]

7. 5 + 5 = 10, so 10 − 5 = ...

8. 3 + 5 = ...
9. 4 + 6 = ...
10. 6 + 0 = ...

Use addition facts to subtract. [Lesson 3.5]

8 − 5 = ...
10 − 6 = ...
6 − 0 = ...

Use subtraction facts to help you find a missing addend. [Lesson 3.6]

11. 14 − 6 = 8
12. 15 − 8 = ...
13. 12 − 7 = ...

6 + [ ] = 14
8 + [ ] = 15
7 + [ ] = 12
Mid-Chapter Test

Count back to find the difference. Use the number line. [Lesson 3.1]

1. \[ \begin{array}{c}
\boxed{7} \\
\boxed{-3}
\end{array} \]

2. \[ \begin{array}{c}
\boxed{13} \\
\boxed{-7}
\end{array} \]

3. \[ \begin{array}{c}
\boxed{9} \\
\boxed{-5}
\end{array} \]

4. \[ \begin{array}{c}
\boxed{15} \\
\boxed{-8}
\end{array} \]

Subtract. Circle the problem if the difference is zero. [Lesson 3.2]

5. \[ \begin{array}{c}
\boxed{7} \\
\boxed{-7}
\end{array} \]

6. \[ \begin{array}{c}
\boxed{9} \\
\boxed{-1}
\end{array} \]

7. \[ \begin{array}{c}
\boxed{13} \\
\boxed{-0}
\end{array} \]

8. \[ \begin{array}{c}
\boxed{11} \\
\boxed{-11}
\end{array} \]

Subtract. Circle the problem if you used doubles to subtract. [Lesson 3.3]

9. \[ \begin{array}{c}
\boxed{15} \\
\boxed{-8}
\end{array} \]

10. \[ \begin{array}{c}
\boxed{14} \\
\boxed{-7}
\end{array} \]

11. \[ \begin{array}{c}
\boxed{12} \\
\boxed{-6}
\end{array} \]

12. \[ \begin{array}{c}
\boxed{16} \\
\boxed{-8}
\end{array} \]

Solve. Circle the correct answer. [Lesson 3.3]

13. \[ \begin{array}{c}
8 - 4 = \\
\boxed{12} \quad \boxed{4} \quad \boxed{2} \quad \boxed{0}
\end{array} \]

14. Bridget picks sixteen pumpkins. She sells seven pumpkins. How many pumpkins does Bridget have left? [Lesson 3.5]

\[ \begin{array}{c}
0 \\
\boxed{5} \\
\boxed{9} \\
\boxed{10}
\end{array} \]
Vocabulary Test

Use the words in the box.
Write the correct word in the blank.

1. In the number sentence \(14 - 8 = 6\), the number 6 is the _____________.

2. Addition and subtraction are ____________________________.

3. To find the difference you _____________.

4. Basic facts using the same numbers are _____________________.

Circle the correct answer.

5. Shows a fact family
   A. \(6 + 6 = 12\)    \(7 + 7 = 14\)    \(8 + 8 = 16\)    \(9 + 9 = 18\)
   B. \(8 + 6 = 14\)    \(6 + 8 = 14\)    \(14 - 6 = 8\)    \(14 - 8 = 6\)
   C. \(24 = 2 \text{ tens} + 4 \text{ ones}\)
   D. ____________

6. Shows counting back to subtract
   A. ____________
   B. ____________
   C. ____________
Name

Oral Assessment

Directions: This test targets those students who have developing verbal skills—both oral and written. Ask the questions below and have students record their answers, or record the answers they supply.

Write the following equations on the board:
A. 10 - 6 = 4  B. 14 - 7 = 7  C. 7 - 0 = 7  D. 4 - 4 = 0  E. 15 - 8 = 7

1. Ask, **Which number sentence has a difference of 4?**

2. Ask, **Which problem shows a difference of 0?**

3. Ask, **Which subtraction sentence is related to 8 + 7 = 15?**
   Have students write two more number sentences in the same family.

4. Have students choose the number sentence whose difference can be found using doubles.

5. Ask, **How can you use a number line to count back to find 17 - 3?**

6. Ask, **In the pattern 28, 24, 20, 16 . . ., what number is next? Tell how you know.**

7. Ask, **What two addition facts are related to 16 - 7 = 9?**

Notes and comments

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________
Oral Assessment Response Sheet

1. ________________________________________________________

2. ________________________________________________________

3. ________________________________________________________

4. ________________________________________________________

5. ________________________________________________________

6. ________________________________________________________

7. ________________________________________________________
Listening Assessment

Preparation: Counters and a 0 to 20 number line are needed for this activity.

Ask students to complete each of the following groups of tasks.

1. Use counters to show the number sentence $11 - 4 = 7$.
   Use a second set of counters to show an addition fact related to the subtraction sentence.

2. Use a number line to show how to find the difference of $15 - 8$ by counting back.

3. Use counters to show the subtraction sentence $16 - 8 = 8$. Tell the addition sentence that is related to this subtraction sentence.

4. Use counters to show a subtraction sentence whose difference is zero.
   Use counters to show a different subtraction sentence whose difference is zero.

5. Use counters to show the subtraction sentence $13 - 7 = 6$. Write the remaining number sentences in the fact family.

6. Use a number line to model the following pattern: 20, 18, 16, 14. Write the next 3 numbers in the pattern.
Listening Assessment Response Sheet

1. ______________________  Show your model here.

2. ______________

3. ______________

4. ______________

5. ______________

6. ______________
<table>
<thead>
<tr>
<th>Score</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Student created concept cards illustrating subtraction concepts taught in the lessons. Student covered all the topics from the chapter and used all of the relevant vocabulary. Student organized cards effectively, using a separate card for each strategy and writing in a neat, concise manner.</td>
</tr>
<tr>
<td>2</td>
<td>Student created concept cards illustrating subtraction concepts taught in the lessons. Student covered all the topics from the chapter and used most of the relevant vocabulary.</td>
</tr>
<tr>
<td>1</td>
<td>Student created concept cards illustrating subtraction concepts taught in the lessons. Student covered some concepts, though the cards were unclear and incomplete.</td>
</tr>
<tr>
<td>0</td>
<td>Student did not satisfactorily complete the task; cards were either unfinished or inaccurate.</td>
</tr>
</tbody>
</table>
# Chapter Foldables Rubric

<table>
<thead>
<tr>
<th>Score</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3</strong></td>
<td>Student successfully made, labeled, and used Foldable to record subtraction strategies. Student demonstrated and explained different ways to find a difference, including counting back, subtracting with 0, and using doubles. Student understood how to relate addition and subtraction, and used the relationship to solve problems and check answers.</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>Student successfully made, labeled, and used Foldable to record subtraction strategies. Student demonstrated and explained different ways to find a difference, including counting back, subtracting with 0, and using doubles.</td>
</tr>
<tr>
<td><strong>1</strong></td>
<td>Student successfully made, labeled, and used Foldable to record subtraction strategies. Student correctly identified some ways to find a difference.</td>
</tr>
<tr>
<td><strong>0</strong></td>
<td>Student did not construct Foldable correctly. Student was unable to demonstrate strategies to find a difference, and unable to show the relationship between addition and subtraction.</td>
</tr>
</tbody>
</table>
Name ____________________________

Chapter Test, Form I

Fill in the circle for the correct answer.

1. Which subtraction sentence is shown on the number line?
   [Lesson 3.1]
   - ○ 14 – 11 = 3
   - ○ 11 – 3 = 8
   - ○ 11 – 4 = 7
   - ○ 11 – 8 = 3

2. Which subtraction sentence is shown on the number line?
   [Lesson 3.1]
   - ○ 20 – 17 = 3
   - ○ 20 – 17 = 8
   - ○ 17 – 9 = 8
   - ○ 8 + 9 = 17

3. Subtract. 6 – 6 = [ ]
   [Lesson 3.2]
   - ○ 12
   - ○ 6
   - ○ 1
   - ○ 0

4. Subtract. 8 – 0 = [ ]
   [Lesson 3.2]
   - ○ 8
   - ○ 6
   - ○ 1
   - ○ 0

5. Lisa has 14 pencils. 7 are blue, the rest are red. What fact can she use to find how many pencils are red?
   [Lesson 3.3]
   - ○ 7 + 0 = 0
   - ○ 7 – 7 = 0
   - ○ 7 + 7 = 14
   - ○ 14 + 7 = 21

6. What are the next three numbers in the pattern?
   [Lesson 3.4]
   - ○ 2, 5, 8, 11, [ ], [ ], [ ]
   - ○ 12, 15, 18
   - ○ 14, 17, 20
   - ○ 13, 15, 17
   - ○ 12, 13, 14
7. What number is missing from these related facts?  
[Lesson 3.5]
\[
8 + \square = 13 \\
13 - 8 = \square \\
\square 8 \\
\square 7 \\
\square 6 \\
\square 5
\]

8. What number sentence is missing from this fact family?  [Lesson 3.7]
\[
7 + 9 = 16 \quad 16 - 7 = 9 \\
9 + 7 = 16 \quad \underline{\square} \\
\square 7 - 6 = 1 \\
\square 16 - 9 = 7 \\
\square 9 - 7 = 2 \\
\square 13 + 7 = 20
\]

9. Fifteen seagulls are on the beach. Nine seagulls fly away. Which number sentence shows the number of seagulls left on the beach?  [Lesson 3.8]
\[
\square 9 + 6 = 15 \\
\square 6 + 9 = 15 \\
\square 15 - 6 = 9 \\
\square 15 - 9 = 6
\]

\[
\square 16 more \\
\square 10 more \\
\square 8 more \\
\square 4 more
\]
Chapter Test, Form 2A

Read each question carefully. Fill in the circle for the correct answer.

