



# ReadyMade™ Fractions 2

correlated to

## California Mathematics Content Standards

### 2<sup>nd</sup> Grade

By the end of grade two, students understand place value and number relationships in addition and subtraction, and they use simple concepts of multiplication. They measure quantities with appropriate units. They classify shapes and see relationships among them by paying attention to their geometric attributes. They collect and analyze data and verify the answers.

#### Number Sense

**4.0 Students understand that fractions and decimals may refer to parts of a set and parts of a whole:**

4.1 Recognize, name, and compare unit fractions from  $\frac{1}{12}$  to  $\frac{1}{2}$ .

Adding Fractions: Level 1 – Pictures and Fraction Symbols. In this activity, students will be matching fraction pictures to fraction symbols, thus illustrating a given equation that adds fractions.

Adding Fractions: Level 2 – Common Denominators. In this activity, students will be given two fraction bars with the same denominator. They will add the numerators and show their answer on a third fraction bar.

Adding Fractions: Level 3 – Mixed Denominators. In this activity, students will be adding two fractions with different denominators. They will use fraction bars to help them find the lowest common denominator and then to solve the problem.

Adding Fractions: Level 4 – Word Problems. In this activity, students will be reading word problems and creating fraction bars to show both the problem and its solution.

Adding Fractions: Level 5 – Word Problems and Lowest Common Denominators. In this activity, students will read a series of word problems. The fractions in the word problems will have different



denominators. Students will use fraction bars to represent the fractions, convert them to fractions with common denominators, and show their answer.

Subtracting Fractions: Level 1 – Pictures and Fraction Symbols. In this activity, students will be matching fraction pictures to fraction symbols, thus illustrating a given equation that subtracts fractions. Subtraction problems use halves, thirds, quarters, sixths, and eighths.

Subtracting Fractions: Level 2 – Common Denominators. In this activity, students will be given two fraction bars with the same denominator. They will subtract the numerators and show their answer on a third fraction bar.

Subtracting Fractions: Level 3 – Mixed Denominators. In this activity, students will be subtracting two fractions with different denominators. They will use fraction bars to help them find the lowest common denominator and then to solve the problem.

Subtracting Fractions: Level 4 – Word Problems and Lowest Common Denominators. In this activity, students will be reading word problems with common denominators, creating fraction bars to show the problem, subtracting, and creating a fraction bar to show the solution to the problem.

Subtracting Fractions: Level 5 – Word Problems, Answer in Lowest Terms. In this activity, students will create fraction bars to show the equation presented in a subtraction word problem. They will then create another fraction bar that shows the answer in lowest terms.

Rounding Fractions: Level 1 – Half or Whole. In this activity, students will be deciding whether they need a whole or a half of a particular food item. This decision involves rounding. In this activity, students will be rounding to the nearest half or whole.

Rounding Fractions: Level 2 – Nearest Half. In this activity, students will be rounding to the nearest half. They will be deciding if a fraction bar is closer to 0, to  $1/2$ , or to 1 whole.

Rounding Fractions: Level 3 – Adding a Fraction Bar. In this activity, students create a fraction bar described in the problem. They decide whether the fraction is closer to 0, to  $1/2$ , or 1 and use numbers at the bottom to insert their answer.



Rounding Fractions: Level 4 – Nearest Tenth. In this activity, students round given fractions to the nearest tenth. They can use the tenths fraction bar provided on the page and the comparison bar to check their work. Problems 1–5 involve addition; problems 6–10 involve subtraction.

Rounding Fractions: Level 5 – Word Problems. In this activity, students read word problems that ask them to round given fractions to the nearest appropriate unit. They place fraction bars on the page and use the comparison bar to check their work.

Fractions and Decimals: Level 1 – Fraction Bar and Counting Box. Both fractions and decimals show parts of a whole. In this activity students create fraction bars to represent the filled area of a decimal grid or fill a decimal grid to be equivalent to a fraction bar.

