



Sixth Grade Math Unit 5 Plan

Grade Level: 6	Unit: Integers
Time: January 16-February 16 (23 days)	Essential Standards: 6.NS.5, 6.NS.6abc
<p>Previous Standard: previous CA standard needed for the essential standard in the unit</p> <p>5.G.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane and interpret coordinate values of points in the context of the situation.</p>	<p>Future Standard: next CA standard students will learn for the essential standard in the unit</p> <p>7.NS.1 Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.</p> <ol style="list-style-type: none"> Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged. <u>Understand $p + q$ as the number located a distance q from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0) are additive inverses). Interpret sums of rational numbers by describing real-world contexts.</u> <u>Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference and apply this principle in real-world contexts.</u> <u>Apply properties of operations as strategies to add and subtract rational numbers.</u>
<p>Standards for Mathematical Practice:</p> <ol style="list-style-type: none"> Make sense of problems and persevere in solving them. Reason abstractly and quantitatively. Construct viable arguments and critique the reasoning of others. Model with mathematics. Use appropriate tools strategically. Attend to precision. Look for and make use of structure. Look for and express regularity in repeated reasoning. 	<p>Student Learning Targets:</p> <ol style="list-style-type: none"> I can show positive and negative numbers on a number line (6.NS.5) I can use positive and negative numbers to describe real world situations (6.NS.5) I can plot and name points on a coordinate plane (6.NS.6abc)

Standards	Vocabulary	Skills	Activities (Resources)	Assessment
<p><u>6.NS.5: Understand that positive and negative numbers are used together to describe quantities having opposite directions or values; use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.</u></p> <p>Link to Sample Item</p>	<p>Integers Positive numbers Negative numbers Opposites Quantities</p>	<ul style="list-style-type: none"> Use positive and negative numbers together to describe quantities having opposite directions or values Use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation. 	<p>Section 6.1: Integers</p> <ul style="list-style-type: none"> Textbook Activity pgs. 248-249 (1e, 2bcd, 3c) Textbook Lesson pgs. 250 (Example 1ab, 2ab, 3ab) Textbook Exercises pgs. 252 (2-15, 25, 30, 32) RPJ pgs. 127-128 (1e, 2bcd, 3c), 130 (1-4, 11) <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> Resources by Chapter pgs. 193 (4-7, 19), 194 (1-4, 13), 196 (1-8) <p>Section 6.3: Fractions and Decimals on the Number Line</p> <ul style="list-style-type: none"> Textbook Activity pgs. 260 (1) 	<p>Suggested Common Formative Assessment:</p> <ul style="list-style-type: none"> After Learning Targets 1 & 2 After Learning Target 3 <p>Common Summative Assessment covering all skills (learning targets):</p> <ul style="list-style-type: none"> Select aligned items from Assessment Book Chapter 6 Test A (pgs. 67-68) or Chapter 6 Test B (pgs. 69-70)

			<ul style="list-style-type: none"> Textbook Exercises pgs. 264 (2, 26ab) RPJ pg. 135 (1) <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> Resources by Chapter pgs. 203 (Start Thinking!), pg. 206 (14c)
<p><u>6.NS.6: Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.</u></p> <p><u>a. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself and that 0 is its own opposite.</u></p> <p>Link to Sample Item</p>	Rational number Coordinate axes	<ul style="list-style-type: none"> Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line Recognize that the opposite of the opposite of a number is the number itself, and that 0 is its own opposite 	<p>Section 6.1: Integers</p> <ul style="list-style-type: none"> Textbook Activity pgs. 249 (3c) Textbook Lessons pgs. 251 (Example 2ab) Textbook Exercises pgs. 252-253 (1623, 25, 31) RPJ pgs. 128 (3c), 130 (5-10) <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> Resources by Chapter pgs. 193 (8-13), 194 (5-8, 14-16)

