

Diocese of Boise Math Curriculum – 6th grade

ESSENTIAL QUESTIONS	DOMAINS AND CLUSTERS	6 th GRADE MATH SKILLS	VOCABULARY	PRACTICES, RESOURCES & ASSESSMENT													
<p>How do we compute fractions?</p> <p>When do we use Roman Numerals?</p>	<p>Numbers, Operations and Algebraic Thinking</p> <p>Know and use number names and the count sequence</p> <p>Use properties of multiplication and division</p> <p>Write and interpret numerical expressions</p> <p>Analyze patterns and relationships</p> <p>Solve problems using the four operations</p>	<p align="center">Reviewed Skills</p> <table border="1"> <tr><td>Write exponents in expanded form</td></tr> <tr><td>Identify Roman Numerals</td></tr> </table> <p align="center">Mastered Skills</p> <table border="1"> <tr><td>Write decimals in expanded form</td></tr> </table> <p align="center">Mastered Skills</p> <table border="1"> <tr><td>Represent whole-number products as rectangular areas in mathematical reasoning</td></tr> </table> <p align="center">Reviewed Skills</p> <table border="1"> <tr><td>Divide multi-digit numbers</td></tr> </table> <p align="center">Mastered Skills</p> <table border="1"> <tr><td>Multiply a whole number of up to four digits by a one-digit whole number</td></tr> <tr><td>Multiply two, two –digit numbers</td></tr> <tr><td>Find whole numbers quotients and remainders with up to four-digit dividends and one-digit divisors</td></tr> <tr><td>Multiply multi-digit whole numbers</td></tr> <tr><td>Apply the distributive property [i.e. $8(5+2)=(8 \times 5)+(8 \times 2) = 40+16 = 56$]</td></tr> </table> <p align="center">Reviewed</p> <table border="1"> <tr><td>Write simple expressions that record calculations with numbers and interpret numerical expressions without evaluating them (i.e. express the calculation “add 8 and 7, then multiply by 2” as $2 \times (8+7)$)</td></tr> <tr><td>Represent verbal statements of comparisons as equations</td></tr> <tr><td>Multiply and divide to solve word problems involving multiplicative comparisons</td></tr> </table>	Write exponents in expanded form	Identify Roman Numerals	Write decimals in expanded form	Represent whole-number products as rectangular areas in mathematical reasoning	Divide multi-digit numbers	Multiply a whole number of up to four digits by a one-digit whole number	Multiply two, two –digit numbers	Find whole numbers quotients and remainders with up to four-digit dividends and one-digit divisors	Multiply multi-digit whole numbers	Apply the distributive property [i.e. $8(5+2)=(8 \times 5)+(8 \times 2) = 40+16 = 56$]	Write simple expressions that record calculations with numbers and interpret numerical expressions without evaluating them (i.e. express the calculation “add 8 and 7, then multiply by 2” as $2 \times (8+7)$)	Represent verbal statements of comparisons as equations	Multiply and divide to solve word problems involving multiplicative comparisons	<p>RIT Range 220 – 240 & Above</p> <ul style="list-style-type: none"> Expanded form Dividend Divisor Quotient Parenthesis Brackets Braces Least common multiple Prime number Composite number Coordinate plane Ordered pairs Quadrants Equivalent fractions Inequality Exponents/ base Variable Square roots Scientific notation Circumference Perimeter Area Lowest common denominator Simplest form Simplify number Absolute value 	<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 sense of structure
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<p>Why are remainders useful?</p> <p>Why is it important to use factors?</p>	<p>Numbers, Operations and Algebraic Thinking</p> <p>Generate and analyze patterns and relationships</p>	<p style="text-align: center;">Mastered Skills</p> <table border="1" style="width: 100%;"> <tr><td style="width: 20px;"></td><td>Solve word problems in which remainders must be interpreted</td></tr> <tr><td></td><td>Assess the reasonableness of answers using mental computation and estimation strategies (including rounding)</td></tr> <tr><td></td><td>Use parentheses, brackets or braces in numerical expressions and evaluate expressions with these symbols</td></tr> <tr><td></td><td>Use distributive property to express a sum of two whole numbers 1-100 with a common factor as a multiple of a sum of two whole numbers with no common factor (i.e. express $36+8$ as $4(9+2)$)</td></tr> </table> <p style="text-align: center;">Reviewed Skills</p> <table border="1" style="width: 100%;"> <tr><td style="width: 20px;"></td><td>Find the greatest common factor of two whole numbers less than or equal to 100</td></tr> <tr><td></td><td>Find the least common multiple of two whole numbers less than or equal to 12</td></tr> </table> <p style="text-align: center;">Mastered Skills</p> <table border="1" style="width: 100%;"> <tr><td style="width: 20px;"></td><td>Find all factors for a whole number in the range 1-100</td></tr> <tr><td></td><td>Recognize that a whole number is a multiple of each of its factors</td></tr> <tr><td></td><td>Determine whether a given whole number is divisible by a given one digit number</td></tr> <tr><td></td><td>Determine whether a given whole number in the range of 1-100 is prime or composite</td></tr> </table> <p style="text-align: center;">Reviewed Skills</p> <table border="1" style="width: 100%;"> <tr><td style="width: 20px;"></td><td>Generate two numerical patterns using two given rules</td></tr> <tr><td></td><td>Identify apparent relationships between corresponding