Fractions and Decimals: Level 2 – Fraction Bars and Counting Box. Fractions can also be represented as decimals. In this activity, students move fraction bars to match the correct decimal equivalent. They can use the Counting Box to check their work.

Fractions and Decimals: Level 3 – Writing Decimal Equivalents. Fractions can also be represented as decimals. In this activity, students use numbers to write the correct decimal equivalent. They can use the Counting Box to check their work.

Fractions and Decimals: Level 4 – Making Fraction Equivalents. Decimals can be represented as fractions. Students will make the fraction bars that are equivalent to given decimal amounts. They can move the fraction to the Counting Box to check their work.

Fractions and Decimals: Level 5 – Word Problems. Fractions can be represented as decimals. In this activity students will read a problem and create a fraction bar to answer the question. Then they use a Counting Box to find the decimal equivalent.

Data Analysis: Level 1 – Graphing and Fractions. Fraction bars can be used to show the results of repeating an event such as flipping a coin. In this activity, students will be asked create data by flipping a coin or spinning a spinner. Then they report the results of the event using fraction bars.

Data Analysis: Level 2: Reporting with Fractions. Fraction bars can be used to show the results of repeating an event such as flipping a coin. In this activity, students will be asked create data by flipping a coin or



spinning a spinner. Then they report the results of the event using fraction bars.

Data Analysis: Level 3: Fractions, Decimals, Percentages. Percentage Fraction bars can be used to illustrate the results of the coin flipping. The same results can be reported as percentages. In this activity, students will create a set of data and report it both as fractions and as percents.

Data Analysis: Level 4: Reporting Survey Results. In this activity, students will be looking at pictographs of survey information and reporting the results of the surveys as fractions and percents. The last three problems invite students to make their own surveys and report the results.

Data Analysis: Level 5: Word Problems. In this activity, students will be reading word problems and solving the problems by using fractions, decimals, and percentages.

4.2 Recognize fractions of a whole and parts of a group (e.g., one-fourth of a pie, two-thirds of 15 balls).

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Adding Fractions: Level 3 – Mixed Denominators. In this activity, students will be adding two fractions with different denominators. They will use fraction bars to help them find the lowest common denominator and then to solve the problem.

Adding Fractions: Level 4 – Word Problems. In this activity, students will be reading word problems and creating fraction bars to show both the problem and its solution.

Adding Fractions: Level 5 – Word Problems and Lowest Common Denominators. In this activity, students will read a series of word problems. The fractions in the word problems will have different denominators. Students will use fraction bars to represent the fractions, convert them to fractions with common denominators, and show their answer.



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Subtracting Fractions: Level 5 – Word Problems, Answer in Lowest Terms. In this activity, students will create fraction bars to show the equation presented in a subtraction word problem. They will then create another fraction bar that shows the answer in lowest terms.

Rounding Fractions: Level 1 – Half or Whole. In this activity, students will be deciding whether they need a whole or a half of a particular food item. This decision involves rounding. In this activity, students will be rounding to the nearest half or whole.

Rounding Fractions: Level 2 – Nearest Half. In this activity, students will be rounding to the nearest half. They will be deciding if a fraction bar is closer to 0, to  $1/2$ , or to 1 whole.

Rounding Fractions: Level 3 – Adding a Fraction Bar. In this activity, students create a fraction bar described in the problem. They decide whether the fraction is closer to 0, to  $1/2$ , or 1 and use numbers at the bottom to insert their answer.

Rounding Fractions: Level 4 – Nearest Tenth. In this activity, students round given fractions to the nearest tenth. They can use the tenths fraction bar provided on the page and the comparison bar to check their work. Problems 1–5 involve addition; problems 6–10 involve subtraction.



Rounding Fractions: Level 5 – Word Problems. In this activity, students read word problems that ask them to round given fractions to the nearest appropriate unit. They place fraction bars on the page and use the comparison bar to check their work.