1. Which number sentence is shown on the number line? [Lesson 3.1]
   - $\bigcirc 20 - 15 = 5$
   - $\bigcirc 20 - 5 = 15$
   - $\bigcirc 15 - 8 = 7$
   - $\bigcirc 8 + 7 = 15$

2. Which number sentence is shown on the number line? [Lesson 3.1]
   - $\bigcirc 20 - 16 = 7$
   - $\bigcirc 16 - 7 = 9$
   - $\bigcirc 16 - 8 = 8$
   - $\bigcirc 9 + 7 = 16$

3. Subtract. $8 - 0 = \square$ [Lesson 3.2]
   - $\bigcirc 8$
   - $\bigcirc 6$
   - $\bigcirc 2$
   - $\bigcirc 0$

4. Subtract. $9 - 9 = \square$ [Lesson 3.2]
   - $\bigcirc 18$
   - $\bigcirc 9$
   - $\bigcirc 2$
   - $\bigcirc 0$

5. Terry has 18 stickers. Some are silver. 9 are gold. What doubles fact can Terry use to find out how many stickers are silver? [Lesson 3.3]
   - $\bigcirc 8 + 10 = 18$
   - $\bigcirc 9 - 0 = 9$
   - $\bigcirc 9 + 9 = 18$
   - $\bigcirc 9 - 9 = 0$

6. What are the next three numbers in the pattern? [Lesson 3.4]
   - $27, 23, 19, 15, \square, \square, \square$
   - $11, 10, 9$
   - $14, 12, 8$
   - $11, 7, 3$
   - $7, 3, 14$

GO ON
7. Complete the related facts.
   [Lesson 3.5]
   \( 7 + \square = 13 \)
   \( 13 - 7 = \square \)
   \( \bigcirc 8 \)
   \( \bigcirc 7 \)
   \( \bigcirc 6 \)
   \( \bigcirc 5 \)

8. What number sentence is missing from this fact family?
   [Lesson 3.7]
   \( 5 + 9 = 14 \quad 14 - 9 = 5 \)
   \( 9 + 5 = 14 \quad \underline{\square} \)
   \( \bigcirc 9 - 5 = 4 \)
   \( \bigcirc 14 + 7 = 21 \)
   \( \bigcirc 9 - 5 = 4 \)
   \( \bigcirc 14 - 5 = 9 \)

9. Thirteen frogs sit on a log. Four frogs jump into the water. Which number sentence tells how many frogs are left on the log?
   [Lesson 3.8]
   \( 9 + 4 = 13 \)
   \( 4 + 9 = 13 \)
   \( 13 - 4 = 9 \)
   \( 13 - 9 = 4 \)

10. Earl counted 8 snakes at the zoo. Mary counts 14. How many more snakes does Mary count than Earl?
    [Lesson 3.1]
    \( \bigcirc 14 \text{ more} \)
    \( \bigcirc 8 \text{ more} \)
    \( \bigcirc 6 \text{ more} \)
    \( \bigcirc 4 \text{ more} \)
Chapter Test, Form 2B

Read each question carefully.
Fill in the circle for the correct answer.

1. Subtract. $11 - 5 = \square$
   [Lesson 3.1]
   ○ 12
   ○ 17
   ○ 6

2. Subtract. $16 - 9 = \square$
   [Lesson 3.1]
   ○ 6
   ○ 7
   ○ 8

3. Subtract. $11 - 0 = \square$
   [Lesson 3.2]
   ○ 11
   ○ 2
   ○ 0

4. Subtract. $7 - 7 = \square$
   [Lesson 3.2]
   ○ 7
   ○ 1
   ○ 0

5. Dale has 14 bunnies. 7 are black. The rest are white. What doubles fact can help you learn how many bunnies are white? [Lesson 3.3]
   ○ $7 - 7 = 0$
   ○ $7 + 7 = 14$
   ○ $7 - 0 = 7$

6. What are the next two numbers in the pattern? 4, 7, 10, 13, 16, $\square$, $\square$ [Lesson 3.4]
   ○ 19, 22
   ○ 17, 18
   ○ 19, 21

GO ON
7. Complete the related facts.  
[Lesson 3.5]  
\[6 + \square = 11\]  
\[11 - 6 = \square\]  
○ 6  
○ 5  
○ 11

8. Which number sentence is missing?  
[Lesson 3.7]  
\[5 + 8 = 13\]  
\[8 + 5 = 13\]  
\[13 - 8 = 5\]  
_______  
○ 8 + 13 = 21  
○ 13 - 5 = 8  
○ 13 + 5 = 18

9. There are 12 hamsters in a cage. Three get out. Which number sentence tells how many are left in the cage?  
[Lesson 3.6]  
\[12 + 3 = 15\]  
\[9 + 12 = 21\]  
\[12 - 3 = 9\]

10. Ken has 8 mice as pets. Marlene has 5 mice. How many more mice does Ken have than Marlene?  
[Lesson 3.1]  
○ 13  
○ 3  
○ 0
Read each question carefully. Write your answer on the line.

Find the difference. [Lesson 3.1]

1. \[16 - 7\]
2. \[15 - 8\]
3. \[14 - 9\]

[Lesson 3.2]

4. \[6 - 0 = \____\]
5. \[8 - 8 = \____\]
6. \[9 - 9 = \____\]
7. \[9 - 0 = \____\]

[Lesson 3.3]

8. Write the doubles fact related to \[16 - 8 = 8\].
9. Write the doubles fact related to \[18 - 9 = 9\].

[Lesson 3.4]

10. Caleb’s puppy, Jack, is growing very fast. He gains about 2 pounds each week. If the pattern continues, how many pounds will Jack weigh after 8 weeks?

<table>
<thead>
<tr>
<th>Week</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of pounds</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Jack will weigh ______ pounds.
11. A bus leaves school with 30 children. At each stop, 4 children leave the bus. How many children will be on the bus after it makes 6 stops? [Lesson 3.4]

<table>
<thead>
<tr>
<th>Stop</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of people</td>
<td>30</td>
<td>26</td>
<td>22</td>
<td>18</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

______ children still on the bus.

12. Write two addition facts related to $17 - 8 = 9$. [Lessons 3.5, 3.6]

________________   __________________

13. Fourteen bunches of roses are at the market. Five are sold. Write a number sentence that shows how many bunches are left. [Lessons 3.5, 3.6, 3.8]

________________

Write an addition sentence from the same fact family.

________________

14. What number sentence is missing from this fact family?

[Lesson 3.7]

$4 + 9 = 13$  
$9 + 4 = 13$  
$13 - 9 = 4$  

________________
Chapter Test, Form 2D

Read each question. Write your answer on the line.

Subtract. [Lesson 3.1]

1. \[ 14 - 6 \]  
2. \[ 15 - 9 \]  
3. \[ 12 - 5 \]  

[Lesson 3.2]

4. \[ 6 - 6 = \]  
5. \[ 8 - 0 = \]  
6. \[ 5 - 5 = \]  
7. \[ 7 - 0 = \]  

8. Write a doubles fact related to \[ 16 - 8 = 8 \]. [Lesson 3.3]  
9. Write a doubles fact related to \[ 18 - 9 = 9 \]. [Lesson 3.3]

10. Jack’s puppy is growing. She gains 2 pounds each week. If the pattern continues, how many pounds will she weigh after 8 weeks? [Lesson 3.4]

<table>
<thead>
<tr>
<th>Week</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of pounds</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

_____ pounds.
11. A bus leaves school with 20 children on it. Two children get off the bus at each stop. How many children will be on the bus after 6 stops? [Lesson 3.4]

<table>
<thead>
<tr>
<th>Stop</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children on the bus</td>
<td>20</td>
<td>18</td>
<td>16</td>
<td>14</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

_____ children still on the bus.

12. Write two addition facts related to $17 - 8 = 9$. [Lessons 3.5, 3.6]

_________________  ____________________

13. There are 14 bunches of roses. Five are sold. Write a number sentence that shows how many bunches are left. [Lesson 3.6]

\[\square - 5 = \square\]

Write an addition sentence from the same fact family.

\[\square + \square = 14\]

14. What number sentence is missing from this fact family? [Lesson 3.7]

\[4 + 9 = 13\]  \[13 - 9 = 4\]
\[9 + 4 = 13\]  \[\underline{\square}\]

15. Hal buys 17 trees. He plants 9. Write a number sentence to show how many trees Hal has left to plant. [Lesson 3.6]

_________________
Cumulative Standardized Test Practice

Read each question carefully. Fill in the circle for the correct answer.

