

Attainment's

MATH for Life

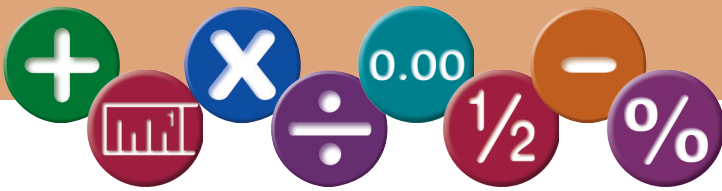
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Teacher's Guide



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Introduction to Teacher's Guide

Math for Life Curriculum Overview

Math for Life links life skill themes to six core academic concepts, adding relevance and appeal to math instruction for learning-disabled middle and high school students. Through the following six units, the curriculum provides in-depth assistance and opportunities for practicing basic math, as well as age-appropriate examples of math used in daily life:

Unit1: Add and Subtract

Unit2: Multiply and Divide

Unit3: Measurement

Unit4: Fractions

Unit5: Decimals

Unit6: Percent

The curriculum can be used in a variety of school situations, such as the following options:

- **Individualized Program:** Pick and choose both units and specific skill sheets based on each student's specific needs. Have students work at his or her own pace and provide assistance as needed. Access the accompanying CD activities for students who need additional practice or who are ready for more-advanced practice with the unit skills.
- **Small-Group Setting:** Follow the "How to Use This Curriculum" steps below.
- **Mainstreamed Classroom Setting:** Pick and choose both units and specific skill sheets to best align with the content being taught in the classroom while providing a more appropriate level of instruction for struggling students. Remember to include the activities on the CD when considering the most-appropriate activities for a given student in a given situation.

The Student Book

In the Student Book, each 20+ page unit includes the following components:

- An overview of the relationship of math to a real-life situation that is covered in the unit
- A review of the math skills that are used in the unit
- Skill activities where students practice the unit math skills
- A multiple-page high-interest and age-appropriate story showing people using math in real-life situations. Within the story, "Get the Facts" sidebars provide useful information.
- **Thinking It Out** activity pages that give students a chance to use the math skills in relation to the story
- **Life Skills Worksheets** that relate other life skills to the math concept

The Teacher's Guide

The teacher's guide includes an introduction to each unit; introductory and follow-up activities; and thumbnails of student book pages and math practice sheets. The thumbnails provide an answer key, plus some teaching tips.

CD

The accompanying CD includes practice math sheets for all of the math skills covered in the book, as well as a PDF of the student book.

How to Use the *Math for Life* Curriculum

Each unit in this curriculum can generate from 12 to 20 lessons. *See illustration on next page.*

Introductory Lesson: The Teacher's Guide has an introductory lesson for each unit that you can use prior to beginning the unit in the Student Book.

Lesson 1: Either individually, in pairs, or as a whole group, have students complete **Looking at Life** and **What do you Think?** from the first page of the unit within the student book. As a group, discuss responses as well as students' prior related experiences.

Lesson 2: As a group, read and discuss the **Skill Review** page. Demonstrate working the sample problems for the whole group. As needed, incorporate the teaching tips provided in the teacher guide.

Skill Lessons (*from 4 to 7 lessons depending on unit*): As a group, discuss each individual skill. Then, have students complete the problems individually. When all students are finished, go through the problems together to check that the answers are correct. For each skill, as needed, print practice pages from the CD for students to complete.

Story Lesson: As a group, read and discuss the story, read and discuss the **Get the Facts** boxes, and complete any in-story activities. As desired and if time permits, discuss the **Story Discussion Questions** included in the teacher's guide for each unit.

Thinking It Out Lessons (*from 2 to 4 lessons depending on unit*): Either individually, in pairs, or as a whole group, have students complete the **Thinking It Out** activities. As a group, check the answers.

Life Skills Worksheets Lessons (*5 lessons per unit*): Either individually, in pairs, or as a group, have students complete each of the **Life Skills Worksheets**.

Additional Lesson Options—based on:

- **The Life Skills Follow-Up Activities**, which you will find in each unit of Teacher's Guide.
- **The Teaching Tips**, which you will find next to student book page thumbnails in the Teacher's Guide.

The Math for Life Curriculum

These lessons are provided for each unit of the book.

Introductory Lesson: Introduction to Unit

Unit-related activities; in *Teacher's Guide* only

Unit 2 - Multiply and Divide

Academic Objectives
Multiplying
Dividing
Using Logic

Life Skills Objectives
Using Reason
Determining How to Use Space

Skills Included in the Multiply and Divide Unit
Know your multiplication and division facts.
Multiply a two-digit number by a one-digit number.
Multiply a two-digit number by a two-digit number.
Divide by a one-digit number.
Divide by a two-digit number.

Practice math sheets for all skills can be found on accompanying CD.

Lesson Option: Unit Introduction

- Divide students into five groups.
- Give each group a cookie sheet. If possible, use five different sized cookie sheets.
- Tell students that each group will be drawing and cutting out different-sized cookies.
- Give each group a copy of a page with five circles on it with these dimensions: 1 1/2 inch, 2 inches, 2 1/2 inches, 3 inches, and 3 inches. For each group, place a 3/4 inch circle on the circles on that each group has a different sized circle.
- Instruct each group to draw cookies about the size of its marked circle. Tell groups to draw as many of the cookies as they think will fit on each of their cookie sheets with at least a finger width between each cookie.
- Have students use tape to position their cookies on the cookie sheets to draw the rest of the sheet.
- Discuss that the number of cookies that fit on a cookie sheet depends both on the size of the cookies and the size of the cookie sheets.


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Lesson 1: Looking at Life and What Do You Think?

First page of unit in *Student Book*

UNIT 2

Multiply and Divide



Looking at Life: The Mathematics of Baking

Knowing how to multiply and divide is a useful skill in many situations, including the kitchen. For example, if you were baking cookies for a fundraiser, you would probably have the following reasons to multiply and divide:

- Change the recipe amounts
- Figure out how many pans you need
- Decide how many boxes of cookies you need

You could figure out what you need to know by adding and subtracting, but multiplying and dividing can be much faster.

WHAT DO YOU THINK?

What is one reason that you might multiply or divide if you were baking at home?

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Lesson 2: Skill Review page

Second page of unit in *Student Book*; overview of skills

SKILL REVIEW

Multiplying is a fast way to add the same number more than once. Dividing is separating a whole into parts. To multiply and divide, you need the following skills:

SKILL 1 Know your multiplication and division facts.	$2 \times 2 = 4$ $4 \div 2 = 2$
SKILL 2 Multiply a two-digit number by a one-digit number.	$\begin{array}{r} 31 \\ \times 5 \\ \hline 155 \end{array}$
SKILL 3 Multiply a two-digit number by a two-digit number.	$\begin{array}{r} 46 \\ \times 21 \\ \hline 966 \end{array}$
SKILL 4 Divide by a one-digit number.	$\begin{array}{r} 32 \\ 3 \overline{)96} \end{array}$
SKILL 5 Divide with a remainder.	A remainder is the amount left over when a number can't divide evenly. $\frac{10}{6} = 1 \frac{4}{6}$
SKILL 6 Divide by a two-digit number.	$\begin{array}{r} 18 \\ 2 \overline{)324} \\ \underline{36} \\ 0 \\ \underline{0} \\ 0 \end{array}$

GET THE FACTS: To Divide, Multiply!

Once you know the answer to a multiplication fact, you also know the answer to the division fact with the same numbers. Switch the numbers around—it works!

$4 \times 5 = 20$
then $20 \div 4 = 5$
 $20 \div 5 = 4$

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Lessons 3 thru up to 9 (one per skill): Skill Lesson pages

In *Student Book*; answer key and teaching tips in *Teacher's Guide*

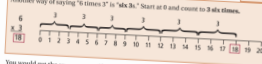
SKILL 1

Multiplication and Division Facts

When you first learn to multiply and divide, you learn the addition and subtraction facts. You learn the basic facts for the numbers 1 to 10.