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same results can be reported as percentages. In this activity, students will create a set of data and report it both as fractions and as percents.

Data Analysis: Level 4: Reporting Survey Results. In this activity, students will be looking at pictographs of survey information and reporting the results of the surveys as fractions and percents. The last three problems invite students to make their own surveys and report the results.

Data Analysis: Level 5: Word Problems. In this activity, students will be reading word problems and solving the problems by using fractions, decimals, and percentages.

4.3 Know that when all fractional parts are included, such as four-fourths, the result is equal to the whole and to one.

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Fractions and Decimals: Level 4 – Making Fraction Equivalents. Decimals can be represented as fractions. Students will make the fraction bars that are equivalent to given decimal amounts. They can move the fraction to the Counting Box to check their work.

## **6.0 Students use estimation strategies in computation and problem solving that involve numbers that use the ones, tens, hundreds, and thousands places:**

6.1 Recognize when an estimate is reasonable in measurements (e.g., closest inch).

Rounding Fractions: Level 5 – Word Problems. In this activity, students read word problems that ask them to round given fractions to the nearest appropriate unit. They place fraction bars on the page and use the comparison bar to check their work.



## **Algebra and Functions**

### **1.0 Students model, represent, and interpret number relationships to create and solve problems involving addition and subtraction:**

1.3 Solve addition and subtraction problems by using data from simple charts, picture graphs, and number sentences.

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Data Analysis: Level 5: Word Problems. In this activity, students will be reading word problems and solving the problems by using fractions, decimals, and percentages.

## **Statistics, Data Analysis, and Probability**

### **1.0 Students collect numerical data and record, organize, display, and interpret the data on bar graphs and other representations:**

1.1 Record numerical data in systematic ways, keeping track of what has been counted.

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Data Analysis: Level 2: Reporting with Fractions. Fraction bars can be used to show the results of repeating an event such as flipping a coin. In this activity, students will be asked create data by flipping a coin or spinning a spinner. Then they report the results of the event using fraction bars.



Data Analysis: Level 3: Fractions, Decimals, Percentages. Percentage Fraction bars can be used to illustrate the results of the coin flipping. The same results can be reported as percentages. In this activity, students will create a set of data and report it both as fractions and as percents.

Data Analysis: Level 4: Reporting Survey Results. In this activity, students will be looking at pictographs of survey information and reporting the results of the surveys as fractions and percents. The last three problems invite students to make their own surveys and report the results.

1.4 Ask and answer simple questions related to data representations.

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## 3<sup>rd</sup> Grade

**By the end of grade three, students deepen their understanding of place value and their understanding of and skill with addition, subtraction, multiplication, and division of whole numbers. Students estimate, measure, and describe objects in space. They use**



patterns to help solve problems. They represent number relationships and conduct simple probability experiments.

## Number Sense

### **3.0 Students understand the relationship between whole numbers, simple fractions, and decimals:**

3.1 Compare fractions represented by drawings or concrete materials to show equivalency and to add and subtract simple fractions in context (e.g.,  $1/2$  of a pizza is the same amount as  $2/4$  of another pizza that is the same size; show that  $3/8$  is larger than  $1/4$ ).

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Subtracting Fractions: Level 1 – Pictures and Fraction Symbols. In this activity, students will be matching fraction pictures to fraction symbols, thus illustrating a given equation that subtracts fractions. Subtraction problems use halves, thirds, quarters, sixths, and eighths.



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Subtracting Fractions: Level 5 – Word Problems, Answer in Lowest Terms. In this activity, students will create fraction bars to show the equation presented in a subtraction word problem. They will then create another fraction bar that shows the answer in lowest terms.

Rounding Fractions: Level 4 – Nearest Tenth. In this activity, students round given fractions to the nearest tenth. They can use the tenths fraction bar provided on the page and the comparison bar to check their work. Problems 1–5 involve addition; problems 6–10 involve subtraction.