1. What is $11 + 9$? Count on to add. [Lesson 2.2]

   - $\bigcirc$ 2
   - $\bigcirc$ 19
   - $\bigcirc$ 20
   - $\bigcirc$ 99

2. What comes next? [Lesson 1.8]

   - $\bigcirc$
   - $\bigcirc$
   - $\bigcirc$
   - $\bigcirc$

3. 75
What is the place value of the 7? [Lesson 1.2]

   - $\bigcirc$ ones
   - $\bigcirc$ tens
   - $\bigcirc$ sevens
   - $\bigcirc$ hundreds

4. About how many balls are there? Use estimation. [Lesson 1.5]

   - $\bigcirc$ 5
   - $\bigcirc$ 10
   - $\bigcirc$ 20
   - $\bigcirc$ 50

Grade 2
5. Ella’s newborn brother grows every week. He was 7 pounds when he was born. He gained 2 pounds his first month and 3 pounds the second month. How much does her brother weigh after the second month? [Lesson 2.8]

______ pounds

6. Todd has 9 blue marbles and 8 red marbles. What near doubles fact shows how many marbles Todd has in all? [Lesson 2.5]

________________________________________

Write two subtraction facts that are related to your answer. [Lessons 3.5, 3.7]

___________; ___________

7. There were 16 hats at the hat shop at the start of the day. Some were sold. There are 6 hats left at the end of the day. How many hats were sold? [Lessons 3.6, 3.7]

16 – ______ = 6

Write an addition sentence from the same fact family.

________________________________________

8. What number sentence is missing from this fact family? [Lesson 3.7]

4 + 9 = 13
9 + 4 = 13

13 – 9 = 4

_______
Preparation: Connecting cubes, counters, and a number line are needed for this activity.

Directions: Before you begin Chapter 3, distribute these questions to students. Read questions along with students, giving them time to answer each. You may want to ask the same questions after students complete the chapter.

Before Chapter After Chapter

1. \[15 - 8 = \] 
   A) Add on   B) Count Back   C) Use Doubles 
   [Lesson 3.1]

2. Use counters to find the answer. \[16 - 7 = \] 
   [Lesson 3.1]

3. What doubles addition sentence is related to this subtraction problem? \[16 - 8 = 8\] 
   \[8 + 8 = 16\]

4. \[15 - 7 = \] 
   The solution to this problem is called the \[\text{difference}\] 
   [Lesson 3.1]

5. Which of the following is a good estimate for the following subtraction problem? \[31 - 10 = \] 
   About 20
   \[
   \begin{align*}
   31 & \approx 20 \\
   27 & \approx 20 \\
   22 & \approx 20 \\
   \end{align*}
   
   About 20

6. \[13 - 0 = \] and \[13 - 13 = \] 
   \[\text{[Lesson 3.2]}\]

7. David adds 5 fish to his fish tank every day. How many fish will be in the tank after 7 days? 
   \[\text{[Lesson 3.4]}\] 
   \[35\]

Note to Teacher: You may use this number line to help students understand how to solve subtraction by counting back. Solve the problem \[15 - 8\] by starting at 15 and counting back by ones until you have reached eight. Have students say the answer aloud. Then have the students use the number line to help them solve the other problems.

Use the number line to help solve the following problems.

1. \[15 - 8 = \] 
2. \[6 - 6 = \] 
3. \[20 - 10 = \] 
4. \[14 - 7 = \] 
5. \[10 - \_ \_ \_ = 4\]

Tell a friend what you have learned.
Name ____________________________

3-1 Reteach
Count Back to Subtract

Count back to subtract.

1. __________
   7 - 4 = __________

2. __________
   9 - 0 = __________

3. __________
   9 - 9 = __________

Count back to subtract. Show how you use ______ to help.

4. __________
   5 - 1 = __________

5. __________
   6 - 2 = __________

6. __________
   9 - 4 = __________

7. __________
   8 - 6 = __________

8. __________
   4 - 3 = __________

9. __________
   7 - 3 = __________

Skills Practice

Count back to subtract.
Use the number line.

1. 12 - 4 = __________
   11 - 3 = __________
   7 - 1 = __________

2. 8 - 3 = __________
   6 - 2 = __________
   10 - 2 = __________

3. 9 - 1 = __________
   7 - 3 = __________
   12 - 3 = __________

4. 8 - 1 = __________
   11 - 2 = __________
   8 - 2 = __________

5. __________
   10 - 1 = __________
   __________
   7 = 10 - 3

Solve.

6. There are 9 dogs playing at the dog park.
   3 dogs go home.
   How many dogs are left? __________ dogs

7. There are 11 lions and 2 tigers at the zoo.
   How many more lions than tigers are at the zoo?
   __________ lions
Answers (Lesson 3-1)

Name ____________________________

Homework Practice 2NS2.2

Count Back to Subtract

Count back to subtract. Use the number line.

1. \(6 - 2 = \underline{4}\)  

Start at \(\underline{6}\).  

Count back \(\underline{2}\).

2. \(12 - 4 = \underline{8}\)  

Start at \(\underline{12}\).  

Count back \(\underline{4}\).

3. \(11 - 2 = \underline{9}\)  

Start at \(\underline{11}\).  

Count back \(\underline{2}\).

4. \(7 - 2 = \underline{5}\)  

Start at \(\underline{7}\).  

Count back \(\underline{2}\).

5. \(9 - 3 = \underline{6}\)  

Start at \(\underline{9}\).  

Count back \(\underline{3}\).

6. \(12 - 3 = \underline{9}\)  

Start at \(\underline{12}\).  

Count back \(\underline{3}\).

7. \(10 - 1 = \underline{9}\)  

Start at \(\underline{10}\).  

Count back \(\underline{1}\).

Count back to solve.

8. A paper clip holder has twelve clips. Alex uses five paper clips.

How many paper clips are left?  
\(\underline{7}\) paper clips


How many pencils does Marty have left?  
\(\underline{8}\) pencils

Problem-Solving Practice 2NS2.2

Count Back to Subtract

Count back to solve. Use the number line.

1. Tanya has 12 blocks. She gives 5 away.

How can you count back to find out how many she has now?  
Start at \(\underline{12}\).  

Count back \(\underline{5}\) to \(\underline{7}\).  

\(\underline{7}\) blocks

2. Ricky has 10 oranges. He uses 6 to make juice.

How can you count back to find out how many are left?  
Start at \(\underline{10}\).  

Count back \(\underline{6}\) to \(\underline{4}\).  

\(\underline{4}\) oranges left

3. Madison’s class needs to plant 10 trees. They plant 3 trees.

Write a number sentence to tell how many trees are left to plant.  
\(\underline{10} - \underline{3} = \underline{7}\)  

\(\underline{7}\) trees

4. Hank needs to wash 9 windows. He washes 6 windows. Write a number sentence to tell how many windows are left to wash.  
\(\underline{9} - \underline{6} = \underline{3}\)  

\(\underline{3}\) windows

5. Twelve cars and four trucks come to the car wash.

How many more cars than trucks are at the car wash?  
\(\underline{8}\) cars
Answers (Lessons 3-1 and 3-2)

**Reaching**

**Subtract All and Subtract Zero**

1. \[ 5 - 5 = 0 \]
2. \[ 5 - 0 = 5 \]
3. \[ 9 - 9 = 0 \]
4. \[ 6 - 6 = 0 \]
5. \[ 7 - 7 = 0 \]

Subtract: You can cross out pictures to help.

1. \[ 9 - 0 = 9 \]
2. \[ 6 - 0 = 6 \]
3. \[ 4 - 0 = 4 \]
4. \[ 7 - 0 = 7 \]
5. \[ 8 - 0 = 8 \]

Subtract all. You have the same number left.

You have 0 left.

**Enrich**

1. \[ 9 - 2 = ? \]
2. \[ 6 - 4 = ? \]
3. \[ 15 - 3 = ? \]
4. \[ 100 - 5 = ? \]

Say 9, then count back two.

The answer is 7.

Say 6, then count back by 4.

The answer is 2.

Say 15, then count back 3.

The answer is 12.

Say 100, then count back by 5.

The answer is 95.

