

Fairview High School: 6th Grade Mathematics

Unit 1: Operations & Properties (13-15 Days)	Standards	Essential Questions/Learning Targets	Assessments	Resources
	<p>CC.6.NS.2 – Fluently divide multi-digit numbers using the standard algorithm.</p> <p>CC.6.EE.1 – Write & evaluate numerical expressions involving whole-number expressions.</p> <p>CC.6.EE.2 – Write, read, & evaluate expressions in which letters stand for numbers. 2b – Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. <i>For example, describe the expression $2(8 + 7)$ as a product of two factors; view $(8 + 7)$ as both a single entity & a sum of two terms.</i> 2c – Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). <i>For example, use the formulas $V = s^2$ & $A = 6s^2$ to find the volume & surface area of a cube with side lengths $s = 12$.</i></p> <p>CC.6.EE.3 – Apply the properties of operations to generate equivalent expressions. <i>For example, apply the distributive property to the expression $3(2 + x)$ to produce the equivalent expression $6 + 3x$; apply the distributive property to the expression $24x + 18y$ to produce the equivalent expression $6(4x + 3y)$; apply properties of operations to $y + y + y$ to produce the equivalent expression $3y$.</i></p>	<p>Students estimate with whole numbers.</p> <p>Students use the algorithm for division.</p> <p>Students interpret the quotient and remainder in a real-world setting.</p> <p>Students represent numbers by using exponents.</p> <p>Students use the order of operations.</p> <p>Students use number properties to compute mentally.</p>	<p>Pre-Assessment: Chapter 1 Test</p> <p>Formative: Kickoffs (Bell Work) Worksheets Activities Exit Slips Quizzes</p> <p>Summative: Chapter 1 Test</p>	<p>Holt McDougal Mathematics, Grade 6 Chapter 1 (Text)</p> <p>Holt McDougal Mathematics, Grade 6 Chapter 1 (Resources)</p> <p>Holt McDougal Mathematics, Grade 6 Chapter 1 (Workbook)</p> <p>Kuta Software</p> <p>Math-Aids.com</p> <p>Getkahoot.com</p> <p>GradeCam.com</p> <p>My.hrw.com</p>