Data Analysis: Level 5: Word Problems. In this activity, students will be reading word problems and solving the problems by using fractions, decimals, and percentages.

3.2 Add and subtract simple fractions (e.g., determine that  $\frac{1}{8} + \frac{3}{8}$  is the same as  $\frac{1}{2}$ ).

Adding Fractions: Level 1 – Pictures and Fraction Symbols. In this activity, students will be matching fraction pictures to fraction symbols, thus illustrating a given equation that adds fractions.

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Data Analysis: Level 5: Word Problems. In this activity, students will be reading word problems and solving the problems by using fractions, decimals, and percentages.

3.4 Know and understand that fractions and decimals are two different representations of the same concept (e.g., 50 cents is  $\frac{1}{2}$  of a dollar, 75 cents is  $\frac{3}{4}$  of a dollar).

Fractions and Decimals: Level 1 – Fraction Bar and Counting Box. Both fractions and decimals show parts of a whole. In this activity students create fraction bars to represent the filled area of a decimal grid or fill a decimal grid to be equivalent to a fraction bar.

Fractions and Decimals: Level 2 – Fraction Bars and Counting Box. Fractions can also be represented as decimals. In this activity, students move fraction bars to match the correct decimal equivalent. They can use the Counting Box to check their work.

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Data Analysis: Level 3: Fractions, Decimals, Percentages. Percentage Fraction bars can be used to illustrate the results of the coin flipping. The same results can be reported as percentages. In this activity, students will create a set of data and report it both as fractions and as percents.

Data Analysis: Level 4: Reporting Survey Results. In this activity, students will be looking at pictographs of survey information and reporting the results of the surveys as fractions and percents. The last three problems invite students to make their own surveys and report the results.



Data Analysis: Level 5: Word Problems. In this activity, students will be reading word problems and solving the problems by using fractions, decimals, and percentages.

## **Statistics, Data Analysis, and Probability**

### **1.0 Students conduct simple probability experiments by determining the number of possible outcomes and make simple predictions:**

1.2 Record the possible outcomes for a simple event (e.g., tossing a coin) and systematically keep track of the outcomes when the event is repeated many times.

Data Analysis: Level 1 – Graphing and Fractions. Fraction bars can be used to show the results of repeating an event such as flipping a coin. In this activity, students will be asked create data by flipping a coin or spinning a spinner. Then they report the results of the event using fraction bars.

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1.3 Summarize and display the results of probability experiments in a clear and organized way (e.g., use a bar graph or a line plot).

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## **Mathematical Reasoning**

### **2.0 Students use strategies, skills, and concepts in finding solutions:**

2.5 Indicate the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy.

Rounding Fractions: Level 1 – Half or Whole. In this activity, students will be deciding whether they need a whole or a half of a particular food item. This decision involves rounding. In this activity, students will be rounding to the nearest half or whole.

Rounding Fractions: Level 2 – Nearest Half. In this activity, students will be rounding to the nearest half. They will be deciding if a fraction bar is closer to 0, to  $1/2$ , or to 1 whole.

Rounding Fractions: Level 3 – Adding a Fraction Bar. In this activity, students create a fraction bar described in the problem. They decide whether the fraction is closer to 0, to  $1/2$ , or 1 and use numbers at the bottom to insert their answer.

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## **4<sup>th</sup> Grade**



**By the end of grade four, students understand large numbers and addition, subtraction, multiplication, and division of whole numbers. They describe and compare simple fractions and decimals. They understand the properties of, and the relationships between, plane geometric figures. They collect, represent, and analyze data to answer questions.**

## **Number Sense**

**1.0 Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions. Students use the concepts of negative numbers:**

1.4 Decide when a rounded solution is called for and explain why such a solution may be appropriate.

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Rounding Fractions: Level 2 – Nearest Half. In this activity, students will be rounding to the nearest half. They will be deciding if a fraction bar is closer to 0, to  $1/2$ , or to 1 whole.