Write the numbers in the bubble as you say them.
Name ____________________________

3-2

Skills Practice
2NS2.2, 2MR1.2

Subtract All and Subtract Zero

Subtract.

1. 7 - 1 = 6
   9 - 0 = 9
   8 - 8 = 0
   10 - 2 = 8

2. 6 - 6 = 0
   9 - 3 = 6
   6 - 0 = 6
   8 - 1 = 7

3. 9 - 1 = 8
   7 - 7 = 0
   9 - 2 = 7
   10 - 1 = 9

4. 8 - 3 = 5
   9 - 9 = 0
   7 - 2 = 5
   8 - 0 = 8

Solve.

5. 10 children play ball. After they finish, all 10 go back to class. How many children keep playing ball? 0 children

6. 8 girls take a walk. When they reach the park, they all keep walking. How many girls are still taking a walk? 8 girls

Answers (Lesson 3-2)
3-2

Name ____________________________

Problem-Solving Practice 2NS2.2, 2MR1.2

Subtract All and Subtract Zero

Write a number sentence for each. Then solve.

1. 3 bees buzz near a flower. None fly away.
   How many bees are near the flower?
   \[ 3 - 0 = 3 \]
   **3** bees

2. 5 sparrows are in the nest. They all fly away.
   How many sparrows are still in the nest?
   \[ 5 - 5 = 0 \]
   **0** sparrows

3. 8 ducks are swimming in a pond. They all fly away.
   How many ducks are in the pond?
   \[ 8 - 8 = 0 \]
   **0** ducks

   How many squirrels are left?
   \[ 8 - 0 = 8 \]
   **8** squirrels

5. Miguel catches seven spiders. He lets them all go.
   How many spiders are left?
   \[ 5 - 5 = 0 \]
   **0** spiders

6. Write a story that this number sentence would solve.
   \[ 5 - 5 = 0 \]
   **Answers will vary.**

3-2

Name ____________________________

Enrich 2NS2.2, 2MR1.2

Solve and Color

Subtract All

When you subtract a number by the same number, the answer is always 0.

Subtract None

When you subtract zero from a number, the number does not change.

Solve and draw a line to connect the problems that belong to the same fact family.

\[ 14 - 14 = 0 \]
\[ 5 - 0 = 5 \]
\[ 85 - 0 = 85 \]
\[ 75 - 75 = 0 \]
\[ 5 - 5 = 0 \]
\[ 14 - 0 = 14 \]
\[ 75 - 0 = 75 \]
\[ 85 - 85 = 0 \]
\[ 88 - 0 = 88 \]
\[ 88 - 88 = 0 \]
Answers (Lesson 3-3)

Skills Practice

Use Doubles to Subtract

Subtract. Circle any problems in which you can use doubles to subtract.

1. 7 - 7 = 0
   11 - 3 = 8
   12 - 6 = 6
   10 - 3 = 7
   8 - 0 = 8

2. 4 - 0 = 4
   8 - 0 = 8
   4 - 0 = 4
   10 - 3 = 7
   7 - 7 = 0

3. 6 - 3 = 3
   9 - 3 = 6
   6 - 3 = 3
   10 - 3 = 7
   14 - 7 = 7

Solve.

4. 16 - 8 = 8

5. Shaun buys 10 erasers. He gives 5 erasers to Fred. How many erasers does Shaun have left? What doubles fact can help you?
   5 + 5 = 10
   10 - 5 = 5
   5 erasers are left

6. Sylvia has 6 markers. She gives 3 markers to Clarice. How many markers does Sylvia have left? What doubles fact can help you?
   3 + 3 = 6
   6 - 3 = 3
   3 markers are left
Problem-Solving Practice

Use Doubles to Subtract

Write the number sentence. Use doubles.

1. Fran and her grandmother pick 16 pumpkins. They use 8 pumpkins for pie. How many pumpkins are left?
   \[16 - 8 = 8\]
   8 pumpkins

2. Luis picks 14 tomatoes. His dad uses 7 tomatoes for salsa. How many tomatoes does Luis have left?
   \[14 - 7 = 7\]
   7 tomatoes

3. Neal has 10 baskets of apples. He gives 5 baskets to his neighbor. How many baskets of apples does Neal keep?
   \[10 - 5 = 5\]
   5 baskets

4. The Horn family plants 6 rows of corn. They pick 3 rows of corn. How many rows of corn are left to pick?
   \[6 - 3 = 3\]
   3 rows of corn

5. Delia bakes eighteen cherry pies. She sells some pies at a farmer’s market. She has nine pies left. How many pies did she sell?
   \[18 - 9 = 9\]
   9 cherry pies

6. Doug brings 12 peppers to market. At the end of the day, he has six peppers. How many peppers did he sell?
   \[12 - 6 = 6\]
   6 peppers
Name ________________________________

3-3

Enrich

Connecting Numbers

First add the doubles sums.
Then use your answers to subtract.

6 + 6 = 12
12 − 6 = 6

4 + 4 = 8
8 − 4 = 4

7 + 7 = 14
14 − 7 = 7

3 + 3 = 6
6 − 3 = 3

9 + 9 = 18
18 − 9 = 9

5 + 5 = 10
10 − 5 = 5

2 + 2 = 4
4 − 2 = 2

8 + 8 = 16
16 − 8 = 8

Reteach (1)

Name ________________________________

3-4

Problem-Solving Strategy: Find a Pattern

There are 5 dogs. How many legs are there in all?

Step 1

Understand

Be sure you understand the problem.

What do you know?

• There are 4 legs on a dog.

• There are 5 dogs.

What do you need to find out?

• I need to find how many legs in all.

Step 2

Plan

Choose a strategy from the list.

• Draw a Picture
• Make a Table
• Guess and Check
• Find a Pattern
• Make a List

If you know how many legs one dog has, you can use a pattern to figure out how many legs 2 dogs have. Then, you can keep the pattern going.

Step 3

Solve

Number of dogs
1
2
3
4
5

Number of legs

4
8
12
16
20

There are 20 legs in all.

Step 4

Check

Look back.

Does my answer make sense?

Yes

No
Name ________________

3-4

Re teach (2)  2SDAP2.1, 2MR1.0

Problem-Solving Strategy: Find a Pattern

Solve.

1. Sam and Andy are stacking blocks. They add blocks 4 at a time. If it does not fall, how high will the stack be after each boy takes 3 turns?

<table>
<thead>
<tr>
<th>Turn</th>
<th>Sam</th>
<th>Andy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>24</td>
</tr>
</tbody>
</table>

The stack will be __24__ blocks high.

2. Antonio works on his spelling. These are his scores for the last 5 tests. If this pattern continues for 8 tests, what will Antonio’s highest score be?

<table>
<thead>
<tr>
<th>Test</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>10</td>
<td>12</td>
<td>14</td>
<td>16</td>
<td>20</td>
<td>22</td>
<td>24</td>
<td>24</td>
</tr>
</tbody>
</table>

Antonio’s highest score will be __24__.

3. Rachel’s school bus takes 14 children home. Two children get off at each stop. If this pattern continues, how many stops will it take until there are no more children on the bus?

<table>
<thead>
<tr>
<th>Stop</th>
<th>School</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Children still on bus</td>
<td>14</td>
<td>12</td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

There are no more children on the bus after __7__ stops.

Name ________________

3-4

Skills Practice  2SDAP2.1, 2MR1.0

Problem-Solving Strategy: Find a Pattern

Find a pattern to solve.

1. One week Max rides his bike 2 miles. Week two he rides 6 miles. Week three he rides 10 miles. In week four, he rides 14 miles. If this pattern continues, how many miles does he ride during week 7?

<table>
<thead>
<tr>
<th>week</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>miles</td>
<td>2</td>
<td>6</td>
<td>10</td>
<td>14</td>
<td>18</td>
<td>22</td>
<td>26</td>
</tr>
</tbody>
</table>

Max rides __26__ miles.

2. A coach orders shirts for the team. The numbers on the first four shirts are 02, 04, 06, and 08. If the pattern stays the same, what will be the numbers on the next three shirts?

<table>
<thead>
<tr>
<th>shirt</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>number</td>
<td>02</td>
<td>04</td>
<td>06</td>
<td>08</td>
<td>10</td>
<td>12</td>
<td>14</td>
</tr>
</tbody>
</table>

The shirts have numbers __10__, __12__, and __14__.

3. Nell writes numbers on cards and asks her sister to help her with the pattern. So far, the numbers on the cards are 17, 15, 13, 11. If the pattern stays the same, what will the next three cards be?

| cards | 17 | 15 | 13 | 11 | 9 | 7 | 5 |

The next three cards will be __9__, __7__, and __5__. 
### Homework Practice

#### Problem-Solving Strategy: Find a Pattern

1. Kim plants tulips. She plants 3 tulips in row one. She plants 6 tulips in row two. She plants 9 tulips in row 3. If she keeps the same pattern, how many tulips will she plant in row 6?