			<p>Section 6.3: Fractions and Decimals on the Number Line</p> <ul style="list-style-type: none"> • Textbook Lesson pgs. 262 (Example 1) • Textbook Exercises pgs. 264 (6-9) <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> • Resources by Chapter pgs. 205 (3-6), 209 	
<p><u>6.NS.6: Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.</u></p> <p><u>b. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.</u></p> <p>Link to Sample Item</p>	<p>Coordinate plane Origin Quadrants Reflection</p>	<ul style="list-style-type: none"> • Use signs in ordered pairs to indicate locations in quadrants of the coordinate plane. • Reflect across one or both axes when two ordered pairs differ only by signs 	<p>Section 6.5: The Coordinate Plane</p> <ul style="list-style-type: none"> • Textbook Lesson pgs. 277 (Example 2) • Textbook Exercises pgs. 280-281 (1522, 38-46) • RPJ pgs. 144, 146 (1-7) <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> • Resources by Chapter pgs. 217 (11-18, 20-22), 218 (9- 15), 220 (9-12) 	

			<p>Section 6.5 (EXTENSION): Reflecting Points in the Coordinate Plane</p> <ul style="list-style-type: none"> • Textbook Lesson pgs. 283-284 (Example all) • Textbook Practice pg. 283 (all) • RPJ pgs. 147- 148 <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> • Resources by Chapter pgs. 221 (Start Thinking!), 222 (all) 	
<p><u>6.NS.6: Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.</u></p> <p><u>c. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.</u></p> <p>Link to Sample Item</p>	<p>Horizontal Vertical</p>	<ul style="list-style-type: none"> • Use a horizontal or vertical number line diagram to find and position integers and other rational numbers. • Use a coordinate plane to find and position integers and other rational numbers. 	<p>Section 6.1: Integers</p> <ul style="list-style-type: none"> • Textbook Activity pgs. 248 -249 (2ac, 3c) • Textbook Lesson pgs. 251 (Example 2ab, 3) • Textbook Exercises pgs. 252-253 (4-7, 16-23, 25-29, 31c) 	

			<ul style="list-style-type: none"> • RPJ pgs. 127-128 (2ac,3c), 130 (5-10) <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> • Resources by Chapter pgs. 191 and 192 (Start Thinking!), 192 (14), 193 (1-3, 1518), 194 (5-12, 1416), 196 (9-14) <p>Section 6.2: Comparing and Ordering Integers</p> <ul style="list-style-type: none"> • Textbook Activity pgs. 254-255 (1ab, 2a, 3) • Textbook Lesson pgs. 256-257 (Example 3, 5a) • Textbook Exercises pgs. 258-259 (2a, 26) • RPJ pgs. 131 (1ab, 2a, 3) <p><u>Additional Resources</u></p>	
--	--	--	---	--

			<ul style="list-style-type: none"> Resources by Chapter pgs. 197 (1-6) <p>Section 6.3: Fractions and Decimals on the Number Line</p> <ul style="list-style-type: none"> Textbook Activity pgs. 260-261 (1-2, 3c) Textbook Lesson pgs. 262-263 (Example 1-4) Textbook Exercises pgs. 264(1a, 1d, 3, 4-9) RPJ pgs. 135 (1-2), 136 (3c) <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> Resources by Chapter pgs. 211 (1-2) <p>Section 6.5: The Coordinate Plane</p> <ul style="list-style-type: none"> Textbook Activity pgs. 274-275 (all) Textbook Lesson pgs. 276-278 	
--	--	--	--	--

			<p>(Example 1-2, 4a)</p> <ul style="list-style-type: none"> • Textbook Exercises pgs. 279-280 (2-30, 37ad) • RPJ pgs. 143, 144 (3), 145, 146 (1-7) <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> • Resources by Chapter pgs. 215 (1-8), 216 (1-9), 217 (1-18), 218 (112), 220 (all), 221
<p>Important to Know Standards: 6.NS.7: Understand ordering and absolute value of rational numbers.</p> <p>a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram.</p>			<p>Section 6.2: Comparing and Ordering Integers</p> <ul style="list-style-type: none"> • Textbook Activity pgs. 254-255 (1cd, 2, 3) • Textbook Lesson pgs. 256-257 (Example 1-4, 5) • Textbook Exercises pgs. 258-259 (1, 2b-19, 20b, 21-24, 25ab, 26-28) • RPJ pgs. 131 (1cd, 2, 3), 134 (all)