For basic multiplication facts, you multiply two numbers between 1 and 10, creating a product. You can use a number line to see how the multiplication facts work.

Another way of saying "6 times 3" is "six threes." Start at 0 and count to 6 six times.



You would get the same answer if you added six 3s: $3 + 3 + 3 + 3 + 3 + 3 = 18$. You would also get the same answer if you skip-count by six six times: $3 \cdot 6 = 18$.

Complete these multiplication facts. If you need to, you can use the number line.

$2 \times 3 =$	$3 \times 5 =$	$1 \times 9 =$	$2 \times 6 =$	$3 \times 6 =$
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After you have written down the multiplication answers, you will be able to answer the division facts just by switching the numbers around. (See **GET THE FACTS** on the last page.)

$6 \div 2 =$	$15 \div 5 =$	$9 \div 3 =$	$12 \div 6 =$	$18 \div 3 =$
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Lesson 10

Read/discuss the story in *Student Book*. Discuss **Get the Facts** sidebars in story.

Baking Up a Fundraiser

"Hey Dexter and Lisa, let's go!" Phillip called as he and Laloni waited by the door to the school parking lot.

Dexter, Lisa, and Laloni all had a cookie sheet in each hand as they headed to the car. Dexter held his cookie sheets over his head and said, "Have cookie sheets, will you travel?" Laughing, they all climbed into the car as Dexter said, "We are going to have to rush get traveling if we are going to bake all these cookies tonight."

"Do you think we can get them all done?" Lisa asked.

"They did it last year with only one oven. We have two ovens, so it shouldn't be too hard." Phillip answered as he pulled into his driveway. "Here we are at Cookie Central!"

They pulled out of the lot with cookie sheets. They all waved at Dexter's neighbor who was standing in his yard. With a puzzled look, he watched them until the last one had disappeared into Dexter's kitchen. "Who bought all these supplies?" Laloni asked as she looked at the piles of sugar, eggs, and other goodies. "I went shopping with Mr. Erdens last night," Dexter answered. "We filled a whole cart." Dexter went to the cupboard and pulled out two more cookie sheets. Next, he opened the recipe box and took out four cookie recipes. He handed a chocolate chip recipe to Phillip, a cookie-and-ice cream recipe to Lisa, and a peanut butter recipe to Laloni. Dexter kept a monster cookie recipe for himself.

GET THE FACTS: Fundraisers

Dexter, Lisa, Laloni and Phillip are baking cookies for a school fundraiser. To raise money, people sell many different things and hold a wide variety of events. Here are some examples:

- language stand
- car wash
- language dinner
- cookie sale
- trunk sale
- holiday decorations sale
- gift tournament
- silent auction
- quiz raffle

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Lessons 11 thru up to 14

Thinking It Out activities

Following story in *Student Book*

THINKING IT OUT #2: Counting Cookies

DIRECTIONS: Use the pan sizes and cookie counts below to figure out how many unbaked cookies to put on each cookie sheet. *NOTE: The first one is done for you.*

PAN SIZE	NUMBER OF COOKIES IN PAN	PAN SIZE	NUMBER OF COOKIES IN PAN
Monster Cookies (Dexter)	<p>Size of 1 cookie: 2 inches</p> <p>Space between: 3 inches</p> <p>Number in row: 3</p> <p>Number of rows: 4</p> <p>$3 \times 4 = 12$</p> <p>Total # of cookies: 12</p>	Peanut Butter Cookies (Laloni)	<p>Size of 1 cookie: 3 inches</p> <p>Space between: 1 inch</p> <p>Number in row: _____</p> <p>Number of rows: _____</p> <p>Total # of cookies: _____</p>
Chocolate Chip Cookies (Phillip)	<p>Size of 1 cookie: 1 inch</p> <p>Space between: 2 inches</p> <p>Number in row: _____</p> <p>Number of rows: _____</p> <p>Total # of cookies: _____</p>	Snickerdoodles (Lisa)	<p>Size of 1 cookie: 1 inch</p> <p>Space between: 1 inch</p> <p>Number in row: _____</p> <p>Number of rows: _____</p> <p>Total # of cookies: _____</p>

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Lessons 15-19


Life Skills Worksheets

At end of the unit in *Student Book*; answer key in *Teacher's Guide*

LIFE SKILLS WORKSHEET #1

Buying the Best Deal

Directions: Look at the sizes and prices of the lotion bottles. Then, answer each question.



- If you need only a small amount of lotion, which size is the best buy? Explain.
- Which is a better buy: two 16 oz. bottles of lotion or one 32 oz. bottle? Explain.
- Rank the five sizes of lotion from most expensive to least expensive per unit.
- If you use about 12 oz. of lotion each month, which size bottle would make sense for you to buy? Explain.

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Lesson 20

Life Skills Follow-Up Activities

in *Teacher's Guide* only, end of unit

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Thinking It Out Activities

#1: Sizing Four Cookie Recipes #2: Counting Cookies #3: Baking Cookies

Life Skills Worksheets

#1: Buying the Best Deal #2: Calculating Quantities #3: Estimating Travel Time #4: Monitoring Miles Per Gallon #5: Understanding Net and Gross Pay

Life Skills Follow-Up Activities

- Bake cookies as a class project. Prior to starting, calculate how many cookies the recipe makes. How many you will get on a cookie sheet, and how many cookie sheets you will fill. Compare your calculations to have the project actually turn out.
- Using tape, map out a giant cookie sheet on the floor. Have students stand in an oval. Space out the number of rows and columns and calculate how many cookies can fit. Since you are using a giant cookie sheet, figure the space for giant cookies as well!
- Choosing boxes sized to hold many cookies, bring five boxes to school. Cut five tagboard disks (cookies) of different sizes. Divide the class into five groups. Give each group a box and a "cookie." Have each team calculate the number of cookies that will fit in the box using a maximum of six layers per box.



Unit 1 - Add and Subtract

Academic Objectives

Adding
Subtracting
Using Logic

Life Skills Objectives

Figuring Basketball Statistics Using Tallies
Reading Charts
Transferring Numbers Between Charts Using a Calculator
Reading Sports Statistics

Skills Included in the Add and Subtract Unit

Addition and subtraction facts
Add large numbers in rows and columns
Subtract larger numbers in rows and columns.
Add numbers with carrying.
Subtract numbers with borrowing.

Additional practice sheets for all skills can be found on CD disc.

Lesson Option: Unit Introduction

1. From a hard-copy or online newspaper or from an online sports site, choose statistics from a basketball game. Using a printer and/or copier, enlarge the statistics chart. Provide each student with a copy or project the page for the class to see as a group.
2. Review the abbreviations across the top of the chart. If you are unsure of their meanings, look at the charts in this lesson or ask a basketball fan.
3. So that all students can see the problems, choose two or three players and create addition problems showing the points scored by each player. Find the total on the statistics chart that matches the answers.
4. For the same two or three players, subtract the baskets made from those attempted to get the number of missed baskets by each player. For this calculation, be sure to figure baskets, not points.
5. Discuss that statistics charts such as this one are kept for most basketball programs from grade school through professional levels. Also, discuss that similar statistics charts are kept for other sports.

6. Tell students that, in this unit, they will use addition and subtraction to work with basketball statics charts.

“Iris, Odell, and Stats” story synopsis

Odell and Iris are managers for the basketball team. Coach Samantha Maverick asks them to make some charts using the stats from four games.

Story Discussion Questions

1. Why did Coach Maverick offer to buy pizza for Odell and Iris?
Sample answer: She thought it would encourage them to come in and work on her report.
2. Why didn't Coach Maverick figure out the statistics herself?
Sample answer: She probably didn't have time.
3. Why did Coach Maverick have Odell and Iris use a spreadsheet to work with the statistics?
Sample answer: To make it go faster and be more accurate.
4. What types of tasks are required of a student manager on a high school basketball team?
Sample answer: Collecting and dispensing balls, cleaning balls, filling drink jugs, collecting towels, washing towels, running errands, keeping and figuring statistics.