<table>
<thead>
<tr>
<th>Row</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tulips</td>
<td>3</td>
<td>6</td>
<td>9</td>
<td>12</td>
<td>15</td>
<td>18</td>
</tr>
</tbody>
</table>

   There will be **18** tulips in row 6.

2. Terry and Pat play a game with colored squares. The pictures show the game after 1, 2, and 3 turns. If the pattern continues, how many squares will be in the game after 8 turns?

<table>
<thead>
<tr>
<th>Turn 1</th>
<th>Turn 2</th>
<th>Turn 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turn</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Squares</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

   There will be **16** squares in the game after 8 turns.

3. Beth’s Bookstore starts with 20 puzzle books. An hour later, they have 17 puzzle books. After 2 hours there are 14 puzzle books. If the pattern stays the same, when will there be only 2 puzzle books left to sell?

<table>
<thead>
<tr>
<th>Puzzle Books</th>
<th>20</th>
<th>17</th>
<th>14</th>
<th>11</th>
<th>8</th>
<th>5</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours</td>
<td>Open</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

   There will be only 2 puzzle books after **6** hours.

### Enrich

#### Page Problems

Joshua tells his friend Jake that he has an amazing trick. He says that if you open a book to any page and tell him the number, he can tell you if the page is on the right or the left side of the book.

Jake opens the book to page 10. Joshua tells him that it is on the left.

Jake opens another book to page 25. Joshua tells him page 25 is on the right.

Jake opens a third book to pages 100, 171, 210. Joshua tells him those pages are left, right, left.

How does Joshua do this amazing trick?

Here is a table to help you figure out the trick.

<table>
<thead>
<tr>
<th>Page</th>
<th>Left/Right</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>left</td>
</tr>
<tr>
<td>75</td>
<td>right</td>
</tr>
<tr>
<td>120</td>
<td>left</td>
</tr>
<tr>
<td>19</td>
<td>right</td>
</tr>
<tr>
<td>77</td>
<td>right</td>
</tr>
<tr>
<td>20</td>
<td>left</td>
</tr>
</tbody>
</table>

What is the trick? **Sample answer:** The trick is that

- **pages on the left side end in 0, 2, 4, 6, or 8** and
- **pages on the right side end in 1, 3, 5, 7, or 9.**

Complete this chart.

<table>
<thead>
<tr>
<th>Page</th>
<th>Right/Left</th>
</tr>
</thead>
<tbody>
<tr>
<td>41</td>
<td>right</td>
</tr>
<tr>
<td>6</td>
<td>left</td>
</tr>
<tr>
<td>17</td>
<td>right</td>
</tr>
<tr>
<td>100</td>
<td>left</td>
</tr>
<tr>
<td>53</td>
<td>right</td>
</tr>
<tr>
<td>39</td>
<td>right</td>
</tr>
</tbody>
</table>
3-5

**Reteach**

*Relate Addition to Subtraction*

These addition and subtraction facts have the same three numbers.

1. \(8 + 4 = \underline{12}\)
2. \(12 - 4 = \underline{8}\)

Use addition facts to subtract.

1. \[4 + 7 = \underline{11}\]
   \[11 - 7 = \underline{4}\]
2. \[3 + 6 = \underline{9}\]
   \[9 - 3 = \underline{6}\]
3. \[9 + 3 = \underline{12}\]
   \[12 - 3 = \underline{9}\]
4. \[2 + 5 = \underline{7}\]
   \[7 - 5 = \underline{2}\]
5. \[2 + 8 = \underline{10}\]
   \[10 - 2 = \underline{8}\]

**Skills Practice**

*Relate Addition to Subtraction*

**Use addition facts to subtract.**

1. \[8 + 5 = \underline{13}\] \[6 + 8 = \underline{14}\] \[6 + 7 = \underline{13}\]
   \[13 - 5 = \underline{8}\] \[14 - 8 = \underline{6}\] \[13 - 7 = \underline{6}\]
2. \[4 + 9 = \underline{13}\] \[8 + 8 = \underline{16}\] \[6 + 9 = \underline{15}\]
   \[13 - 4 = \underline{9}\] \[16 - 8 = \underline{8}\] \[15 - 6 = \underline{9}\]
3. \[3 + 9 = \underline{12}\] \[4 + 8 = \underline{12}\] \[7 + 7 = \underline{14}\]
   \[11 + 8 = \underline{19}\] \[12 + 8 = \underline{20}\] \[14 + 7 = \underline{21}\]
4. \[8 + 7 = \underline{15}\] \[9 + 6 = \underline{15}\] \[8 + 9 = \underline{17}\]
   \[15 + 7 = \underline{22}\] \[16 + 7 = \underline{23}\] \[17 + 9 = \underline{26}\]
5. \[5 + 9 = \underline{14}\] \[3 + 9 = \underline{12}\] \[9 + 9 = \underline{18}\]
   \[14 + 9 = \underline{23}\] \[12 + 9 = \underline{21}\] \[18 + 9 = \underline{27}\]

**Solve.**

6. There are 16 stamps. Pete uses 8 of the stamps. How many stamps are left? \(\underline{8}\) stamps
7. Megan writes 4 letters on Monday. She writes 9 letters on Tuesday. How many letters does Megan write? \(\underline{13}\) letters
3-5 Homework Practice  
Relate Addition to Subtraction

Use addition facts to subtract.

1. 7 + 5 = 12  12 - 5 = 7
2. 4 + 7 = 11  11 - 7 = 4
3. 9 + 3 = 12  12 - 3 = 9
4. 9 + 8 = 17  17 - 8 = 9

Write a number sentence to solve.

5. Dean has 15 books. He reads 8 of them. How many books does Dean have left to read?
   15 - 8 = 7 books
6. Fay paints 8 pictures in March. She paints 9 pictures in April. How many pictures does Fay paint?
   8 + 9 = 17 pictures

3-5 Problem-Solving Practice  
Relate Addition to Subtraction

Write a number sentence to solve. Then write a related fact.

1. 5 children start soccer on Monday. 4 more children start soccer on Wednesday. How many children in all play soccer?
   5 + 4 = 9  9 - 4 = 5 or
2. The tennis team has 16 players. 8 players leave the team. How many players are still on the team?
   16 - 8 = 8  8 + 8 = 16
3. Ten boys join the model train club. Two boys move away. How many boys are in the club?
   10 - 2 = 8  8 + 2 = 10 or
4. Six players start a game club. Nine new players join. How many players are in the game club now?
   6 + 9 = 15  15 - 9 = 6 or
5. Write an addition story. Use the numbers 4, 6, and 10. Then write a related subtraction fact.
   Then write a related subtraction fact.
   6 + 4 = 10 or 4 + 6 = 10
   10 - 6 = 4 or 10 - 4 = 6
   Answers will vary.
**Enrich**

Use Addition to Subtract

**Subtracting Circles**

1. \[17 \begin{array}{c} \hline \end{array} 8 \] + 9 = 17

2. \[14 \begin{array}{c} \hline \end{array} 6 \] + 8 = 14

3. \[20 \begin{array}{c} \hline \end{array} 9 \] + 11 = 20

4. \[16 \begin{array}{c} \hline \end{array} 7 \] + 9 = 16

**Reteach**

Missing Addends

9 + \[\square\] = 14

Write a related fact.

14 - 9 = 5, so, 9 + 5 = 14.

Find the missing addend. Draw pictures to help.

1. \[8 + \boxed{4} = 12\]
   12 - 8 = 4

2. \[7 + \boxed{5} = 12\]
   12 - 7 = 5

3. \[5 + \boxed{8} = 13\]
   13 - 5 = 8

4. \[9 + \boxed{8} = 17\]
   17 - 9 = 8

5. \[8 + \boxed{6} = 14\]
   14 - 6 = 8
Answers (Lesson 3-6)

Find each missing addend.