Rounding Fractions: Level 3 – Adding a Fraction Bar. In this activity, students create a fraction bar described in the problem. They decide whether the fraction is closer to 0, to  $1/2$ , or 1 and use numbers at the bottom to insert their answer.

Rounding Fractions: Level 4 – Nearest Tenth. In this activity, students round given fractions to the nearest tenth. They can use the tenths fraction bar provided on the page and the comparison bar to check their work. Problems 1–5 involve addition; problems 6–10 involve subtraction.

Rounding Fractions: Level 5 – Word Problems. In this activity, students read word problems that ask them to round given fractions to the nearest appropriate unit. They place fraction bars on the page and use the comparison bar to check their work.

1.5 Explain different interpretations of fractions, for example, parts of a whole, parts of a set, and division of whole numbers by whole numbers; explain equivalents of fractions (see Standard 4.0).



Adding Fractions: Level 1 – Pictures and Fraction Symbols. In this activity, students will be matching fraction pictures to fraction symbols, thus illustrating a given equation that adds fractions.

Adding Fractions: Level 2 – Common Denominators. In this activity, students will be given two fraction bars with the same denominator. They will add the numerators and show their answer on a third fraction bar.

Adding Fractions: Level 3 – Mixed Denominators. In this activity, students will be adding two fractions with different denominators. They will use fraction bars to help them find the lowest common denominator and then to solve the problem.

Adding Fractions: Level 4 – Word Problems. In this activity, students will be reading word problems and creating fraction bars to show both the problem and its solution.

Adding Fractions: Level 5 – Word Problems and Lowest Common Denominators. In this activity, students will read a series of word problems. The fractions in the word problems will have different denominators. Students will use fraction bars to represent the fractions, convert them to fractions with common denominators, and show their answer.

Subtracting Fractions: Level 1 – Pictures and Fraction Symbols. In this activity, students will be matching fraction pictures to fraction symbols, thus illustrating a given equation that subtracts fractions. Subtraction problems use halves, thirds, quarters, sixths, and eighths.

Subtracting Fractions: Level 2 – Common Denominators. In this activity, students will be given two fraction bars with the same denominator. They will subtract the numerators and show their answer on a third fraction bar.

Subtracting Fractions: Level 3 – Mixed Denominators. In this activity, students will be subtracting two fractions with different denominators. They will use fraction bars to help them find the lowest common denominator and then to solve the problem.

Subtracting Fractions: Level 4 – Word Problems and Lowest Common Denominators. In this activity, students will be reading word problems with common denominators, creating fraction bars to show the problem, subtracting, and creating a fraction bar to show the solution to the problem.



Subtracting Fractions: Level 5 – Word Problems, Answer in Lowest Terms . In this activity, students will create fraction bars to show the equation presented in a subtraction word problem. They will then create another fraction bar that shows the answer in lowest terms.

Rounding Fractions: Level 1 – Half or Whole. In this activity, students will be deciding whether they need a whole or a half of a particular food item. This decision involves rounding. In this activity, students will be rounding to the nearest half or whole.

Rounding Fractions: Level 2 – Nearest Half. In this activity, students will be rounding to the nearest half. They will be deciding if a fraction bar is closer to 0, to  $1/2$ , or to 1 whole.

Rounding Fractions: Level 3 – Adding a Fraction Bar. In this activity, students create a fraction bar described in the problem. They decide whether the fraction is closer to 0, to  $1/2$ , or 1 and use numbers at the bottom to insert their answer.

Rounding Fractions: Level 4 – Nearest Tenth. In this activity, students round given fractions to the nearest tenth. They can use the tenths fraction bar provided on the page and the comparison bar to check their work. Problems 1–5 involve addition; problems 6–10 involve subtraction.