Thinking It Out Activities

#1: Player Charts #2: Most Valuable Player #3: Team Chart

Life Skills Worksheets


#1: Figuring Ages #2: Figuring Elapsed Time #3: Scoring Sports
#4: Understanding Sports Statistics #5: Working With a Bus Schedule

Life Skills Follow-Up Activities

1. Ask a manager from a school basketball team to talk to your class about his or her duties.
2. Prepare statistic-comparison charts fro a school basketball team. Either offer to do the charts as a service for the team or do them as a class project.
3. Prepare empty statistic charts and have students go to a game and keep statistics.
4. Compare completed student charts with each other and/or with official game statistics.

UNIT 1

Add and Subtract



Looking at Life: The Mathematics of Basketball

Keeping score is just one of many ways numbers are used in the game of basketball. Game statistics, often called *stats*, are another way that numbers are used.

Game stats tell a story about what each player did during the game. Stats include information such as each player's number of baskets made, fouls committed, and time played.

Some basketball stats require the skills of adding and subtracting.

WHAT DO YOU THINK?

What is one reason that a basketball coach would add or subtract?

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Possible Answers: Basketball coaches could use addition for many purposes, including any of these tasks:

- to keep a running total of points each player scored
- to keep track of the number of free-throws made and missed by each player
- to keep track of three-pointers made
- to keep track of fouls made

A basketball coach could use subtraction during a game to see how many points the team needs to catch up or how many points ahead the team is.

SKILL REVIEW

Adding is putting together. Subtracting is taking away. To add and subtract, you need the following skills:

SKILL 1 Learn addition and subtraction facts for single numbers.	$4 + 2 = 6$ $6 - 2 = 4$										
SKILL 2 Add larger numbers in rows and columns.	<table style="margin-left: auto; margin-right: auto;"> <tr><td></td><td>COLUMNS</td></tr> <tr><td></td><td>↓ ↓ ↓</td></tr> <tr><td></td><td>22</td></tr> <tr><td>→</td><td>+37</td></tr> <tr><td>→</td><td>59</td></tr> </table>		COLUMNS		↓ ↓ ↓		22	→	+37	→	59
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SKILL 3 Subtract larger numbers in rows and columns.	<table style="margin-left: auto; margin-right: auto;"> <tr><td>59</td></tr> <tr><td>- 22</td></tr> <tr><td>37</td></tr> </table>	59	- 22	37							
59											
- 22											
37											
SKILL 4 Add numbers with carrying.	<table style="margin-left: auto; margin-right: auto;"> <tr><td>19</td></tr> <tr><td>+ 1</td></tr> <tr><td>20</td></tr> </table>	19	+ 1	20							
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SKILL 5 Subtract numbers with borrowing.	<table style="margin-left: auto; margin-right: auto;"> <tr><td>20</td></tr> <tr><td>- 19</td></tr> <tr><td>1</td></tr> </table>	20	- 19	1							
20											
- 19											
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GET THE FACTS: Zero and One

ZERO (0) is the same as nothing.

Any number + 0 is the same number: $8 + 0 = 8$
 Any number - 0 is the same number: $8 - 0 = 8$
 Any number minus the same number is always zero: $8 - 8 = 0$

ONE (1) plus or minus any number goes to the number right next to it.

Any number + 1 is the very next number: $1 + 4 = 5$ $4 + 1 = 5$
 Any number - 1 is the number just before: $5 - 1 = 4$ $4 - 1 = 3$

Try it! $7 + 0 = \boxed{0}$ $7 - 0 = \boxed{7}$ $7 - 1 = \boxed{6}$

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SKILL 1

For students who have trouble remembering the addition and subtraction facts, try this visual/auditory/kinesthetic approach.

- Give them a stack of flashcards that are numbered 1-50.
- Keeping the flashcards in order, have students record the math facts while looking at the problems and answers together.
- Have them listen to the recording while visually looking at the cards without the answers showing.
- Tell them to try and say the answer before they hear it.
- Give them a worksheet with the math facts in the same order and have them listen to the recording and try writing the answers before they hear them.

SKILL 2

For students who have trouble aligning numbers accurately, try having them write the problems using graph paper. If necessary, tape small pieces of graph paper into the book.

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SKILL 1
Addition Facts: Single Numbers

Learn the basic facts for the numbers 0 to 10. At first you might use a **numberline** to count, but if you practice you will know math facts without counting.

For basic addition facts, you put together two numbers between 0 and 10. **Example:** $\begin{matrix} +3 \\ 2 \\ \hline 5 \end{matrix}$

Using the numberline: Start at 2 and count spaces for the number you are adding, 3.

It's Your Turn: Complete these addition facts. If you need to, you can use the numberline. See if you can do the top row in your head. What about the bottom row?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Hint: See the facts about Zero and One.

$\begin{matrix} 1 \\ +3 \\ \hline \end{matrix}$ 4	$\begin{matrix} 4 \\ +0 \\ \hline \end{matrix}$ 4	$\begin{matrix} 1 \\ +8 \\ \hline \end{matrix}$ 9	$\begin{matrix} 6 \\ +0 \\ \hline \end{matrix}$ 6	$\begin{matrix} 3 \\ +2 \\ \hline \end{matrix}$ 5
$\begin{matrix} 8 \\ +3 \\ \hline \end{matrix}$ 11	$\begin{matrix} 8 \\ +4 \\ \hline \end{matrix}$ 12	$\begin{matrix} 6 \\ +6 \\ \hline \end{matrix}$ 12	$\begin{matrix} 6 \\ +7 \\ \hline \end{matrix}$ 13	$\begin{matrix} 9 \\ +9 \\ \hline \end{matrix}$ 18

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SKILL 1
Subtraction Facts: Single Numbers

Learn the basic facts for the numbers 0 to 10.

For basic subtraction facts, start at the top number and count backwards the number of spaces equal to the next number. **Example:** $\begin{matrix} 10 \\ -4 \\ \hline 6 \end{matrix}$

Using the numberline: Start at 10 and count spaces backwards for the 2nd number, 4.

It's Your Turn: Complete these subtraction facts. If you need to, you can use the numberline. See if you can do the top row in your head. Then try the bottom row.

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Remember the facts about 0 and 1!

$\begin{matrix} 6 \\ -1 \\ \hline \end{matrix}$ 5	$\begin{matrix} 3 \\ -0 \\ \hline \end{matrix}$ 3	$\begin{matrix} 15 \\ -1 \\ \hline \end{matrix}$ 14	$\begin{matrix} 20 \\ -10 \\ \hline \end{matrix}$ 10	$\begin{matrix} 7 \\ -2 \\ \hline \end{matrix}$ 5
$\begin{matrix} 9 \\ -3 \\ \hline \end{matrix}$ 6	$\begin{matrix} 6 \\ -5 \\ \hline \end{matrix}$ 1	$\begin{matrix} 8 \\ -2 \\ \hline \end{matrix}$ 6	$\begin{matrix} 9 \\ -8 \\ \hline \end{matrix}$ 1	$\begin{matrix} 8 \\ -6 \\ \hline \end{matrix}$ 2

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SKILL 2
Add Larger Numbers

Larger numbers have two or more columns. Each column is a simple addition fact. Start with the column on the right, then go to the left.

Each cart below can hold **30** basketballs. Use addition to see if the balls on each set of carts could fit on just one of the carts.

23
 $\begin{matrix} 23 \\ +15 \\ \hline \end{matrix}$
38

Can the balls fit on one cart?
 Yes No

20
 $\begin{matrix} 20 \\ +11 \\ \hline \end{matrix}$
31

Can the balls fit on one cart?
 Yes No

SKILL 3
Subtract Larger Numbers

Larger numbers have two or more columns. For each problem, start with the column on the right.

Each cart below shows the number of balls at the beginning of practice. The loose balls shows the number that were used. Use subtraction to find out how many balls were not used.