terms</td></tr> <tr><td></td><td>Form ordered pairs consisting of corresponding terms from two patterns and graph the ordered pairs on a coordinate plane</td></tr> <tr><td></td><td>Identify apparent features of a pattern without a given rule</td></tr> </table>		Solve word problems in which remainders must be interpreted		Assess the reasonableness of answers using mental computation and estimation strategies (including rounding)		Use parentheses, brackets or braces in numerical expressions and evaluate expressions with these symbols		Use distributive property to express a sum of two whole numbers 1-100 with a common factor as a multiple of a sum of two whole numbers with no common factor (i.e. express $36+8$ as $4(9+2)$)		Find the greatest common factor of two whole numbers less than or equal to 100		Find the least common multiple of two whole numbers less than or equal to 12		Find all factors for a whole number in the range 1-100		Recognize that a whole number is a multiple of each of its factors		Determine whether a given whole number is divisible by a given one digit number		Determine whether a given whole number in the range of 1-100 is prime or composite		Generate two numerical patterns using two given rules		Identify apparent relationships between corresponding terms		Form ordered pairs consisting of corresponding terms from two patterns and graph the ordered pairs on a coordinate plane		Identify apparent features of a pattern without a given rule	<ul style="list-style-type: none"> • Evaluate • Expressions • Ratio • Integer • Rational • Magnitude 	<p>8. Look for and express regularity in repeated reasoning</p> <p>RESOURCES: Geometric shapes Visuals Ruler Graph paper Text Khan Academy Calculator</p> <p>ASSESSMENT:</p> <ul style="list-style-type: none"> • Class discussion • Questioning techniques • Exit ticket • Quiz • Performance tasks • Learning logs • Math journals • Think-pair-share • Chapter test • Standardized test
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<p>What is a ratio?</p> <p>When would we use ratios in day to day life?</p>	<p>Numbers, Operations and Algebraic Thinking</p> <p>Demonstrate an understanding of ratio concepts and use ratio reasoning to solve problems</p>	<p style="text-align: center;">Introduced Skills</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px;"></td> <td>Explain the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$.</td> </tr> <tr> <td></td> <td>Use rate language in the context of a ratio relationship (i.e. "We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger")</td> </tr> <tr> <td></td> <td>Use ratio and rate reasoning to solve real-world problems</td> </tr> <tr> <td></td> <td>Use tables to compare ratios and unit rates</td> </tr> <tr> <td></td> <td>Solve unit rate problems including those involving unit pricing and constant speed.</td> </tr> <tr> <td></td> <td>Solve problems involving finding the whole, given a part and the percent</td> </tr> <tr> <td></td> <td>Use ratio reasoning to convert measurement units</td> </tr> <tr> <td></td> <td>Convert and transform units appropriately when multiplying or dividing quantities</td> </tr> <tr> <td></td> <td>Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units</td> </tr> <tr> <td></td> <td>Recognize and represent proportional relationships between quantities</td> </tr> <tr> <td></td> <td>Decide whether two quantities are in a proportional relationship (i.e. test for equivalent ratios)</td> </tr> </table> <p style="text-align: center;">Reviewed Skills</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px;"></td> <td>Explain the concept of a ratio a/b associated with a ratio $a:b$ with</td> </tr> <tr> <td></td> <td>Use ratio language to describe ratio relationship between two quantities</td> </tr> <tr> <td></td> <td>Find a percent of a quantity as a rate per 100 (i.e. 30% of a quantity means 30/100 times the quantity)</td> </tr> </table>		Explain the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$.		Use rate language in the context of a ratio relationship (i.e. "We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger")		Use ratio and rate reasoning to solve real-world problems		Use tables to compare ratios and unit rates		Solve unit rate problems including those involving unit pricing and constant speed.		Solve problems involving finding the whole, given a part and the percent		Use ratio reasoning to convert measurement units		Convert and transform units appropriately when multiplying or dividing quantities		Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units		Recognize and represent proportional relationships between quantities		Decide whether two quantities are in a proportional relationship (i.e. test for equivalent ratios)		Explain the concept of a ratio a/b associated with a ratio $a:b$ with		Use ratio language to describe ratio relationship between two quantities		Find a percent of a quantity as a rate per 100 (i.e. 30% of a quantity means 30/100 times the quantity)	<ul style="list-style-type: none"> • 	