Rounding Fractions: Level 5 – Word Problems. In this activity, students read word problems that ask them to round given fractions to the nearest appropriate unit. They place fraction bars on the page and use the comparison bar to check their work.

Fractions and Decimals: Level 1 – Fraction Bar and Counting Box. Both fractions and decimals show parts of a whole. In this activity students create fraction bars to represent the filled area of a decimal grid or fill a decimal grid to be equivalent to a fraction bar.

Fractions and Decimals: Level 2 – Fraction Bars and Counting Box. Fractions can also be represented as decimals. In this activity, students move fraction bars to match the correct decimal equivalent. They can use the Counting Box to check their work.

Fractions and Decimals: Level 3 – Writing Decimal Equivalents. Fractions can also be represented as decimals. In this activity, students use numbers to write the correct decimal equivalent. They can use the Counting Box to check their work.



Fractions and Decimals: Level 4 – Making Fraction Equivalents.

Decimals can be represented as fractions. Students will make the fraction bars that are equivalent to given decimal amounts. They can move the fraction to the Counting Box to check their work.

Fractions and Decimals: Level 5 – Word Problems. Fractions can be represented as decimals. In this activity students will read a problem and create a fraction bar to answer the question. Then they use a Counting Box to find the decimal equivalent.

Data Analysis: Level 1 – Graphing and Fractions. Fraction bars can be used to show the results of repeating an event such as flipping a coin. In this activity, students will be asked create data by flipping a coin or spinning a spinner. Then they report the results of the event using fraction bars.

Data Analysis: Level 2: Reporting with Fractions. Fraction bars can be used to show the results of repeating an event such as flipping a coin. In this activity, students will be asked create data by flipping a coin or spinning a spinner. Then they report the results of the event using fraction bars.

Data Analysis: Level 3: Fractions, Decimals, Percentages. Percentage Fraction bars can be used to illustrate the results of the coin flipping. The same results can be reported as percentages. In this activity, students will create a set of data and report it both as fractions and as percents.

Data Analysis: Level 4: Reporting Survey Results. In this activity, students will be looking at pictographs of survey information and reporting the results of the surveys as fractions and percents. The last three problems invite students to make their own surveys and report the results.

Data Analysis: Level 5: Word Problems. In this activity, students will be reading word problems and solving the problems by using fractions, decimals, and percentages.

1.6 Write tenths and hundredths in decimal and fraction notations and know the fraction and decimal equivalents for halves and fourths (e.g.,  $1/2 = 0.5$  or  $.50$ ;  $7/4 = 1 3/4 = 1.75$ ).

Fractions and Decimals: Level 1 – Fraction Bar and Counting Box. Both fractions and decimals show parts of a whole. In this activity students



create fraction bars to represent the filled area of a decimal grid or fill a decimal grid to be equivalent to a fraction bar.

Fractions and Decimals: Level 2 – Fraction Bars and Counting Box.

Fractions can also be represented as decimals. In this activity, students move fraction bars to match the correct decimal equivalent. They can use the Counting Box to check their work.

Fractions and Decimals: Level 3 – Writing Decimal Equivalents.

Fractions can also be represented as decimals. In this activity, students use numbers to write the correct decimal equivalent. They can use the Counting Box to check their work.

Fractions and Decimals: Level 4 – Making Fraction Equivalents.

Decimals can be represented as fractions. Students will make the fraction bars that are equivalent to given decimal amounts. They can move the fraction to the Counting Box to check their work.

Fractions and Decimals: Level 5 – Word Problems. Fractions can be represented as decimals. In this activity students will read a problem and create a fraction bar to answer the question. Then they use a Counting Box to find the decimal equivalent.

Data Analysis: Level 3: Fractions, Decimals, Percentages. Percentage Fraction bars can be used to illustrate the results of the coin flipping. The same results can be reported as percentages. In this activity, students will create a set of data and report it both as fractions and as percents.