27
 $\begin{matrix} 27 \\ -14 \\ \hline 13 \end{matrix}$

$\begin{matrix} 7-4=3 \\ 2-1=1 \end{matrix}$

29
 $\begin{matrix} 29 \\ -18 \\ \hline 11 \end{matrix}$

19
 $\begin{matrix} 19 \\ -12 \\ \hline 7 \end{matrix}$

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SKILL 4 (next page)

Try this approach for students who have a great deal of problems understanding the concept of carrying:

- Create number cards for each number within a problem. Using the sample problem, $321 + 299$, use index cards to create a card for each of these numbers: 3 2 1 2 9 9 6. Also: 10 (a 1 and a 0 taped together) 12 (a 1 and a 2 taped together)
- Put the cards on the desk to create the problem.
- Have student add $9 + 1$ and choose the 10-card as the answer.
- Point out that 10 won't fit in the column, so they will have to separate them.
- Have the student cut the double card into two cards and place the zero in the answer spot and carry the 1.


Repeat this process with the second column and the 12 card.

Have the student finish the problem by choosing the 6 card for the third (left) column.



SKILL 4 Add Numbers With Carrying

When the numbers in a column add up to more than 9, you need to use carrying. Write down the righthand number, and carry the leftover numbers to the next column over. Always go right to left. See "How To Do It" below, then try it!



GET THE FACTS: Using a calculator

Sometimes you will use a calculator. It is a good idea to learn how to add and subtract big numbers without one. While you are practicing, you can use a calculator to check your answers.

Maddie is gluing dried peas onto her artwork to make trees. Some peas are already glued in place. She plans to add the loose peas. Find the total number of peas she will use for each tree. Start with the righthand column, and add all three columns.

How To Do It $321 + 299 = X$

Column 1

$$\begin{array}{r} 321 \\ + 299 \\ \hline \end{array}$$

$1 + 9 = 10$
Write the 0.
Carry the 1 to column 2.

Column 2

$$\begin{array}{r} 1 \\ 321 \\ + 299 \\ \hline \end{array}$$

$1 + 2 + 9 = 12$
Write the 2.
Carry the 1 to column 3.

Column 3

$$\begin{array}{r} 1 \\ 321 \\ + 299 \\ \hline \end{array}$$

$1 + 3 + 2 = 6$

ANSWER: 620

Now You Try It! $245 + 207 = X$

Column 1

$$\begin{array}{r} 245 \\ + 207 \\ \hline \end{array}$$

Column 2


$$\begin{array}{r} 1 \\ 245 \\ + 207 \\ \hline \end{array}$$

Column 3

$$\begin{array}{r} 1 \\ 245 \\ + 207 \\ \hline \end{array}$$

ANSWER: 452

TIP: If you have no numbers left over, you do not have to carry.



SKILL 5 Subtract Numbers With Borrowing

When at least one of the bottom numbers is bigger than the number above it, you need to use borrowing. Cross out the number at the top of the next column to the left, make it one less, and put "1" in front of the number that was too small.

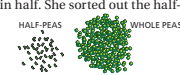
For each problem, start with the righthand column. See examples below.

EXAMPLE: $45 - 29 = X$

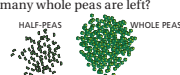
Start with 5 - 9. 5 is smaller than 9, so go to the next column. Take 1 away from the 4 and put it in front of the 5. Now 5 is 15. $15 - 9 = 6$. Going left, 4 is now 3. $3 - 2 = 1$. Answer: 16.

$$\begin{array}{r} 45 \\ - 29 \\ \hline \end{array}$$

Maddie started with two piles of peas for her trees. Each pile had some peas that were split in half. She sorted out the half-peas. How many whole peas are left?



HALF-PEAS WHOLE PEAS



HALF-PEAS WHOLE PEAS

How To Do It $432 - 29 = X$

Column 1

$$\begin{array}{r} 432 \\ - 29 \\ \hline \end{array}$$

Take 1 from the 3, put it in front of 2 to make 12.

$12 - 9 = 3$

Column 2

$$\begin{array}{r} 2 \\ 432 \\ - 29 \\ \hline \end{array}$$

Now the 3 is a 2.

$2 - 2 = 0$

Column 3

$$\begin{array}{r} 432 \\ - 29 \\ \hline \end{array}$$

$4 - \text{nothing} = 4$.

ANSWER: 403

Now You Try It! $387 - 91 = X$

Column 1

$$\begin{array}{r} 387 \\ - 91 \\ \hline \end{array}$$

Column 2

$$\begin{array}{r} 18 \\ 387 \\ - 91 \\ \hline \end{array}$$

Column 3

$$\begin{array}{r} 2 \\ 387 \\ - 91 \\ \hline \end{array}$$

ANSWER: 296

TIP: Only borrow when the top number is smaller than the bottom number.

SKILL 5

Try this approach for students who have a great deal of problems understanding the concept of borrowing: Using four \$1 bills, 61 pennies and three shoe boxes with dividers in the middle, create the sample problem, $432 - 29$, like this.

- Line the three shoe boxes up next to each other so that one can represent the 100s column, one the 10s column, and one the ones column. Label the boxes "hundreds," "tens," and "ones." The dividers in the middle of the shoe boxes represent the separation between the top and bottom numbers of the problem. Write the problem numbers in the correct sections of the boxes, and put money in as follows:

Luckily, you don't need 400 pennies for this problem!

4 \$1 bills	30 pennies	2 pennies
-----	20 pennies	-----
	9 pennies	9 pennies

- Tell the student that, starting in the right box, he is to separate the bottom number of pennies (9) from the pennies in the top part of the box (2) and the pennies left will be the answer.
- Make sure he understands that he can't separate nine pennies out from the pennies in the top of the box because 2 pennies are not enough.
- Then, tell him that he can borrow from the tens box, but he must borrow ten at a time. Have him count out ten pennies in the top section of the tens box and move the pennies to the ones box.
- Have him count the total pennies in the ones box, and use a pen to change the number written in the ones box from 2 to 12.
- Point out that, when there were 30 pennies in the tens box, there were three groups of ten. But, now that he has removed 10 pennies from the box, there are only two groups of ten. So, have him use a pen to cross out the 3 and write 2.
- Have him again try to separate nine pennies out of the pennies in the top right box. Discuss that, since there are three pennies left, the answer in the first column is 3.
- Point out that the bottom number in the second column is 2, so he should separate out two pennies from the pennies in the top of the middle box.
- Discuss that, since there are no pennies left, and since $2 - 2 = 0$, the middle answer number is 0.
- Discuss that, since there are no pennies in the bottom left box, and $4 - 0 = 4$, the bottom left answer number is 4.



Iris, Odell, and Stats

"I'll collect the dirty towels if you wash the player's bench," Iris said as she grabbed a towel.

"Such fun tasks we have," laughed Odell. He picked up the spray bottle and headed into the gym.

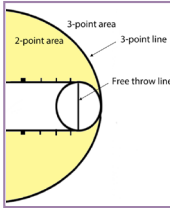
Aside from a few after-game clean-up chores, Iris and Odell enjoyed being the managers for the basketball team. Coach Samantha Maverick trusted them with a lot of tasks. Their favorite chore was making statistic charts. Using the spreadsheet was fun. They also liked seeing how the players were doing.

Odell walked back in the locker room just as Iris picked up the last towel. They stopped in the coach's office to say goodnight.

"Hey, guys!" Coach Maverick said with a smile. "You two did a great job tonight. How would you like to come in tomorrow afternoon and make some new statistic charts? I'll buy pizza."

"I can," said Iris.

"Me, too!" answered Odell.



GET THE FACTS: Scoring

In the game of basketball, players can score in three different ways.

- Shoot the basket through the hoop while playing near the basket: 2 points
- Shoot the basket through the hoop while playing behind the three-point line: 3 points
- Shoot the basket from the freethrow line after a referee calls a foul on a player from the opposite team: 1 point per shot



"Great, I'll see you about 1:00," Coach Maverick said.

"See you then," Iris and Odell said together.

When Iris walked into Coach Maverick's office the next day at 1:00, Odell was already sitting at the computer. "How long have you been here?" Iris asked.

"I just got here. Coach Mav already had the computer on," Odell answered. "I was looking at the scores for the last four games. Our Wildcats have been doing great!"