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<p>How do we compute mixed numbers?</p> <p>How do we use patterns to understand fractions?</p>	<p>Numbers, Operations and Algebraic Thinking</p>	<p style="text-align: center;">Introduced Skills</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px;"></td> <td>Write, interpret and explain statements of order for rational numbers in real-world contexts (i.e. write $-3^{\circ}\text{C} > -7^{\circ}\text{C}$ to express the fact that -3°C is warmer than -7°C)</td> </tr> <tr> <td></td> <td>Describe the absolute value of a rational number as its distance from 0 on the number line</td> </tr> <tr> <td></td> <td>Interpret absolute value as magnitude for a positive or negative quantity in a real-world situation</td> </tr> <tr> <td></td> <td>Apply and extend previous understandings to add and subtract rational numbers</td> </tr> <tr> <td></td> <td>Represent addition and subtraction on a horizontal or vertical number line diagram</td> </tr> <tr> <td></td> <td>Describe situations in which opposite quantities combine to make 0.</td> </tr> <tr> <td></td> <td>Demonstrate $p+q$ as the number located a distance q from p in the positive or negative direction depending on whether q is positive or negative</td> </tr> <tr> <td></td> <td>Interpret the sums of rational numbers by describing real-world contexts</td> </tr> <tr> <td></td> <td>Demonstrate subtraction of rational numbers as using the additive inverse, $p-q=p+(-q)$</td> </tr> <tr> <td></td> <td>Show that the distance between two rational numbers on the number line is the absolute value of their difference</td> </tr> <tr> <td></td> <td>Apply and extend previous understandings of fractions to multiply and divide rational numbers</td> </tr> <tr> <td></td> <td>Explain that integers can be divided provided that the divisor is not zero and every quotient of integers is a rational number</td> </tr> <tr> <td></td> <td>Apply properties of operations as strategies to multiply and divide rational numbers in real world context</td> </tr> <tr> <td></td> <td>Convert a rational number to a decimal using long division</td> </tr> <tr> <td></td> <td>Find and position integers and other rational numbers on a horizontal or vertical number line diagram</td> </tr> </table>		Write, interpret and explain statements of order for rational numbers in real-world contexts (i.e. write $-3^{\circ}\text{C} > -7^{\circ}\text{C}$ to express the fact that -3°C is warmer than -7°C)		Describe 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		Apply and extend previous understandings to add and subtract rational numbers		Represent addition and subtraction on a horizontal or vertical number line diagram		Describe situations in which opposite quantities combine to make 0.		Demonstrate $p+q$ as the number located a distance $ q $ from p in the positive or negative direction depending on whether q is positive or negative		Interpret the sums of rational numbers by describing real-world contexts		Demonstrate subtraction of rational numbers as using 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		Apply and extend previous understandings of fractions to multiply and divide rational numbers		Explain that integers can be divided provided that the divisor is not zero and every quotient of integers is a rational number		Apply properties of operations as strategies to multiply and divide rational numbers in real world context		Convert a rational number to a decimal using long division		Find and position integers and other rational numbers on a horizontal or vertical number line diagram	<ul style="list-style-type: none"> • 	
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<p>What is absolute deviation?</p>	<p>Numbers, Operations and Algebraic Thinking</p> <p>Apply and extend previous understandings of arithmetic to algebraic expressions</p> <p>Reason about and solve one-variable equations and inequalities</p>	<p style="text-align: center;">Introduced Skills</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px;"></td> <td>Apply the properties of operations to generate equivalent expressions</td> </tr> <tr> <td></td> <td>Identify when two expressions are equivalent</td> </tr> <tr> <td></td> <td>Apply properties of operations to calculate with numbers in any form by converting between forms and assessing the reasonableness of answers using mental computation and estimation strategies</td> </tr> <tr> <td></td> <td>Construct simple equations and inequalities to solve problems</td> </tr> </table> <p style="text-align: center;">Reviewed Skills</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px;"></td> <td>Write and evaluate numerical expressions involving whole-number exponents</td> </tr> <tr> <td></td> <td>Write, read and evaluate expressions in which letters stand for numbers</td> </tr> <tr> <td></td> <td>Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient) while viewing one or more parts of an expression as a single entity</td> </tr> <tr> <td></td> <td>Evaluate expressions with specific values of their variables</td> </tr> </table> <p style="text-align: center;">Introduced Skills</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px;"></td> <td>Explain solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true?