Data Analysis: Level 4: Reporting Survey Results. In this activity, students will be looking at pictographs of survey information and reporting the results of the surveys as fractions and percents. The last three problems invite students to make their own surveys and report the results.

Data Analysis: Level 5: Word Problems. In this activity, students will be reading word problems and solving the problems by using fractions, decimals, and percentages.

1.7 Write the fraction represented by a drawing of parts of a figure; represent a given fraction by using drawings; and relate a fraction to a simple decimal on a number line.

Adding Fractions: Level 1 – Pictures and Fraction Symbols. In this activity, students will be matching fraction pictures to fraction symbols, thus illustrating a given equation that adds fractions.



Adding Fractions: Level 2 – Common Denominators. In this activity, students will be given two fraction bars with the same denominator. They will add the numerators and show their answer on a third fraction bar.

Adding Fractions: Level 3 – Mixed Denominators. In this activity, students will be adding two fractions with different denominators. They will use fraction bars to help them find the lowest common denominator and then to solve the problem.

Adding Fractions: Level 4 – Word Problems. In this activity, students will be reading word problems and creating fraction bars to show both the problem and its solution.

Adding Fractions: Level 5 – Word Problems and Lowest Common Denominators. In this activity, students will read a series of word problems. The fractions in the word problems will have different denominators. Students will use fraction bars to represent the fractions, convert them to fractions with common denominators, and show their answer.

Subtracting Fractions: Level 1 – Pictures and Fraction Symbols. In this activity, students will be matching fraction pictures to fraction symbols, thus illustrating a given equation that subtracts fractions. Subtraction problems use halves, thirds, quarters, sixths, and eighths.

Subtracting Fractions: Level 2 – Common Denominators. In this activity, students will be given two fraction bars with the same denominator. They will subtract the numerators and show their answer on a third fraction bar.

Subtracting Fractions: Level 3 – Mixed Denominators. In this activity, students will be subtracting two fractions with different denominators. They will use fraction bars to help them find the lowest common denominator and then to solve the problem.

Subtracting Fractions: Level 4 – Word Problems and Lowest Common Denominators. In this activity, students will be reading word problems with common denominators, creating fraction bars to show the problem, subtracting, and creating a fraction bar to show the solution to the problem.

Subtracting Fractions: Level 5 – Word Problems, Answer in Lowest Terms. In this activity, students will create fraction bars to show the equation presented in a subtraction word problem. They will then create another fraction bar that shows the answer in lowest terms.



Rounding Fractions: Level 1 – Half or Whole. In this activity, students will be deciding whether they need a whole or a half of a particular food item. This decision involves rounding. In this activity, students will be rounding to the nearest half or whole.

Rounding Fractions: Level 2 – Nearest Half. In this activity, students will be rounding to the nearest half. They will be deciding if a fraction bar is closer to 0, to  $1/2$ , or to 1 whole.

Rounding Fractions: Level 3 – Adding a Fraction Bar. In this activity, students create a fraction bar described in the problem. They decide whether the fraction is closer to 0, to  $1/2$ , or 1 and use numbers at the bottom to insert their answer.

Rounding Fractions: Level 4 – Nearest Tenth. In this activity, students round given fractions to the nearest tenth. They can use the tenths fraction bar provided on the page and the comparison bar to check their work. Problems 1–5 involve addition; problems 6–10 involve subtraction.

Rounding Fractions: Level 5 – Word Problems. In this activity, students read word problems that ask them to round given fractions to the nearest appropriate unit. They place fraction bars on the page and use the comparison bar to check their work.

Fractions and Decimals: Level 1 – Fraction Bar and Counting Box. Both fractions and decimals show parts of a whole. In this activity students create fraction bars to represent the filled area of a decimal grid or fill a decimal grid to be equivalent to a fraction bar.

Fractions and Decimals: Level 2 – Fraction Bars and Counting Box. Fractions can also be represented as decimals. In this activity, students move fraction bars to match the correct decimal equivalent. They can use the Counting Box to check their work.