Just then, Coach Maverick walked in with a hot pizza. "Hi guys. Thanks for coming. I've got the stats tallies for the last four games. Tallies are the marks I made to keep track of our scores. I would like you two to use the information to create a team chart that

covers all four games. Start by changing the tallies from the first game into numbers." She gave Iris and Odell the first chart.

"The other games were done in a hand-held computer and I will get those printouts for you. You will need to add the total points for each player to get the total points for the team."

Iris looked at the chart, then she asked, "Coach Maverick, am I right that the tally marks in the attempted column mean all baskets shot, both made and missed?"

Coach Maverick answered, "Yes, that is correct." Then, she continued, "We are going to have a Most Valuable Player. I want my players to avoid breaking the rules, so subtract any fouls they made from their total points."



"After you finish the most-valuable chart, I'll take the top three choices from your chart. The players can then vote on one of the three to be the Most Valuable Player," Coach Maverick explained as she walked out the door.

Iris and Odell worked all afternoon. Before they left, they put the finished charts on Coach Maverick's desk.

Just as they were leaving, Coach Maverick came back. She picked up the top chart and said, "This looks great, guys. Thanks for all your work."

It's Your Turn: Count the tally marks in the chart below and write them down as numbers. The first row is already done. Four lines with a line through them, like this ~~||||~~ is 5. If there are no tallies, write a zero: 0.

Players	2-point baskets		3-point baskets		Free Throws	
	attempted	made	attempted	made	attempted	made
Kopper						
Kaydra						
Jackie						
Tonya						
Abigail						
Brae Lynn						

Players	2-point baskets		3-point baskets		Free Throws	
	attempted	made	attempted	made	attempted	made
Kopper	12	3	3	1	2	1
Kaydra	11	2	3	0	2	0
Jackie	5	2	0	0	2	1
Tonya	5	1	0	0	1	0
Abigail	10	3	3	2	3	2
Brae Lynn	5	2	1	0	0	0



GET THE FACTS: All About Stats

In this story the coach is tracking the points scored by individual players and by the team. In real life, coaches keep track of many other things that their players do.

- **Foul:** Hitting, bumping or tripping a player on the other team (bad)
- **Rebound (Reb):** Getting the ball after it hits the hoop (good)
- **Assist (Asst):** Passing the ball to a player who then scores (good)
- **Steal (Stls):** Taking the ball from the other team (good)
- **Turnover (TOV):** Losing the ball to the other team (bad)

Here's an example of a real-life basketball score sheet.

Team Name	Bobcats										Home (Away)	Date	12/30	Gym	Central J/S						
Team Fouls	1st Half					2nd Half					Double Bonus	10 +	Time Outs								
	1	2	3	4	5	6	7	8	9	10			Half	:30	:30						
#	Player	Fouls	1st Q	2nd Q	3rd Q	4th Q	Reb	Asst	Stls	TOV	FG%	FT%	Pts								
2	Wilson	1	2	3	4	5	0	1	3	2	00	3	2	0	1	1	2/6	2/3	6		
5	Parker	X	X	1	4	5	0			2	2	00	1	1	1	1	1/3	2/2	5		
10	Smith	X	2	3	4	5	2	1	0	2	2	0	1	1	1	1	2/5	0/0	4		
21	Johnson	1	2	3	4	5	1	1	0	3	2	0	1	1	1	1	1/3	4/7	0	2	9
24	Williams	X	2	3	4	5	0	0	0	3	0	2	0	1	1	1	2/4	4/4	9		
38	Rizzo	1	X	2	4	5	0	2	2	2	2	1	1	1	1	1	1/5	0/0	2		
55	O'Neil	1	2	3	4	5	2	3	0	2	2	0	1	1	1	1	2/6	0/0	6		
Shots FG / FGA			4/6	3/8	2/9	5/13											14/36	8/11			
Totals			9	9	8	15	22	11	13	12							39	23	41		

Running Score																								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

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THINKING IT OUT #1: Player Charts

DIRECTIONS: Add up Kopper's points for each game. Game 1 has been done. Then add the points at the bottom to get Kopper's total number of points. Do this for all the players.

How to do it: Add together Kopper's points from Game 1, Game 2, Game 3, and Game 4. Put the **TOTAL POINTS** for each game in the green blanks. Then add the numbers.

Remember: If a column adds up to 10 or more, carry the extra number to the left. After Kopper's chart, do charts for Kaydra, Jackie, Tonya, Abigail, and Brae.

Kopper	Game 1 points	Game 2 points	Game 3 points	Game 4 points
2-pt shots	6	0	2	4
3-pt shots	3	3	0	3
Free throws	1	0	0	1
TOTAL POINTS	10	3	2	8
Total Game 1 points				WORKSPACE
Total Game 2 points		3		
Total Game 3 points		2		
Total Game 4 points		8		
FINAL TOTAL POINTS		23		

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Kaydra	Game 1 points	Game 2 points	Game 3 points	Game 4 points
2-pt shots	4	4	12	14
3-pt shots	0	3	0	0
Free throws	0	3	2	2
TOTAL POINTS	4	10	14	16
Total Game 1 points		4		WORKSPACE
Total Game 2 points		10		
Total Game 3 points		14		
Total Game 4 points		16		
FINAL TOTAL POINTS		44		

Jackie	Game 1 points	Game 2 points	Game 3 points	Game 4 points
2-pt shots	4	6	6	10
3-pt shots	0	3	6	6
Free throws	1	3	0	2
TOTAL POINTS	5	12	12	18
Total Game 1 points		5		WORKSPACE
Total Game 2 points		12		
Total Game 3 points		12		
Total Game 4 points		18		
FINAL TOTAL POINTS		47		

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Tonya	Game 1 points	Game 2 points	Game 3 points	Game 4 points
2-pt shots	2	6	10	2
3-pt shots	0	3	3	3
Free throws	0	3	1	3
TOTAL POINTS	4	10	14	16
Total Game 1 points		4		WORKSPACE
Total Game 2 points		10		
Total Game 3 points		14		
Total Game 4 points		16		
FINAL TOTAL POINTS		44		

Abigail	Game 1 points	Game 2 points	Game 3 points	Game 4 points
2-pt shots	6	4	4	4
3-pt shots	6	9	0	9
Free throws	2	3	1	2
TOTAL POINTS	14	16	5	15
Total Game 1 points		14		WORKSPACE
Total Game 2 points		16		
Total Game 3 points		5		
Total Game 4 points		15		
FINAL TOTAL POINTS		50		

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Brae	Game 1 points	Game 2 points	Game 3 points	Game 4 points
2-pt shots	4	0	2	2
3-pt shots	0	0	0	0
Free throws	0	0	0	0
TOTAL POINTS	4	0	2	2
Total Game 1 points		4		WORKSPACE
Total Game 2 points		0		
Total Game 3 points		2		
Total Game 4 points		2		
FINAL TOTAL POINTS		8		

THINKING IT OUT #2: Most Valuable Player

DIRECTIONS: Copy each player's **FINAL TOTAL POINTS** to the "Points" row below. Subtract the number of fouls from the number of points to get the players' final score. The coach is going to let the team choose from the three players with the highest scores. Who are the top three? Kaydra, Tonya, and Abigail.

Look at FINAL SCORE. Who is the most valuable player? Kaydra and Tonya are tied.

	Kopper	Kaydra	Jackie	Tonya	Abigail	Brae
Points	23	44	47	36	50	8
Fouls	-12	-8	-18	-0	-15	-5
FINAL SCORE	11	36	29	36	35	3

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THINKING IT OUT #3: Team Chart

DIRECTIONS: Add the players' points for each game together to figure out the team's points. How does it compare with the Wildcats' final scores in the box below?

Then, add the numbers in the righthand column together to figure out the team's total points for games 1 through 4.