			<p><u>Additional Resources</u></p> <ul style="list-style-type: none"> Resources by Chapter pgs. 197 (Start Thinking!), 198 (all), 199 (all), 200 (all), 202 (all) <p>Section 6.3: Fractions and Decimals on the Number Line</p> <ul style="list-style-type: none"> Textbook Activity pgs. 261 (2, 3c) Textbook Lesson pgs. 262-263 (Example 2-4) Textbook Exercises pgs. 264 (1, 3, 4-5, 10-25, 27) RPJ pgs. 135 (2), 137 (3c), 138 (all) <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> Resources by Chapter pgs. 204 (1-3), 205 (1-2, 7-20), 206 (1-14ab, 15), 207 (all), 208 (all) 	
--	--	--	--	--

<p>6.NS.7: Understand ordering and absolute value of rational numbers.</p> <p>b. Write, interpret, and explain statements of order for rational numbers in real-world contexts.</p>			<p>Section 6.2: Comparing and Ordering Integers</p> <ul style="list-style-type: none"> • Textbook Activity pgs. 254-255 (1cd, 2, 3) • Textbook Lesson pgs. 256-257 (Example 1-4, 5) • Textbook Exercises pgs. 258-259 (1, 2b-19, 20b, 21-24, 25ab, 26-28) • RPJ pgs. 131 (1cd, 2, 3), 134 (all) <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> • Resources by Chapter pgs. 197 (Start Thinking!), 198 (all), 199 (all), 200 (all), 202 (all) <p>Section 6.3: Fractions and Decimals on the Number Line</p> <ul style="list-style-type: none"> • Textbook Activity pgs. 261 (2, 3c) 	
---	--	--	---	--

			<ul style="list-style-type: none"> • Textbook Lesson pgs. 262-263 (Example 2-4) • Textbook Exercises pgs. 264 (1, 3, 4-5, 10-25, 27) • RPJ pgs. 135 (2), 137 (3c), 138 (all) <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> • Resources by Chapter pgs. 204 (1-3), 205 (1-2, 7-20), 206 (1-14ab, 15), 207 (all), 208 (all) 	
<p>6.NS.7: Understand ordering and absolute value of rational numbers.</p> <p>c. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.</p>			<p>Section 6.4: Absolute Value</p> <ul style="list-style-type: none"> • Textbook Activity pgs. 268-269 (1, 2) • Textbook Lesson pgs. 270-271 (all) • Textbook Exercises pgs. 272-273 (all) • RPJ pgs. 139-140 (all), 142 (all) <p><u>Additional Resources</u></p>	

			<ul style="list-style-type: none"> Resources by Chapter pgs. 209-214 (all)
<p>6.NS.7: Understand ordering and absolute value of rational numbers.</p> <p>d. Distinguish comparisons of absolute value from statements about order.</p>			<p>Section 6.4: Absolute Value</p> <ul style="list-style-type: none"> Textbook Activity pgs. 268-269 (1, 2) Textbook Lesson pgs. 270-271 (all) Textbook Exercises pgs. 272-273 (all) RPJ pgs. 139-140 (all), 142 (all) <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> Resources by Chapter pgs. 209-214 (all)
<p>6.NS.8: Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate</p>			<p>Section 6.5: The Coordinate Plane</p> <ul style="list-style-type: none"> Textbook Lesson pgs. 277-278 (Example 3, 4b) Textbook Exercises pgs. 279-280 (23-31, 32-34, 37, 47-52, 54) RPJ pgs. 146 (8)

			<u>Additional Resources</u> <ul style="list-style-type: none"> Resources by Chapter pgs. 217 (19, 23), 218 (16-17), 220 (13-17), 222 (16b, 17b) 	
6.G.3: Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.			Section 4.4: Polygons in the Coordinate Plane <ul style="list-style-type: none"> Textbook Activity pgs. 174-175 Textbook Lesson pgs. 176-177 Textbook Exercises pgs. 178-179 (1-16, 22-24) RPJ pgs. 91-92, 93 (4), 94 <u>Additional Resources</u> <ul style="list-style-type: none"> Resources by Chapter pgs. 135-140 	

Reflection:

List strategies or “things to remember” when teaching and when planning the unit

After the unit, document what worked well and what needs to change for the next year

Calendar

Monday	Tuesday	Wednesday	Thursday	Friday
Date I can... Focus (skill or daily objective students will learn for the day)				

***Identify dates for CFAs and end of unit assessments on the calendar.**

Calendar

Monday	Tuesday	Wednesday	Thursday	Friday

***Identify dates for CFAs and end of unit assessments on the calendar.**