Fractions and Decimals: Level 3 – Writing Decimal Equivalents. Fractions can also be represented as decimals. In this activity, students use numbers to write the correct decimal equivalent. They can use the Counting Box to check their work.

Fractions and Decimals: Level 4 – Making Fraction Equivalents. Decimals can be represented as fractions. Students will make the fraction bars that are equivalent to given decimal amounts. They can move the fraction to the Counting Box to check their work.



Fractions and Decimals: Level 5 – Word Problems. Fractions can be represented as decimals. In this activity students will read a problem and create a fraction bar to answer the question. Then they use a Counting Box to find the decimal equivalent.

Data Analysis: Level 1 – Graphing and Fractions. Fraction bars can be used to show the results of repeating an event such as flipping a coin. In this activity, students will be asked create data by flipping a coin or spinning a spinner. Then they report the results of the event using fraction bars.

Data Analysis: Level 2: Reporting with Fractions. Fraction bars can be used to show the results of repeating an event such as flipping a coin. In this activity, students will be asked create data by flipping a coin or spinning a spinner. Then they report the results of the event using fraction bars.

Data Analysis: Level 3: Fractions, Decimals, Percentages. Percentage Fraction bars can be used to illustrate the results of the coin flipping. The same results can be reported as percentages. In this activity, students will create a set of data and report it both as fractions and as percents.

Data Analysis: Level 4: Reporting Survey Results. In this activity, students will be looking at pictographs of survey information and reporting the results of the surveys as fractions and percents. The last three problems invite students to make their own surveys and report the results.

Data Analysis: Level 5: Word Problems. In this activity, students will be reading word problems and solving the problems by using fractions, decimals, and percentages.

## **Statistics, Data Analysis, and Probability**

### **1.0 Students organize, represent, and interpret numerical and categorical data and clearly communicate their findings:**

1.1 Formulate survey questions; systematically collect and represent data on a number line; and coordinate graphs, tables, and charts.

Data Analysis: Level 4: Reporting Survey Results. In this activity, students will be looking at pictographs of survey information and



reporting the results of the surveys as fractions and percents. The last three problems invite students to make their own surveys and report the results.

## **2.0 Students make predictions for simple probability situations:**

2.1 Represent all possible outcomes for a simple probability situation in an organized way (e.g., tables, grids, tree diagrams).

Data Analysis: Level 1 – Graphing and Fractions. Fraction bars can be used to show the results of repeating an event such as flipping a coin. In this activity, students will be asked create data by flipping a coin or spinning a spinner. Then they report the results of the event using fraction bars.

Data Analysis: Level 2: Reporting with Fractions. Fraction bars can be used to show the results of repeating an event such as flipping a coin. In this activity, students will be asked create data by flipping a coin or spinning a spinner. Then they report the results of the event using fraction bars.

Data Analysis: Level 3: Fractions, Decimals, Percentages. Percentage Fraction bars can be used to illustrate the results of the coin flipping. The same results can be reported as percentages. In this activity, students will create a set of data and report it both as fractions and as percents.

2.2 Express outcomes of experimental probability situations verbally and numerically (e.g., 3 out of 4;  $3/4$ ).

Data Analysis: Level 1 – Graphing and Fractions. Fraction bars can be used to show the results of repeating an event such as flipping a coin. In this activity, students will be asked create data by flipping a coin or spinning a spinner. Then they report the results of the event using fraction bars.

Data Analysis: Level 2: Reporting with Fractions. Fraction bars can be used to show the results of repeating an event such as flipping a coin. In this activity, students will be asked create data by flipping a coin or spinning a spinner. Then they report the results of the event using fraction bars.

Data Analysis: Level 3: Fractions, Decimals, Percentages. Percentage Fraction bars can be used to illustrate the results of the coin flipping. The same results can be reported as percentages. In this activity, students will create a set of data and report it both as fractions and as percents.