PLAYER	GAME 1	GAME 2	GAME 3	GAME 4	GAMES 1-4
Kopper	10	3	2	8	23
Kaydra	4	10	14	16	44
Jackie	5	12	12	18	47
Tonya	2	12	14	8	36
Abigail	14	16	5	15	50
Brae	4	0	2	2	8
TEAM POINTS PER GAME	39	53	49	67	208

BONUS: If you add the numbers in the bottom row, the team points for games 1 through 4, what will that number be? Try it!

Wildcats Final Scores

GAME 1: Racers 44, Wildcats 39 GAME 3: Wildcats 49, Sharks 24
 GAME 2: Wildcats 53, Badgers 40 GAME 4: Wildcats 67, Miners 51

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LIFE SKILLS WORKSHEET #1

Figuring Ages

Directions: Find each person's age.

#	Name	Current Year	Year Born	Calculation	Age
Sample:	Carrie	2015	1995	$2015 - 1995 = 12$	12 yrs old
1.	Adam		1992		
2.	Beth		2003		
3.	Netti				
4.	Ching				
5.	Craig		1982		
6.	Marcos		1975		
7.	LaFrancine		1998		
8.	Sam		2005		
9.	Del		1961		
10.	LeBron		1980		

Answers will vary based on current year.

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LIFE SKILLS WORKSHEET #2

Figuring Elapsed Time

Directions: Answer each question.

15 minutes?

45 minutes?

2 weeks?

2 weeks and 5 days?

What time will it be in.....

From today, what will be the date in.....

Answers will vary based on student input.

2 hours & 30 minutes?

months and 2 weeks?

What time was it.....

25 minutes ago?

10 minutes ago?

3 weeks ago?

10 days ago?

What was the date.....

2 hours & 20 minutes ago?

3 hours & 15 minutes ago?

2 months ago?

3 months and 3 weeks ago?

How long until it is.....

5:15 p.m.?

7:30 a.m.?

were you born?

did you get to school today?

About how long ago.....

midnight?

noon tomorrow?

was the last school holiday?

was your last birthday?

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LIFE SKILLS WORKSHEET #3

Scoring Sports

Directions: Find the score for each sport.

BOWLING

1	6	2	3	5	X	4	X	5	9	7	3	7	9	8	9	9	X	10	5	8
	8	16	45	65	78	97	106	115	135	153										

TENNIS

Player	Action	Score	Action	Score	Action	Score	Action	Score	Action	Score
Elton	Served	15	Served twice, both hit net	15	Served	30	Served	40	Served	Game
Greg	Could not return serve	Love	Hit out of bounds	15	Two volleys and then hit net	15	Could not return	15		

FOOTBALL

Team	1st Quarter Scoring	Score at end of 1st Quarter	2nd Quarter Scoring	Score at end of 2nd Quarter
Rams	2 touchdowns; Ran 1 extra point	13		13
Bulls		0	1 touchdown & kicked extra point	7

Team	3rd Quarter Scoring	Score at end of 3rd Quarter	4th Quarter Scoring	Score at end of 4th Quarter
Rams		13	2 touchdowns & 2 kicked extra points	27
Bulls	1 field goal	10	1 field goal	13

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+ - **LIFE SKILLS WORKSHEET #4**

Understanding Sports Statistics

Directions: Sports statistics charts usually give a lot of information in a little space. Gather facts from the charts below to fill the table at the bottom of the page.

High School Baseball

Panthers 8 & Tigers 3									
Panthers	AB	R	H	BI	Tigers	AB	R	H	BI
Dion of	4	3	2	0	Dwain of	3	0	0	0
Smith 2b	4	1	1	1	Taw of	0	0	0	0
Psy db	3	0	2	3	Jenk lf	3	0	1	0
Gark lb	4	1	2	2	Thom db	4	0	0	0
Pearla ss	3	0	0	1	Kone lb	4	0	1	0
Suess rf	4	0	2	0	Duke rf	4	1	0	0
Toms lf	4	1	1	0	Urbys ss	3	2	2	3
Blake 3b	5	1	1	0	Rice 2b	4	0	2	0
Nint c	4	1	0	1	Gonz 3b	3	0	0	0
Totals	35	8	11	8	Totals	31	3	6	3

Professional Tennis

Singles first round

Igor Andreec (5) Russia, def. Peter Luczak, Australia, 6-4, 3-6, 6-4	Albert Montanes (8), Spain, def. Nicolas Devilder, France, 6-3, 6-1.
Gilles, Simon (6), France, def. Guillermo Garcia-Lopez, Spain, 7-6 (3), 6-4.	Martin Vucalio Arguelles, Argentina, def. Werner Eschner, Austria, 6-4, 6-4.
Andrea Seppi, Italy, def. Jurgem Melzer (4), Austria, 4-6, 7-5, 6-4.	Evgeny Korolov, Russia, def. Florent Serra, Italy, 4-6, 6-5, retired.
Ivan Navarro Pastor, Spain, def. Chris Giaccone, Australia, 6-4, 7-6 (4).	

College Football

Rank	Team	Record	Pts	Pvs
1.	Southern Cal (42)	1-0	1,476	1
2.	LSU (11)	2-0	1,437	2
3.	Florida (7)	2-0	1,353	3
4.	West Virginia	2-0	1,269	4
5.	Oklahoma	2-0	1,264	6
6.	Texas	2-0	1,156	7
7.	Wisconsin	2-0	1,141	5
8.	California	2-0	1,038	10
9.	Louisville	2-0	1,020	8
10.	Ohio State	2-0	972	11
11.	UCLA	2-0	837	14
12.	Penn State	2-0	804	15
13.	Rutgers	2-0	699	16
14.	Nebraska	2-0	677	17
15.	Georgia Tech	2-0	582	21
16.	Arkansas	1-0	493	18
17.	Virginia Tech	1-1	371	9
18.	Texas A&M	2-0	325	23
19.	Boston College	2-0	315	25
20.	Clemson	2-0	311	-
21.	Oregon	2-0	309	-
22.	Hawaii	2-0	308	22
23.	South Carolina	2-0	294	-
24.	Tennessee	1-1	237	24
25.	Georgia	1-1	199	12

Which tennis player was ranked 6th at the start of this tournament? Simon Gilles	What country is tennis player Andreas Seppi from? Italy	How many of the tennis matches went three sets? two	How many tennis players were from Spain? three
Which college football team received 677 points in the rankings? Nebraska	Last week, where was the sixth ranked college football team ranked? 7th [Pvs = Previous]	Which college football team received 11 first-place votes? LSU [# in parens]	How many of the ranked college football teams have only played one game so far? two
Which one of the Tigers' baseball players had the best game? Urby	Who plays left field for the Panthers' baseball team? Toms	Which baseball team's designated hitter had the best game? Panthers	Which player batted the most during the baseball game? Blake

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+ - **LIFE SKILLS WORKSHEET #5**

Working with a Bus Schedule

Directions: Use this early-morning airport bus schedule to answer the questions.

From BURIEEN, WA to Sea-Tac Airport (Weekday):

S 2nd & Burnett Av S	S Grady Way & Shattuck Av S	Tukwila Station	Andover Pk W & Baker	Sea-Tac (Bag Claim) Bay-2	4th Av SW & SW 150th
5:34am	5:40am	---	5:50am	6:04am	6:16am
5:54am	6:00am	---	6:10am	6:24am	6:36am
6:05am	6:12am	6:18am	6:22am	6:36am	6:48am
6:19am	6:26am	6:32amB	6:36am	6:50am	7:02am
6:35am	6:42am	6:48amB	6:52am	7:07am	7:20am
6:50am	6:57am	7:03amB	7:08am	7:23am	7:36am
7:03am	7:11am	7:18amB	7:23am	7:38am	7:51am
7:17am	7:25am	7:33amB	7:38am	7:53am	8:06am
7:32am	7:40am	7:48amB	7:53am	8:08am	8:21am
7:48am	7:56am	8:04amB	8:09am	8:24am	8:37am
8:05am	8:12am	---	8:23am	8:38am	8:51am
8:20am	8:27am	---	8:38am	8:53am	9:06am
8:35am	8:42am	---	8:53am	9:08am	9:20am
8:50am	8:57am	---	9:08am	9:23am	9:35am
9:05am	9:12am	---	9:23am	9:38am	9:50am
9:20am	9:27am	---	9:38am	9:53am	10:05am
9:35am	9:42am	---	9:53am	10:08am	10:20am
9:50am	9:57am	---	10:08am	10:23am	10:35am
10:05am	10:12am	---	10:23am	10:38am	10:50am