</td> </tr> <tr> <td></td> <td>Use substitution to determine whether a given number in a specified set makes an equation or inequality true</td> </tr> <tr> <td></td> <td>Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world problem</td> </tr> <tr> <td></td> <td>Recognize and represent in a number line diagram that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions</td> </tr> </table>		Apply the properties of operations to generate equivalent expressions		Identify when two expressions are equivalent		Apply properties of operations to calculate with numbers in any form by converting between forms and assessing the reasonableness of answers using mental computation and estimation strategies		Construct simple equations and inequalities to solve problems		Write and evaluate numerical expressions involving whole-number exponents		Write, read and evaluate expressions in which letters stand for numbers		Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient) while viewing one or more parts of an expression as a single entity		Evaluate expressions with specific values of their variables		Explain solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true?		Use substitution to determine whether a given number in a specified set makes an equation or inequality true		Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world problem		Recognize and represent in a number line diagram that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions	<ul style="list-style-type: none"> • 	
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<p>How are graphs used?</p> <p>How do we identify mean, median, and mode range?</p>	<p>Numbers, Operations and Algebraic Thinking</p> <p>Work with radicals and integer exponents</p> <p>Analyze and solve linear equations and pairs of simultaneous linear equations</p> <p>Numbers and Operations of Base Ten</p> <p>Compare numbers</p> <p>Explain and use the place value system</p>	<p style="text-align: center;">Reviewed Skills</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 20px;"></td> <td>Use variables to represent numbers and write expressions when solving a real-world problem, and solve</td> </tr> <tr> <td></td> <td>Explain that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set</td> </tr> </table> <p style="text-align: center;">Introduced Skills</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 20px;"></td> <td>Evaluate square roots of small perfect squares and cube roots of small perfect cubes quantities (scientific notation)</td> </tr> <tr> <td></td> <td>Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small</td> </tr> <tr> <td></td> <td>Use scientific notation and appropriate units for measurements of very large or very small quantities</td> </tr> </table> <p style="text-align: center;">Introduced Skills</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 20px;"></td> <td>Solve linear equations with one variable</td> </tr> </table> <p style="text-align: center;">Reviewed Skills</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 20px;"></td> <td>Use variables to represent two quantities in a real-world problem that change in relationship to one another</td> </tr> </table> <p style="text-align: center;">Mastered Skills</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 20px;"></td> <td>Compare two decimals to thousandths based on meanings of the digits in each place using $<$, $>$, and $=$</td> </tr> </table> <p style="text-align: center;">Reviewed Skills</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 20px;"></td> <td>Use whole-number exponents to denote powers of 10</td> </tr> <tr> <td></td> <td>Read, write and compare decimals to thousandths using base-ten numbers, number names and expanded form</td> </tr> </table>		Use variables to represent numbers and write expressions when solving a real-world problem, and solve		Explain that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set		Evaluate square roots of small perfect squares and cube roots of small perfect cubes quantities (scientific notation)		Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small		Use scientific notation and appropriate units for measurements of very large or very small quantities		Solve linear equations with one variable		Use variables to represent two quantities in a real-world problem that change in relationship to one another		Compare two decimals to thousandths based on meanings of the digits in each place using $<$, $>$, and $=$		Use whole-number exponents to denote powers of 10		Read, write and compare decimals to thousandths using base-ten numbers, number names and expanded form	<ul style="list-style-type: none"> • 	
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<p>How do we solve geometric problems?</p> <p>How do we use formulas?</p>	<p>Geometry</p> <p>Shapes Analyze , compare , create, classify and compose shapes</p> <p>Graphing Graph points on the coordinate plane to solve real-world and mathematical problems</p>	<p style="text-align: center;">Reviewed Skills</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 5%;"></td> <td>Classify two-dimensional figures in a hierarchy based on properties</td> </tr> <tr> <td></td> <td>Identify line-symmetric figures and draw lines of symmetry</td> </tr> </table> <p style="text-align: center;">Mastered Skills</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 5%;"></td> <td>Identify angles and lines in two-dimensional figures</td> </tr> <tr> <td></td> <td>Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or angles of specified size</td> </tr> <tr> <td></td> <td>Recognize and identify right triangles as a category</td> </tr> <tr> <td></td> <td>Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts</td> </tr> <tr> <td></td> <td>Identify line-symmetric figures and draw lines of symmetry</td> </tr> <tr> <td></td> <td>Draw points, lines, line segments, rays, angles and perpendicular and parallel lines</td> </tr> </table> <p style="text-align: center;">Introduced Skills</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 