1. 9 + 12 = 21
2. 14 - 7 = 7
3. 8 + 9 = 17
4. 10 + 8 = 18
5. 5 + 9 = 14
6. 15 - 9 = 6
7. 16 - 7 = 9
8. 13 - 5 = 8
9. 14 - 6 = 8
10. 10 - 4 = 6
11. 11 - 5 = 6
12. 12 - 6 = 6
13. 13 - 7 = 6
14. 14 - 8 = 6
15. 15 - 9 = 6
16. 16 - 10 = 6
17. 17 - 11 = 6
18. 18 - 12 = 6
19. 19 - 13 = 6
20. 20 - 14 = 6
21. 21 - 16 = 5
22. 22 - 17 = 5
23. 23 - 18 = 5
24. 24 - 19 = 5
25. 25 - 20 = 5
26. 26 - 21 = 5
27. 27 - 22 = 5
28. 28 - 23 = 5
29. 29 - 24 = 5
30. 30 - 25 = 5
31. 31 - 26 = 5
32. 32 - 27 = 5
33. 33 - 28 = 5
34. 34 - 29 = 5
35. 35 - 30 = 5
36. 36 - 31 = 5
37. 37 - 32 = 5
38. 38 - 33 = 5
39. 39 - 34 = 5
40. 40 - 35 = 5
41. 41 - 36 = 5
42. 42 - 37 = 5
43. 43 - 38 = 5
44. 44 - 39 = 5
45. 45 - 40 = 5
46. 46 - 41 = 5
47. 47 - 42 = 5
48. 48 - 43 = 5
49. 49 - 44 = 5
50. 50 - 45 = 5
51. 51 - 46 = 5
52. 52 - 47 = 5
53. 53 - 48 = 5
54. 54 - 49 = 5
55. 55 - 50 = 5
56. 56 - 51 = 5
57. 57 - 52 = 5
58. 58 - 53 = 5
59. 59 - 54 = 5
60. 60 - 55 = 5
61. 61 - 56 = 5
62. 62 - 57 = 5
63. 63 - 58 = 5
64. 64 - 59 = 5
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66. 66 - 61 = 5
67. 67 - 62 = 5
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69. 69 - 64 = 5
70. 70 - 65 = 5
71. 71 - 66 = 5
72. 72 - 67 = 5
73. 73 - 68 = 5
74. 74 - 69 = 5
75. 75 - 70 = 5
76. 76 - 71 = 5
77. 77 - 72 = 5
78. 78 - 73 = 5
79. 79 - 74 = 5
80. 80 - 75 = 5
81. 81 - 76 = 5
82. 82 - 77 = 5
83. 83 - 78 = 5
84. 84 - 79 = 5
85. 85 - 80 = 5
86. 86 - 81 = 5
87. 87 - 82 = 5
88. 88 - 83 = 5
89. 89 - 84 = 5
90. 90 - 85 = 5
91. 91 - 86 = 5
92. 92 - 87 = 5
93. 93 - 88 = 5
94. 94 - 89 = 5
95. 95 - 90 = 5
96. 96 - 91 = 5
97. 97 - 92 = 5
98. 98 - 93 = 5
99. 99 - 94 = 5
100. 100 - 95 = 5

Solve.

5. David and his friends are flying 16 kites. Some kites get trapped in trees. 7 kites are still flying. How many kites are in the trees? 7 + 9 = 16
4. The scouts have 15 boats. They put some boats in the pond. 9 boats are left on land. How many boats did the scouts put into the pond? 9 + 6 = 15
3. Gina has 15 postcards. 7 are from the United States. How many are not from the United States? 8 postcards
2. Jeff has 9 stamps. He gets 3 more. How many stamps does he have now? 12 stamps
1. 3-6 Homework Practice

Name Skills Practice Missing Addends

3-6 Answers

Chapter 3

Grade 2 A15
Answers (Lesson 3-6)

Jomar and Jacob are playing a game called Guess the Card. Here are the cards that they are using:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>7</td>
<td></td>
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<td></td>
<td></td>
<td>3</td>
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<td></td>
</tr>
<tr>
<td>?</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td></td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Jacob said that the sum of the three cards is 20. What is the number on the card?

3

Jomar said that his number is the difference between 10 and 3. What is the number on the card?

7

Jacob said that the number on the card is the difference between 5 and 4. What is the number on the card?

1

---

Problem-Solving Practice

1. Anna buys 7 plants. She wants 12 plants. How many more plants does Anna need?

Anna needs 5 more plants.

2. J.J. needs 14 flower boxes. He has 6 flower boxes. How many more flower boxes does J.J. need?

J.J. needs 8 more flower boxes.

3. Garden City plans to put 14 trees in a park. The city has 9 trees. How many more trees does the city need?

The city needs 5 more trees.

4. Louis has 7 roses. He wants 15 roses. How many more roses does Louis need?

Louis needs 8 more roses.
Answers (Lesson 3-7)

Skills Practice

Fact Families

Complete each fact family.

1. 9 + 4 = 13
   4 + 9 = 13
   13 - 4 = 9
   13 - 9 = 4

2. 8 + 6 = 14
   6 + 8 = 14
   14 - 6 = 8
   14 - 8 = 6

3. 7 + 9 = 16
   9 + 7 = 16
   16 - 7 = 9
   16 - 9 = 7

4. 6 + 5 = 11
   5 + 6 = 11
   11 - 5 = 6
   11 - 6 = 5

5. 8 + 9 = 17
   9 + 8 = 17
   17 - 8 = 9
   17 - 9 = 8

Solve. Write the number sentences in the fact family.

7. Lucas has 7 toy cars and 8 toy trucks. He has 15 toys in all.
   Write the number sentences in the fact family.

   7 + 8 = 15
   8 + 7 = 15
   15 - 7 = 8
   15 - 8 = 7
Name

3-7

Homework Practice

Fact Families

Complete each fact family.

1. \( 5 + \underline{5} = 10 \)
   \( \underline{10} - \underline{5} = 5 \)
2. \( 6 + \underline{6} = 12 \)
   \( \underline{12} - \underline{6} = 6 \)
3. \( 6 + 9 = \underline{15} \)
   \( 9 + 6 = \underline{15} \)
   \( 15 - 9 = \underline{6} \)
   \( 15 - 6 = \underline{9} \)
4. \( 5 + 9 = \underline{14} \)
   \( 9 + 5 = \underline{14} \)
   \( 14 - 9 = \underline{5} \)
   \( 14 - 5 = \underline{9} \)
5. \( 7 + \underline{5} = 12 \)
   \( \underline{7} + 5 = 12 \)
   \( 12 - \underline{5} = 7 \)
   \( 12 - \underline{7} = 5 \)
6. \( 6 + 7 = 13 \)
   \( \underline{6} + 7 = 13 \)
   \( 13 - \underline{6} = 7 \)
   \( 13 - \underline{7} = 6 \)

Solve. Write the fact family.

7. Lori made 7 bracelets. Then, she made 9 more.
   How many total bracelets did Lori make?
   \( \underline{7} + 9 = 16 \)
   \( 9 + 7 = 16 \)
   \( 16 - 9 = 7 \)
   \( 16 - 7 = 9 \)
   Lori made \( \underline{16} \) bracelets in all.

Problem-Solving Practice

Fact Families

Solve. Write the number sentences in the fact family.

1. Mr. Sims has to fix 14 cars. He has 5 cars left to fix. How many cars has Mr. Sims already fixed?
   \( \underline{14} - \underline{9} = 5 \)
   \( \underline{9} + \underline{5} = 14 \)
   \( 14 - 5 = \underline{9} \)

2. Officer Smith visits 17 schools each month. He has 9 schools left to visit. How many schools has he already visited?
   \( \underline{17} - \underline{8} = 9 \)
   \( \underline{8} + \underline{9} = 17 \)
   \( 17 - 9 = \underline{8} \)

3. Ms. Grimes is a firefighter. She plans 15 fire drills each month. She has 8 drills left to plan. How many fire drills has she already planned?
   \( \underline{15} - \underline{7} = 8 \)
   \( \underline{15} - \underline{8} = 7 \)
   \( \underline{7} + \underline{8} = 15 \)
   \( 15 - \underline{5} = 10 \)
   She has planned \( \underline{7} \) fire drills.

4. Doug & Son deliver lunches to 16 schools a day. Today, they have 9 schools left to go to. How many deliveries did they make?
   \( \underline{16} - \underline{7} = 9 \)
   \( \underline{16} - \underline{9} = 7 \)
   \( \underline{9} + \underline{7} = 16 \)
   \( 7 + \underline{9} = 16 \)
   They have made \( \underline{7} \) deliveries.
Name ____________________________

3-7  Enrich
Lunch Count

The students in the 2nd-grade classes choose their lunch each day.

<table>
<thead>
<tr>
<th>Choice A</th>
<th>Choice B</th>
<th>Number of children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Strong</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Miss Kim</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Mrs. West</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Miss White</td>
<td>6</td>
<td>8</td>
</tr>
</tbody>
</table>

Use the numbers from the chart to write a fact family.

Mr. Strong’s class

\[8 + 9 = 17\]
\[9 + 8 = 17\]
\[17 - 8 = 9\]
\[17 - 9 = 8\]

Miss Kim’s class

\[4 + 5 = 9\]
\[5 + 4 = 9\]
\[9 - 5 = 4\]
\[9 - 4 = 5\]

Mrs. West’s class

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

Miss White’s class

\[6 + 8 = 14\]
\[8 + 6 = 14\]
\[14 - 8 = 6\]
\[14 - 6 = 8\]

Name ____________________________

3-8  Reteach (1)
Problem-Solving Investigation: Choose a Strategy

1. Kim’s mom makes 13 blueberry pancakes. Kim eats some. There are 9 pancakes left when she finishes. How many pancakes did Kim eat?