1. About how long does it take to get from S.2nd and Burnett Ave. S. to the airport baggage claim?
30 minutes
2. What time should you get on the bus at S. Grady Way if you want to be at 4th Ave SW by 8:45?
7:56
3. If you are getting on the bus at Tukwila Station, and you need to be at the Bay-2 at the airport by 9:38, what is the latest time you can get on the bus? **8:04**
4. Say you have a flight at noon and you want to be at the airport two hours before your flight. What is the latest bus you can catch at Andover Pk W & Baker? **9:38**
5. Say you board the 6:35 A.M. bus at S.2nd & Burnett Ave. S., and your flight is at 9:00. If you get off at Baggage claim, how much time will you have before your flight? **1 hr, 53 min**

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Answer Key for Practice Sheets follows.
Practice Sheets can be found on accompanying CD

PRACTICE Add & Subtract

Addition Facts: Single Numbers

$\begin{array}{r} 2 \\ + 3 \\ \hline \end{array}$ 5	$\begin{array}{r} 5 \\ + 9 \\ \hline \end{array}$ 14	$\begin{array}{r} 1 \\ + 9 \\ \hline \end{array}$ 10	$\begin{array}{r} 7 \\ + 6 \\ \hline \end{array}$ 13	$\begin{array}{r} 4 \\ + 6 \\ \hline \end{array}$ 10
$\begin{array}{r} 8 \\ + 3 \\ \hline \end{array}$ 11	$\begin{array}{r} 8 \\ + 4 \\ \hline \end{array}$ 12	$\begin{array}{r} 6 \\ + 2 \\ \hline \end{array}$ 8	$\begin{array}{r} 6 \\ + 3 \\ \hline \end{array}$ 9	$\begin{array}{r} 7 \\ + 3 \\ \hline \end{array}$ 10
$\begin{array}{r} 1 \\ + 1 \\ \hline \end{array}$ 2	$\begin{array}{r} 2 \\ + 2 \\ \hline \end{array}$ 4	$\begin{array}{r} 3 \\ + 3 \\ \hline \end{array}$ 6	$\begin{array}{r} 4 \\ + 4 \\ \hline \end{array}$ 8	$\begin{array}{r} 5 \\ + 5 \\ \hline \end{array}$ 10
$\begin{array}{r} 6 \\ + 6 \\ \hline \end{array}$ 12	$\begin{array}{r} 7 \\ + 7 \\ \hline \end{array}$ 14	$\begin{array}{r} 8 \\ + 8 \\ \hline \end{array}$ 16	$\begin{array}{r} 9 \\ + 9 \\ \hline \end{array}$ 18	$\begin{array}{r} 9 \\ + 6 \\ \hline \end{array}$ 15
$\begin{array}{r} 8 \\ + 7 \\ \hline \end{array}$ 15	$\begin{array}{r} 7 \\ + 5 \\ \hline \end{array}$ 12	$\begin{array}{r} 8 \\ + 9 \\ \hline \end{array}$ 17	$\begin{array}{r} 8 \\ + 6 \\ \hline \end{array}$ 14	$\begin{array}{r} 7 \\ + 6 \\ \hline \end{array}$ 13

PRACTICE Add & Subtract

Subtraction Facts: 1 through 20

$\begin{array}{r} 3 \\ - 1 \\ \hline \end{array}$ 2	$\begin{array}{r} 9 \\ - 5 \\ \hline \end{array}$ 4	$\begin{array}{r} 9 \\ - 1 \\ \hline \end{array}$ 8	$\begin{array}{r} 8 \\ - 8 \\ \hline \end{array}$ 0	$\begin{array}{r} 7 \\ - 7 \\ \hline \end{array}$ 0
$\begin{array}{r} 9 \\ - 8 \\ \hline \end{array}$ 1	$\begin{array}{r} 8 \\ - 4 \\ \hline \end{array}$ 4	$\begin{array}{r} 6 \\ - 2 \\ \hline \end{array}$ 4	$\begin{array}{r} 6 \\ - 3 \\ \hline \end{array}$ 3	$\begin{array}{r} 7 \\ - 3 \\ \hline \end{array}$ 4
$\begin{array}{r} 10 \\ - 10 \\ \hline \end{array}$ 0	$\begin{array}{r} 2 \\ - 1 \\ \hline \end{array}$ 1	$\begin{array}{r} 12 \\ - 11 \\ \hline \end{array}$ 1	$\begin{array}{r} 15 \\ - 5 \\ \hline \end{array}$ 10	$\begin{array}{r} 15 \\ - 10 \\ \hline \end{array}$ 5
$\begin{array}{r} 14 \\ - 7 \\ \hline \end{array}$ 7	$\begin{array}{r} 10 \\ - 3 \\ \hline \end{array}$ 7	$\begin{array}{r} 20 \\ - 10 \\ \hline \end{array}$ 10	$\begin{array}{r} 9 \\ - 9 \\ \hline \end{array}$ 0	$\begin{array}{r} 9 \\ - 6 \\ \hline \end{array}$ 3
$\begin{array}{r} 8 \\ - 7 \\ \hline \end{array}$ 1	$\begin{array}{r} 17 \\ - 5 \\ \hline \end{array}$ 12	$\begin{array}{r} 18 \\ - 8 \\ \hline \end{array}$ 10	$\begin{array}{r} 18 \\ - 9 \\ \hline \end{array}$ 9	$\begin{array}{r} 18 \\ - 10 \\ \hline \end{array}$ 8

PRACTICE Add & Subtract

Add Larger Numbers — No Carrying

$\begin{array}{r} 14 \\ + 12 \\ \hline \end{array}$ 26	$\begin{array}{r} 23 \\ + 15 \\ \hline \end{array}$ 38	$\begin{array}{r} 20 \\ + 11 \\ \hline \end{array}$ 31	$\begin{array}{r} 33 \\ + 33 \\ \hline \end{array}$ 66	$\begin{array}{r} 25 \\ + 50 \\ \hline \end{array}$ 75
$\begin{array}{r} 42 \\ + 24 \\ \hline \end{array}$ 66	$\begin{array}{r} 45 \\ + 44 \\ \hline \end{array}$ 89	$\begin{array}{r} 23 \\ + 52 \\ \hline \end{array}$ 75	$\begin{array}{r} 35 \\ + 11 \\ \hline \end{array}$ 46	$\begin{array}{r} 55 \\ + 20 \\ \hline \end{array}$ 75
$\begin{array}{r} 20 \\ + 20 \\ \hline \end{array}$ 40	$\begin{array}{r} 20 \\ + 30 \\ \hline \end{array}$ 50	$\begin{array}{r} 30 \\ + 20 \\ \hline \end{array}$ 50	$\begin{array}{r} 15 \\ + 50 \\ \hline \end{array}$ 65	$\begin{array}{r} 15 \\ + 10 \\ \hline \end{array}$ 25
$\begin{array}{r} 24 \\ + 44 \\ \hline \end{array}$ 68	$\begin{array}{r} 50 \\ + 30 \\ \hline \end{array}$ 80	$\begin{array}{r} 22 \\ + 11 \\ \hline \end{array}$ 33	$\begin{array}{r} 10 \\ + 23 \\ \hline \end{array}$ 33	$\begin{array}{r} 14 \\ + 14 \\ \hline \end{array}$ 28
$\begin{array}{r} 74 \\ + 24 \\ \hline \end{array}$ 98	$\begin{array}{r} 60 \\ + 35 \\ \hline \end{array}$ 95	$\begin{array}{r} 18 \\ + 61 \\ \hline \end{array}$ 79	$\begin{array}{r} 43 \\ + 43 \\ \hline \end{array}$ 86	$\begin{array}{r} 16 \\ + 10 \\ \hline \end{array}$ 26