5%;"></td> <td>Draw polygons in the coordinate plane given coordinates for the vertices</td> </tr> <tr> <td></td> <td>Use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate in the context of solving real-world and mathematical problems</td> </tr> <tr> <td></td> <td>Solve real-world problems by graphing points in all four quadrants of the coordinate plane</td> </tr> <tr> <td></td> <td>While graphing points, include the use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate</td> </tr> </table>		Classify two-dimensional figures in a hierarchy based on properties		Identify line-symmetric figures and draw lines of symmetry		Identify angles and lines in two-dimensional figures		Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or angles of specified size		Recognize and identify right triangles as a category		Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts		Identify line-symmetric figures and draw lines of symmetry		Draw points, lines, line segments, rays, angles and perpendicular and parallel lines		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 in the context of solving real-world and mathematical problems		Solve real-world problems by graphing points in all four quadrants of the coordinate plane		While graphing points, include the use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate	<ul style="list-style-type: none"> • 	
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	<p>Geometry</p> <p>Graphing</p> <p>Graph points on the coordinate plane to solve real-world and mathematical problems</p> <p>Statistics and Probability</p> <p>Develop understanding of statistical variability</p>	<p style="text-align: center;">Reviewed Skills</p> <table border="1" data-bbox="564 284 1472 743"> <tr> <td data-bbox="564 284 646 456"></td> <td data-bbox="646 284 1472 456">Use a pair of perpendicular number lines (axes) to define a coordinate system with the intersection of the lines (origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers (coordinates)</td> </tr> <tr> <td data-bbox="564 456 646 597"></td> <td data-bbox="646 456 1472 597">Explain that the first number in a coordinate indicates how far to travel from the origin in the direction of one axis and the second number indicates how far to travel in the direction of the second axis</td> </tr> <tr> <td data-bbox="564 597 646 670"></td> <td data-bbox="646 597 1472 670">Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane</td> </tr> <tr> <td data-bbox="564 670 646 743"></td> <td data-bbox="646 670 1472 743">Interpret coordinate values of points in the context of the situation</td> </tr> </table> <p style="text-align: center;">Introduced Skills</p> <table border="1" data-bbox="564 875 1472 1430"> <tr> <td data-bbox="564 875 646 982"></td> <td data-bbox="646 875 1472 982">Solve a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers</td> </tr> <tr> <td data-bbox="564 982 646 1063"></td> <td data-bbox="646 982 1472 1063">Explain that a measure of center for a numerical data set summarizes all of its values with a single number</td> </tr> <tr> <td data-bbox="564 1063 646 1136"></td> <td data-bbox="646 1063 1472 1136">Demonstrate that statistics can be used to gain information about a population by examining a sample of the population</td> </tr> <tr> <td data-bbox="564 1136 646 1209"></td> <td data-bbox="646 1136 1472 1209">Explain that generalizations about a population from a sample are valid only if the sample is representative of the population</td> </tr> <tr> <td data-bbox="564 1209 646 1282"></td> <td data-bbox="646 1209 1472 1282">Explain that random sampling trends to produce representative samples and support valid inferences</td> </tr> <tr> <td data-bbox="564 1282 646 1356"></td> <td data-bbox="646 1282 1472 1356">Use data from a random sample to draw inferences about a population with an unknown characteristic of interest</td> </tr> <tr> <td data-bbox="564 1356 646 1430"></td> <td data-bbox="646 1356 1472 1430">Generate multiple samples of the same size to gauge the variation in estimates or predictions</td> </tr> </table>		Use a pair of perpendicular number lines (axes) to define a coordinate system with the intersection of the lines (origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers (coordinates)		Explain that the first number in a coordinate indicates how far to travel from the origin in the direction of one axis and the second number indicates how far to travel in the direction of the second axis		Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane		Interpret coordinate values of points in the context of the situation		Solve a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers		Explain that a measure of center for a numerical data set summarizes all of its values with a single number		Demonstrate that statistics can be used to gain information about a population by examining a sample of the population		Explain that generalizations about a population from a sample are valid only if the sample is representative of the population		Explain that random sampling trends to produce representative samples and support valid inferences		Use data from a random sample to draw inferences about a population with an unknown characteristic of interest		Generate multiple samples of the same size to gauge the variation in estimates or predictions	<ul style="list-style-type: none"> • 	
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