Choose a problem-solving strategy to solve.

Step 1  Understand

What do you know?

Mom makes 13 pancakes.
9 pancakes are left.

What do I need to find?

How many pancakes Kim ate.

Step 2  Plan

How will I find how many Kim ate?

I can write a number sentence.

Step 3  Solve

13 - 9 = 4
Kim ate 4 pancakes.

Step 4  Check

Did I write a number sentence? Yes
Does my answer make sense? Yes
Problem-Solving Investigation: Choose a Strategy

**Problem-Solving Strategies**
- Find a Pattern
- Logical Reasoning
- Write a Number Sentence

**Solve.**

1. Kyra has 17 stickers. She loses 9 stickers. How many stickers does she have left?

   Kyra has **8** stickers.

2. Julia makes a pattern with stars.

   ![Star Pattern]

   If the pattern continues, how many stars will be in row 8?

   **16** stars

3. Eldon had 15 fish. He gave some to his brother. Now Eldon has 6 fish.

   How many fish did Eldon give to his brother?

   **9** fish

Show your work here.

**Reteach (2)**

1. Kyra has 17 stickers. She loses 9 stickers. How many stickers does she have left?

   Kyra has **8** stickers.

2. Julia makes a pattern with stars.

   ![Star Pattern]

   If the pattern continues, how many stars will be in row 8?

   **16** stars

3. Eldon had 15 fish. He gave some to his brother. Now Eldon has 6 fish.

   How many fish did Eldon give to his brother?

   **9** fish

Show your work here.
Solve.

1. Ray is painting red, yellow, and blue stripes. He paints the yellow stripe next to the blue stripe. The red stripe is not first. He paints the red stripe next to the blue stripe. What is the order of the stripes?

   yellow, blue, red

2. Mrs. Ash buys 16 rolls of wallpaper. Nine rolls are for the downstairs. The rest are for the bedrooms. How many rolls of wallpaper are for the bedrooms?

   7 rolls

3. Sue buys 17 cans of paint. Four cans are blue. Three cans are green. Two cans are red. The rest of the cans are white. How many cans of paint are white?

   8 cans of white
Diagnostic Test

Are you ready for Chapter 3?

Write the number.

1. __5__
2. __9__

Subtract.

3. 5 – 3 = __2__
4. 6 – 4 = __2__

5. 7 – 3 = __4__
6. 8 – 8 = __0__

Draw an X over the triangles to solve.

7. __5__

Mikey had 6 marbles. Two marbles rolled away.

How many marbles does he have now? __4__ marbles

Chapter Pretest

Preparation: Cubes are needed for this activity.

Use a number line to count back. [Lesson 3.1]

1. 4 - 3 = __1__
2. 9 - 4 = __5__
3. 8 - 5 = __3__

Solve. You may use ___ to help. [Lesson 3.2]

4. 7 + 0 = __7__
5. 7 - 7 = __0__
6. 11 - 0 = __11__

Use doubles facts to help you subtract. You may use ___ to help. [Lesson 3.3]

7. 5 + 5 = __10__, so 10 - 5 = __5__
8. 7 + 7 = __14__, so 14 - 7 = __7__

Use addition facts to subtract. [Lesson 3.5]

9. 4 + 6 = __10__
10. 6 + 0 = __6__

Use subtraction facts to help you find a missing addend. [Lesson 3.6]

11. 14 - 6 = __8__
12. 15 - 8 = __7__
13. 12 - 7 = __5__
Mid-Chapter Test

Use the number line. [Lesson 3.1]

1. 7
2. 13
3. 9
4. 15

\[ \begin{array}{c}
\text{difference} \\
\text{subtract} \\
\text{inverse operations} \\
\text{related facts}
\end{array} \]

Subtract. Circle the problem if the difference is zero. [Lesson 3.2]

5. 7
6. 9
7. 13
8. 11

\[ \begin{array}{c}
\text{difference} \\
\text{subtract} \\
\text{inverse operations} \\
\text{related facts}
\end{array} \]

Subtract. Circle the problem if you used doubles to subtract. [Lesson 3.3]

9. 15
10. 14
11. 12
12. 16

Solve. Circle the correct answer. [Lesson 3.3]

13. 8 – 4 = 
14. Bridget picks sixteen pumpkins. She sells seven pumpkins. How many pumpkins does Bridget have left? [Lesson 3.5]

Vocabulary Test

Use the words in the box. Write the correct word in the blank.

1. In the number sentence 14 – 8 = 6, the number 6 is the difference.

2. Addition and subtraction are inverse operations.

3. To find the difference you subtract.

4. Basic facts using the same numbers are related facts.

Circle the correct answer.

5. Shows a fact family

A. \(9 + 6 = 12\) \(7 + 7 = 14\) \(8 + 8 = 16\) \(9 + 9 = 18\)
B. \(8 + 6 = 14\) \(6 + 8 = 14\) \(14 - 6 = 8\) \(14 - 8 = 6\)
C. \(24 = 2\ \text{tens} + 4\ \text{ones}\)
D. \(0\ \text{ones} + 10\ \text{tens} = 100\)

6. Shows counting back to subtract

A. \(0 \text{ ones} + 10 \text{ tens} = 100\)
B. \(0 \text{ ones} + 10 \text{ tens} = 100\)
C. \(0 \text{ ones} + 10 \text{ tens} = 100\)
1. A; 10 – 6 = 4
2. D; 4 – 4 = 0
3. E; 15 – 8 = 7; 15 – 7 = 8, 7 + 8 = 15
4. B; 14 – 7 = 7
5. 8 + 8 = 16
6. Answers will vary.
7. Answers will vary.

1. Start at 17 and count backward 3.
2. Each time the number drops by 4.
3. 8 + 8 = 16
4. Answers will vary.
5. 13 – 6 = 7
6. Answers will vary.
7. 9 + 7 = 16, 7 + 9 = 16

1. Show your model here.

1. 7 + 4 = 11 or
2. 4 + 7 = 11
3. 8 + 8 = 16
4. Answers will vary.
5. 13 – 6 = 7
6. Answers will vary.
7. Answers will vary.
7. What number is missing from these related facts?

8  +  7 = 13
13  -  7 = 6
13  -  8 = 5
16  -  9 = 7
16  -  7 = 9

8. What number sentence is missing from this fact family?

7 + 9 = 16
16  -  7 = 9
9 + 7 = 16

9. Fifteen seagulls are on the beach. Nine seagulls fly away. Which number sentence shows the number of seagulls left on the beach?

6 + 9 = 15
15  -  6 = 9
15  -  9 = 6

10. Roy counts 12 birds. Junior counts 4 birds. How many more birds does Roy count than Junior?

12  -  4 = 8
10  -  6 = 4
14  -  6 = 8

Name

Chapter Test, Form 1

(continued)
Chapter Test, Form 2A

Name

1. Which number sentence is shown on the number line?

\[ \begin{align*}
&\text{Lesson 3.1} \\
&5 + 9 = 14 \\
&9 + 5 = 14
\end{align*} \]

[ ] 5 + 9 = 14 correct

[ ] 9 + 5 = 14 conceptual error

[ ] 8 + 6 = 15 conceptual error

2. Which number sentence is shown on the number line?

\[ \begin{align*}
&\text{Lesson 3.2} \\
&20 - 16 = 4 \\
&16 - 8 = 8
\end{align*} \]

[ ] 20 - 16 = 4 correct

[ ] 16 - 8 = 8 conceptual error

[ ] 9 - 7 = 7 procedural error

3. Subtract. 8 - 0 = \[ \text{Lesson 3.3} \]

\[ \begin{align*}
&9 - 0 = 9 \\
&8 + 0 = 8
\end{align*} \]

[ ] 9 - 0 = 9 correct

[ ] 8 + 0 = 8 conceptual error

[ ] 8 - 0 = 8 conceptual error

4. Subtract. 9 - 9 = \[ \text{Lesson 3.4} \]

\[ \begin{align*}
&9 - 9 = 0 \\
&14 - 5 = 9
\end{align*} \]

[ ] 9 - 9 = 0 conceptual error

[ ] 14 - 5 = 9 conceptual error

[ ] 14 - 7 = 7 procedural error

5. Terry has 18 stickers. Some are silver, 9 are gold. What doubles fact can Terry use to find out how many stickers are silver? \[ \text{Lesson 3.5} \]

\[ \begin{align*}
&8 + 9 = 17 \\
&9 + 9 = 18
\end{align*} \]

[ ] 8 + 9 = 17 conceptual error

[ ] 9 + 9 = 18 correct

[ ] 8 + 10 = 18 procedural error

[ ] 9 + 10 = 18 conceptual error

6. What are the next three numbers in the pattern?

\[ \text{Lesson 3.6} \]

\[ \text{Lesson 3.7} \]

\[ \text{Lesson 3.8} \]

