

Chapter 6 Planning Chart: Addition and Subtraction of Integers

Cross-Curricular Focus: Adopt effective work methods. The lessons in this chapter show several methods for adding and subtracting integers. Students should learn each method and then make choices about which methods work best in various situations and use the appropriate methods to simplify their work.

Broad Area of Learning: Environmental Awareness. This chapter provides several opportunities to discuss environmental issues related to temperature, including the introduction to Lessons 1 and 7.

Content	QEP Concepts	QEP Processes	Addressing Concepts and Processes
Getting Started: Interpreting Data, pp. 184–185			Assessment Opportunity
Lesson 1: Comparing Positive and Negative Numbers, pp. 186–189	<i>Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense</i> <ul style="list-style-type: none"> • Reading, writing, various representations, patterns, properties • Fractional, decimal and exponential (integral exponent) notation; percentage, square root 	<i>Arithmetic: Different Ways of Writing and Representing Numbers</i> <ul style="list-style-type: none"> • Comparing • Using a variety of representations (e.g. numerical, graphic) • Locating numbers on a number line, abscissa (x-coordinate) of a point 	
Mental Math: Quick Subtraction, p. 189	<i>Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense</i> <ul style="list-style-type: none"> • Reading, writing, various representations, patterns, properties 	<i>Arithmetic: Operations Involving Numbers Written in Decimal and Fractional Notation</i> <ul style="list-style-type: none"> • Looking for equivalent expressions 	
Lesson 2: An Integer Experiment, pp. 190–191	<i>Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense</i> <ul style="list-style-type: none"> • Reading, writing, various representations, patterns, properties • Fractional, decimal and exponential (integral exponent) notation; percentage, square root <i>Probability: Random Experiment</i> <ul style="list-style-type: none"> • Random experiments involving one or more steps (with or without replacement, with or without order) 	<i>Arithmetic: Different Ways of Writing and Representing Numbers</i> <ul style="list-style-type: none"> • Using a variety of representations (e.g. numerical, graphic) • Locating numbers on a number line, abscissa (x-coordinate) of a point 	In prompt B replace “scatter plot” with “graph.”
Lesson 3: Adding Integers Using the Zero Principle, pp. 192–195	<i>Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense</i> <ul style="list-style-type: none"> • Reading, writing, various representations, patterns, properties • Fractional, decimal and exponential (integral exponent) notation; percentage, square root • Properties of operations: <ul style="list-style-type: none"> • Commutative and associative properties 	<i>Arithmetic: Different Ways of Writing and Representing Numbers</i> <ul style="list-style-type: none"> • Using a variety of representations (e.g. numerical, graphic) • Recognizing and using equivalent ways of writing numbers: <ul style="list-style-type: none"> • Decomposition of numbers (e.g. additive, multiplicative) • Simplification and reduction <i>Arithmetic: Operations Involving Numbers Written in Decimal and Fractional Notation</i> <ul style="list-style-type: none"> • Looking for equivalent expressions • Simplifying the terms of an operation • Written computation: the four operations involving numbers that are easy to work with (including large numbers) and sequences of simple operations performed in the proper order (numbers written in decimal notation), using equivalent ways of writing numbers and the properties of operations 	

Content	QEP Concepts	QEP Processes	Addressing Concepts and Processes
<p>Lesson 4: Adding Integers That Are Far from Zero, pp. 196–199</p>	<p><i>Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense</i></p> <ul style="list-style-type: none"> • Reading, writing, various representations, patterns, properties • Fractional, decimal and exponential (integral exponent) notation; percentage, square root • Properties of operations: <ul style="list-style-type: none"> • Commutative and associative properties 	<p><i>Arithmetic: Different Ways of Writing and Representing Numbers</i></p> <ul style="list-style-type: none"> • Using a variety of representations (e.g. numerical, graphic) • Recognizing and using equivalent ways of writing numbers: <ul style="list-style-type: none"> • Decomposition of numbers (e.g. additive, multiplicative) • Simplification and reduction • Locating numbers on a number line, abscissa (x-coordinate) of a point <p><i>Arithmetic: Operations Involving Numbers Written in Decimal and Fractional Notation</i></p> <ul style="list-style-type: none"> • Looking for equivalent expressions • Written computation: the four operations involving numbers that are easy to work with (including large numbers) and sequences of simple operations performed in the proper order (numbers written in decimal notation), using equivalent ways of writing numbers and the properties of operations 	
<p>Lesson 5: Integer Addition Strategies, pp. 200–203</p>	<p><i>Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense</i></p> <ul style="list-style-type: none"> • Reading, writing, various representations, patterns, properties • Fractional, decimal and exponential (integral exponent) notation; percentage, square root • Properties of operations: <ul style="list-style-type: none"> • Commutative and associative properties 	<p><i>Arithmetic: Different Ways of Writing and Representing Numbers</i></p> <ul style="list-style-type: none"> • Using a variety of representations (e.g. numerical, graphic) • Recognizing and using equivalent ways of writing numbers: <ul style="list-style-type: none"> • Decomposition of numbers (e.g. additive, multiplicative) • Simplification and reduction <p><i>Arithmetic: Operations Involving Numbers Written in Decimal and Fractional Notation</i></p> <ul style="list-style-type: none"> • Looking for equivalent expressions • Simplifying the terms of an operation • Written computation: the four operations involving numbers that are easy to work with (including large numbers) and sequences of simple operations performed in the proper order (numbers written in decimal notation), using equivalent ways of writing numbers and the properties of operations • Use of a calculator: operations and sequences of operations performed in the proper order 	
<p>Mid-Chapter Review: pp. 204–205</p>			Assessment Opportunity
<p>Math Game: Integro, p. 206</p>	<p><i>Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense</i></p> <ul style="list-style-type: none"> • Reading, writing, various representations, patterns, properties 	<p><i>Arithmetic: Different Ways of Writing and Representing Numbers</i></p> <ul style="list-style-type: none"> • Using a variety of representations (e.g. numerical, graphic) <p><i>Arithmetic: Operations Involving Numbers Written in Decimal and Fractional Notation</i></p> <ul style="list-style-type: none"> • Mental computation: the four operations, especially with numbers written in decimal notation, using equivalent ways of writing numbers and the properties of operations 	Optional