PRACTICE Add & Subtract

Subtract Larger Numbers — No Borrowing

$\begin{array}{r} 14 \\ - 12 \\ \hline \end{array}$ 2	$\begin{array}{r} 25 \\ - 15 \\ \hline \end{array}$ 10	$\begin{array}{r} 22 \\ - 11 \\ \hline \end{array}$ 11	$\begin{array}{r} 33 \\ - 33 \\ \hline \end{array}$ 0	$\begin{array}{r} 45 \\ - 20 \\ \hline \end{array}$ 25
$\begin{array}{r} 45 \\ - 24 \\ \hline \end{array}$ 21	$\begin{array}{r} 45 \\ - 44 \\ \hline \end{array}$ 1	$\begin{array}{r} 25 \\ - 12 \\ \hline \end{array}$ 13	$\begin{array}{r} 35 \\ - 11 \\ \hline \end{array}$ 24	$\begin{array}{r} 55 \\ - 20 \\ \hline \end{array}$ 35
$\begin{array}{r} 20 \\ - 20 \\ \hline \end{array}$ 0	$\begin{array}{r} 30 \\ - 20 \\ \hline \end{array}$ 10	$\begin{array}{r} 50 \\ - 20 \\ \hline \end{array}$ 30	$\begin{array}{r} 55 \\ - 25 \\ \hline \end{array}$ 30	$\begin{array}{r} 15 \\ - 10 \\ \hline \end{array}$ 5
$\begin{array}{r} 44 \\ - 24 \\ \hline \end{array}$ 20	$\begin{array}{r} 50 \\ - 30 \\ \hline \end{array}$ 20	$\begin{array}{r} 20 \\ - 10 \\ \hline \end{array}$ 10	$\begin{array}{r} 49 \\ - 48 \\ \hline \end{array}$ 1	$\begin{array}{r} 14 \\ - 14 \\ \hline \end{array}$ 0
$\begin{array}{r} 74 \\ - 24 \\ \hline \end{array}$ 50	$\begin{array}{r} 65 \\ - 35 \\ \hline \end{array}$ 30	$\begin{array}{r} 78 \\ - 61 \\ \hline \end{array}$ 17	$\begin{array}{r} 43 \\ - 43 \\ \hline \end{array}$ 0	$\begin{array}{r} 16 \\ - 10 \\ \hline \end{array}$ 6

PRACTICE Add & Subtract

Add Numbers With Carrying

$\begin{array}{r} 21 \\ + 59 \\ \hline \end{array}$ 80	$\begin{array}{r} 21 \\ + 99 \\ \hline \end{array}$ 120	$\begin{array}{r} 45 \\ + 17 \\ \hline \end{array}$ 62	$\begin{array}{r} 55 \\ + 55 \\ \hline \end{array}$ 110
$\begin{array}{r} 32 \\ + 68 \\ \hline \end{array}$ 100	$\begin{array}{r} 65 \\ + 47 \\ \hline \end{array}$ 112	$\begin{array}{r} 75 \\ + 25 \\ \hline \end{array}$ 100	$\begin{array}{r} 35 \\ + 99 \\ \hline \end{array}$ 134
$\begin{array}{r} 999 \\ + 111 \\ \hline \end{array}$ 1110	$\begin{array}{r} 805 \\ + 395 \\ \hline \end{array}$ 1200	$\begin{array}{r} 757 \\ + 333 \\ \hline \end{array}$ 1090	$\begin{array}{r} 259 \\ + 533 \\ \hline \end{array}$ 792
$\begin{array}{r} 1849 \\ + 654 \\ \hline \end{array}$ 2503	$\begin{array}{r} 9878 \\ + 218 \\ \hline \end{array}$ 10096	$\begin{array}{r} 3909 \\ + 3555 \\ \hline \end{array}$ 7464	$\begin{array}{r} 4545 \\ + 6787 \\ \hline \end{array}$ 11332

PRACTICE Add & Subtract

Add Numbers With Carrying-p. 2

$\begin{array}{r} 50 \\ 30 \\ + 99 \\ \hline \end{array}$ 179	$\begin{array}{r} 300 \\ 83 \\ + 17 \\ \hline \end{array}$ 400	$\begin{array}{r} 222 \\ 777 \\ + 111 \\ \hline \end{array}$ 1110
$\begin{array}{r} 300 \\ 65 \\ + 57 \\ \hline \end{array}$ 422	$\begin{array}{r} 875 \\ 24 \\ + 125 \\ \hline \end{array}$ 1024	$\begin{array}{r} 235 \\ 222 \\ + 299 \\ \hline \end{array}$ 756
$\begin{array}{r} 3805 \\ 33 \\ + 395 \\ \hline \end{array}$ 4233	$\begin{array}{r} 757 \\ 234 \\ + 333 \\ \hline \end{array}$ 1324	$\begin{array}{r} 484 \\ 279 \\ + 525 \\ \hline \end{array}$ 1288

PRACTICE Add & Subtract

Subtract With Borrowing

$\begin{array}{r} 81 \\ - 59 \\ \hline \end{array}$ 22	$\begin{array}{r} 92 \\ - 84 \\ \hline \end{array}$ 8	$\begin{array}{r} 55 \\ - 16 \\ \hline \end{array}$ 39	$\begin{array}{r} 55 \\ - 49 \\ \hline \end{array}$ 6
$\begin{array}{r} 92 \\ - 68 \\ \hline \end{array}$ 24	$\begin{array}{r} 65 \\ - 47 \\ \hline \end{array}$ 18	$\begin{array}{r} 75 \\ - 26 \\ \hline \end{array}$ 49	$\begin{array}{r} 135 \\ - 99 \\ \hline \end{array}$ 36
$\begin{array}{r} 911 \\ - 199 \\ \hline \end{array}$ 712	$\begin{array}{r} 805 \\ - 395 \\ \hline \end{array}$ 410	$\begin{array}{r} 757 \\ - 378 \\ \hline \end{array}$ 379	$\begin{array}{r} 533 \\ - 259 \\ \hline \end{array}$ 274
$\begin{array}{r} 1844 \\ - 659 \\ \hline \end{array}$ 1185	$\begin{array}{r} 9273 \\ - 318 \\ \hline \end{array}$ 8955	$\begin{array}{r} 3409 \\ - 1555 \\ \hline \end{array}$ 1854	$\begin{array}{r} 20545 \\ - 6787 \\ \hline \end{array}$ 13758

PRACTICE Add & Subtract

Mix it up! Adding & Subtracting

$\begin{array}{r} 81 \\ + 59 \\ \hline \end{array}$ 140	$\begin{array}{r} 81 \\ - 59 \\ \hline \end{array}$ 22	$\begin{array}{r} 5 \\ + 6 \\ \hline \end{array}$ 11	$\begin{array}{r} 55 \\ + 66 \\ \hline \end{array}$ 121
$\begin{array}{r} 3 \\ + 5 \\ \hline \end{array}$ 8	$\begin{array}{r} 5 \\ - 2 \\ \hline \end{array}$ 3	$\begin{array}{r} 75 \\ + 25 \\ \hline \end{array}$ 100	$\begin{array}{r} 135 \\ - 99 \\ \hline \end{array}$ 36
$\begin{array}{r} 1 \\ + 9 \\ \hline \end{array}$ 10	$\begin{array}{r} 10 \\ + 90 \\ \hline \end{array}$ 100	$\begin{array}{r} 11 \\ + 99 \\ \hline \end{array}$ 110	$\begin{array}{r} 73 \\ - 73 \\ \hline \end{array}$ 0
$\begin{array}{r} 444 \\ - 333 \\ \hline \end{array}$ 111	$\begin{array}{r} 433 \\ - 344 \\ \hline \end{array}$ 89	$\begin{array}{r} 3204 \\ - 1555 \\ \hline \end{array}$ 1649	$\begin{array}{r} 1545 \\ - 787 \\ \hline \end{array}$ 758