7. Complete the related facts.

\[ \begin{align*}
&\text{Lesson 3.8} \\
&9 + 4 = 13 \\
&13 - 4 = 9
\end{align*} \]

[ ] 9 + 4 = 13 correct

[ ] 13 - 4 = 9 procedural error

[ ] 13 - 9 = 4 conceptual error

8. Which number sentence is missing from this fact family?

\[ \begin{align*}
&\text{Lesson 3.9} \\
&5 + 9 = 14 \\
&9 + 5 = 14
\end{align*} \]

\[ \begin{align*}
&10 + 9 = 19 \\
&11 + 8 = 19
\end{align*} \]

[ ] 9 - 5 = 9 procedural error

[ ] 10 + 9 = 19 conceptual error

[ ] 11 + 8 = 19 conceptual error

9. Thirteen frogs sit on a log. Four frogs jump into the water. Which number sentence tells how many frogs are left on the log?

\[ \begin{align*}
&\text{Lesson 3.10} \\
&13 - 4 = 9 \\
&13 - 9 = 4
\end{align*} \]

[ ] 13 - 4 = 9 correct

[ ] 13 - 9 = 4 procedural error

[ ] 13 - 8 = 5 conceptual error

10. Earl counted 8 snakes at the zoo. Mary counts 14. How many more snakes does Mary count than Earl?

\[ \text{Lesson 3.11} \]

\[ \begin{align*}
&14 more guess \\
&6 more correct
\end{align*} \]

[ ] 4 more conceptual error

[ ] 6 more correct

[ ] 6 more conceptual error

STOP

Answers (Chapter Test Form 2A)
Read each question carefully. Fill in the circle for the correct answer.

1. Subtract. 11 - 5 =
   [Lesson 3.1]
   ○ 12 guess
   ○ 17 conceptual error
   ● 6 correct

2. Subtract. 16 - 9 =
   [Lesson 3.1]
   ○ 6 guess
   ○ 5 conceptual error
   ● 7 correct
   ○ 8 procedural error

3. Subtract. 11 - 0 =
   [Lesson 3.2]
   ● 11 correct
   ○ 2 conceptual error
   ○ 0 conceptual error

4. Subtract. 7 - 7 =
   [Lesson 3.2]
   ○ 7 conceptual error
   ○ 1 guess
   ● 0 correct

5. Dale has 14 bunnies. 7 are black. The rest are white. What doubles fact can help you learn how many bunnies are white? [Lesson 3.3]
   ● 7 - 7 = 0 procedural error
   ○ 7 + 7 = 14 correct
   ○ 7 - 0 = 7 procedural error

6. What are the next two numbers in the pattern? 4, 7, 10, 13, 16, __, __.
   [Lesson 3.4]
   ● 19, 22 correct
   ○ 17, 18 guess
   ● 19, 21 procedural error

7. Complete the related facts.
   [Lesson 3.5]
   6 + □ = 11
   ○ 6猜
   ● 5 correct
   ○ 11 guess

8. Which number sentence is missing? [Lesson 3.7]
   5 + 8 = 13
   8 + 5 = 13
   13 - 8 = □
   ○ 8 + 13 = 21 guess
   ● 13 - 5 = 8 correct
   ○ 13 + 5 = 18 conceptual error

9. There are 12 hamsters in a cage. Three get out. Which number sentence tells how many are left in the cage? [Lesson 3.6]
   12 + 3 = 15 conceptual error
   ○ 9 + 12 = 21 conceptual error
   ● 12 - 3 = 9 correct

10. Ken has 8 mice as pets. Marlene has 5 mice. How many more mice does Ken have than Marlene? [Lesson 3.1]
    ○ 13 conceptual error
    ● 3 correct
    ○ 0 conceptual error
Chapter Test, Form 2C

Read each question carefully. Write your answer on the line.

Find the difference. [Lesson 3.1]

1. \[16 - 7 = \]
2. \[15 - 8 = \]
3. \[14 - 9 = \]

| Lesson 3.2 |
| 4. \[6 - 0 = \]
| 5. \[8 - 8 = \]
| 6. \[9 - 9 = \]
| 7. \[9 - 0 = \]

| Lesson 3.3 |
| 8. Write the doubles fact related to \[16 - 8 = 8\]. \[8 + 8 = 16\] |
| 9. Write the doubles fact related to \[18 - 9 = 9\]. \[9 + 9 = 18\] |

| Lesson 3.2 |
| 10. Caleb's puppy, Jack, is growing very fast. He gains about 2 pounds each week. If the pattern continues, how many pounds will Jack weigh after 8 weeks? [Lesson 3.4] |
| Week | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Number of pounds | 3 | 5 | 7 | 9 | 11 | 13 | 15 | 17 |
| Jack will weigh \[17\] pounds. |

| Lesson 3.4 |
| 11. A bus leaves school with 30 children. At each stop, 4 children leave the bus. How many children will be on the bus after it makes 6 stops? [Lesson 3.4] |
| Stop | 1 | 2 | 3 | 4 | 5 | 6 |
| Number of people | 30 | 26 | 22 | 18 | 14 | 10 |
| \[6\] children still on the bus. |

| Lesson 3.5, 3.6 |
| 12. Write two addition facts related to \[17 - 8 = 9\]. [Lessons 3.5, 3.6] |
| \[8 + 9 = 17\] \[9 + 8 = 17\] |

| Lesson 3.5, 3.6, 3.8 |
| 13. Fourteen bunches of roses are at the market. Five are sold. Write a number sentence that shows how many bunches are left. [Lessons 3.5, 3.6, 3.8] |
| \[14 - 5 = 9\] |
| Write an addition sentence from the same fact family. |
| \[5 + 9 = 14\] or \[9 + 5 = 14\] |

| Lesson 3.7 |
| 14. What number sentence is missing from this fact family? |
| [Lesson 3.7] |
| \[4 + 9 = 13\] \[13 - 9 = 4\] |
| \[9 + 4 = 13\] \[13 - 4 = 9\] |

| Stop |
| A28 |

Answers (Chapter Test Form 2C)
11. A bus leaves school with 20 children on it. Two children get off the bus at each stop. How many children will be on the bus after 6 stops? ***Lesson 3.4***

<table>
<thead>
<tr>
<th>Stop</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Children on the bus</strong></td>
<td>20</td>
<td>18</td>
<td>16</td>
<td>14</td>
<td><strong>12</strong></td>
<td><strong>10</strong></td>
</tr>
</tbody>
</table>

8 children still on the bus.

12. Write two addition facts related to $17 - 8 = 9$. ***Lessons 3.5, 3.6***

$8 + 9 = 17$

$9 + 8 = 17$

13. There are 14 bunches of roses. Five are sold. Write a number sentence that shows how many bunches are left. ***Lesson 3.6***

$14 - 5 = \boxed{9}$

Write an addition sentence from the same fact family.

$\boxed{5 + 9 = 14}$ or $9 + 5 = 14$

14. What number sentence is missing from this fact family? ***Lesson 3.7***

$4 + 9 = 13$

$9 + 4 = 13$

$13 - 4 = \boxed{9}$

15. Hal buys 17 trees. He plants 9. Write a number sentence to show how many trees Hal has left to plant. ***Lesson 3.6***

$17 - 9 = \boxed{8}$
Cumulative Standardized Test Practice

Read each question carefully.
Fill in the circle for the correct answer.

1. What is $11 + 9$? Count on to add. [Lesson 2.2]
   - $20$
   - $19$
   - $20$
   - $99$

2. What comes next? [Lesson 1.8]
   - $17$
   - $18$
   - $19$
   - $20$

3. 175
   What is the place value of the 7? [Lesson 1.2]
   - ones
   - tens
   - sevens
   - hundreds

4. About how many balls are there? Use estimation. [Lesson 1.5]
   - $5$
   - $10$
   - $20$
   - $50$

5. Ella’s newborn brother grows every week. He was 7 pounds when he was born. He gained 2 pounds his first month and 3 pounds the second month. How much does her brother weigh now? [Lesson 2.8]
   ___ pounds

6. Todd has 9 blue marbles and 8 red marbles. What near doubles fact shows how many marbles Todd has in all? [Lesson 2.5]
   __________;
   __________;

   Write two subtraction facts that are related to your answer. [Lessons 3.5, 3.7]
   __________;
   __________;

7. There were 16 hats at the hat shop at the start of the day. Some were sold. There are 6 hats left at the end of the day. How many hats were sold? [Lessons 3.6, 3.7]
   $16 - ___ = 6$

   Write an addition sentence from the same fact family.
   __________;

8. What number sentence is missing from this fact family? [Lesson 3.7]
   $4 + 9 = 13$
   $13 - 9 = 4$
   $9 + 4 = 13$
   __________;