Content	QEP Concepts	QEP Processes	Addressing Concepts and Processes
Curious Math: Time Zones, p. 207	<p><i>Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense</i></p> <ul style="list-style-type: none"> • Reading, writing, various representations, patterns, properties 	<p>Arithmetic: Different Ways of Writing and Representing Numbers</p> <ul style="list-style-type: none"> • Using a variety of representations (e.g. numerical, graphic) <p><i>Arithmetic: Operations Involving Numbers Written in Decimal and Fractional Notation</i></p> <ul style="list-style-type: none"> • Mental computation: the four operations, especially with numbers written in decimal notation, using equivalent ways of writing numbers and the properties of operations • Written computation: the four operations involving numbers that are easy to work with (including large numbers) and sequences of simple operations performed in the proper order (numbers written in decimal notation), using equivalent ways of writing numbers and the properties of operations 	Optional
Lesson 6: Using Counters to Subtract Integers, pp. 208–211	<p><i>Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense</i></p> <ul style="list-style-type: none"> • Reading, writing, various representations, patterns, properties • Fractional, decimal and exponential (integral exponent) notation; percentage, square root • Properties of operations: <ul style="list-style-type: none"> • Commutative and associative properties 	<p><i>Arithmetic: Different Ways of Writing and Representing Numbers</i></p> <ul style="list-style-type: none"> • Using a variety of representations (e.g. numerical, graphic) • Recognizing and using equivalent ways of writing numbers: <ul style="list-style-type: none"> • Decomposition of numbers (e.g. additive, multiplicative) • Simplification and reduction <p><i>Arithmetic: Operations Involving Numbers Written in Decimal and Fractional Notation</i></p> <ul style="list-style-type: none"> • Looking for equivalent expressions • Written computation: the four operations involving numbers that are easy to work with (including large numbers) and sequences of simple operations performed in the proper order (numbers written in decimal notation), using equivalent ways of writing numbers and the properties of operations 	
Lesson 7: Using Numbers Lines to Subtract Integers, pp. 212–215	<p><i>Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense</i></p> <ul style="list-style-type: none"> • Reading, writing, various representations, patterns, properties • Fractional, decimal and exponential (integral exponent) notation; percentage, square root 	<p><i>Arithmetic: Different Ways of Writing and Representing Numbers</i></p> <ul style="list-style-type: none"> • Using a variety of representations (e.g. numerical, graphic) • Locating numbers on a number line, abscissa (x-coordinate) of a point <p><i>Arithmetic: Operations Involving Numbers Written in Decimal and Fractional Notation</i></p> <ul style="list-style-type: none"> • Written computation: the four operations involving numbers that are easy to work with (including large numbers) and sequences of simple operations performed in the proper order (numbers written in decimal notation), using equivalent ways of writing numbers and the properties of operations 	The student book uses the word “brackets” to refer to parentheses. Remind students that “brackets” is another name for “parentheses”.

Content	QEP Concepts	QEP Processes	Addressing Concepts and Processes
Lesson 8: Solve Problems by Working Backwards, pp. 216–218	<i>Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense</i> <ul style="list-style-type: none"> • Reading, writing, various representations, patterns, properties • Fractional, decimal and exponential (integral exponent) notation; percentage, square root 	<i>Arithmetic: Operations Involving Numbers Written in Decimal and Fractional Notation</i> <ul style="list-style-type: none"> • Written computation: the four operations involving numbers that are easy to work with (including large numbers) and sequences of simple operations performed in the proper order (numbers written in decimal notation), using equivalent ways of writing numbers and the properties of operations 	
Chapter Self-Test: p. 219			Self-Assessment Opportunity
Chapter Review: pp. 220–221			Assessment Opportunity
Chapter Task: Mystery Integer, p. 222	<i>Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense</i> <ul style="list-style-type: none"> • Reading, writing, various representations, patterns, properties • Fractional, decimal and exponential (integral exponent) notation; percentage, square root • Order of operations and the use of no more than two levels of parentheses in different contexts 	<i>Arithmetic: Operations Involving Numbers Written in Decimal and Fractional Notation</i> <ul style="list-style-type: none"> • Written computation: the four operations involving numbers that are easy to work with (including large numbers) and sequences of simple operations performed in the proper order (numbers written in decimal notation), using equivalent ways of writing numbers and the properties of operations 	Assessment Opportunity
Chapters 4–6 Cumulative Review: pp. 223–224			Assessment Opportunity