<p style="text-align: center;">Unit 2: Intro to Algebra (15 Days)</p>	<p>CC.6.EE.2 – Write, read, & evaluate expressions in which letters stand for numbers. 2a – Write expressions that record operations with numbers & with letters standing for numbers. <i>For example, express the calculation “Subtract y from 5” as $5 - y$.</i> 2b – Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. <i>For example, describe the expression $2(8 + 7)$ as a product of two factors; view $(8 + 7)$ as both a single entity & a sum of two terms.</i></p> <p>CC.6.EE.4 – Identify when two expressions are equivalent (i.e. when the two expressions name the same number regardless of which value is substituted into them). <i>For example, the expressions $y + y + y$ & $3y$ are equivalent because they name the same number regardless of which number y stands for.</i></p> <p>CC.6.EE.5 – Understand 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.</p> <p>CC.6.EE.6 – Use variables to represent numbers & write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.</p> <p>CC.6.EE.7 – Solve real-world & mathematical problems by writing & solving equations of the form $x + p = q$ & $px = q$ for cases in which p, q, & x are all nonnegative rational numbers.</p>	<p>Students identify and evaluate expressions.</p> <p>Students translate between words and math.</p> <p>Students write expressions for tables and sequences.</p> <p>Students determine whether a number is a solution of an equation.</p> <p>Students solve whole number addition equations.</p> <p>Students solve whole-number subtraction equations.</p> <p>Students solve whole-number multiplication equations.</p> <p>Students solve whole-number division equations.</p>	<p>Pre-Assessment: Chapter 2 Test</p> <p>Formative: Kickoffs (Bell Work) Worksheets Activities Exit Slips Quizzes</p> <p>Summative: Chapter 2 Test</p>	<p>Holt McDougal Mathematics, Grade 6 Chapter 2 (Text)</p> <p>Holt McDougal Mathematics, Grade 6 Chapter 2 (Resources)</p> <p>Holt McDougal Mathematics, Grade 6 Chapter 2 (Workbook)</p> <p>Kuta Software</p> <p>Math-Aids.com</p> <p>Getkahoot.com</p> <p>GradeCam.com</p> <p>My.hrw.com</p>
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<p style="text-align: center;">Unit 3: Decimals (10-15 Days)</p>	<p>CC.6.NS.3 – Fluently add, subtract, multiply, & divide multi-digit decimals using the standard algorithm for each operation.</p> <p>CC.6.EE.6 – Use variables to represent numbers & write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.</p> <p>CC.6.EE.7 – Solve real-world & mathematical problems by writing & solving equations of the form $x + p = q$ & $px = q$ for cases in which p, q, & x are all nonnegative rational numbers.</p>	<p>Students write, compare, and order decimals using place values and number lines.</p> <p>Students estimate decimal sums, differences, products, and quotients.</p> <p>Students add and subtract decimals.</p> <p>Students multiply decimals by whole numbers and by decimals.</p> <p>Students divide decimals by whole numbers.</p> <p>Students divide whole numbers and decimals by decimals.</p> <p>Students solve problems by interpreting the quotient.</p> <p>Students solve equations involving decimals.</p>	<p>Pre-Assessment: Chapter 3 Test</p> <p>Formative: Kickoffs (Bell Work) Worksheets Activities Exit Slips Quizzes</p> <p>Summative: Chapter 3 Test</p>	<p>Holt McDougal Mathematics, Grade 6 Chapter 3 (Text)</p> <p>Holt McDougal Mathematics, Grade 6 Chapter 3 (Resources)</p> <p>Holt McDougal Mathematics, Grade 6 Chapter 3 (Workbook)</p> <p>Kuta Software</p> <p>Math-Aids.com</p> <p>Getkahoot.com</p> <p>GradeCam.com</p> <p>My.hrw.com</p>
<p style="text-align: center;">Unit 4: Number Theory & Fractions (15 Days)</p>	<p>CC.6.NS.4 – Find the greatest common factor of two whole numbers less than or equal to 100 & the least common multiple of two whole numbers less than or equal to 12. Use the 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>For example, express $36 + 8$ as $4(9 + 2)$.</i></p> <p>CC.6.NS.7 – Understand ordering & absolute value of rational numbers.</p> <p>CC.6.EE.2b – Identify parts of an expression using mathematical terms (sum, term, product, factor,</p>	<p>Students write prime factorizations of composite numbers.</p> <p>Students find the greatest common factor (GCF) of a set of numbers.</p> <p>Students factor numerical and algebraic expressions.</p> <p>Students write equivalent numerical and algebraic expressions.</p>	<p>Pre-Assessment: Chapter 4 Test</p> <p>Formative: Kickoffs (Bell Work) Worksheets Activities Exit Slips Quizzes</p> <p>Summative: Chapter 4 Test</p>	<p>Holt McDougal Mathematics, Grade 6 Chapter 4 (Text)</p> <p>Holt McDougal Mathematics, Grade 6 Chapter 4 (Resources)</p> <p>Holt McDougal Mathematics, Grade 6 Chapter 4 (Workbook)</p> <p>Kuta Software</p>

<p>quotient, coefficient); view one or more parts of an expression as a single entity. <i>For example, describe the expression $2(8 + 7)$ as a product of two factors; view $(8 + 7)$ as both a single entity & a sum of two terms.</i></p> <p>CC.6.EE.3 – Apply the properties of operations to generate equivalent expressions. <i>For example, apply the distributive property to the expression $3(2 + x)$ to produce the equivalent expression $6 + 3x$; apply the distributive property to the expression $24x + 18y$ to produce the equivalent expression $6(4x + 3y)$; apply properties of operations to $y + y + y$ to produce the equivalent expression $3y$.</i></p> <p>CC.6.EE.4 – Identify when two expressions are equivalent (i.e. when the two expressions name the same number regardless of which value is substituted into them). <i>For example, the expressions $y + y + y$ & $3y$ are equivalent because they name the same number regardless of which number y stands for.</i></p>	<p>Students convert between decimals and fractions.</p> <p>Students write equivalent fractions.</p> <p>Students convert between mixed numbers and improper fractions.</p> <p>Students use pictures and number lines to compare and order fractions.</p>		<p>Math-Aids.com</p> <p>Getkahoot.com</p> <p>GradeCam.com</p> <p>My.hrw.com</p>
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<p style="text-align: center;">Unit 5: Fraction Operations (15 Days)</p>	<p>CC.6.NS.1 – Interpret & compute quotients of fractions, & solve word problems involving division of fractions by fractions, e.g., by using visual fraction models & equations to represent the problem. <i>For example, create a story context for $(2/3) \div (3/4) = 8/9$ because $3/4$ of $8/9$ is $2/3$. (in general, $(a/b) \div (c/d) = ad/bc$.) How much chocolate will each person get if 3 people share $1/2$ lb of chocolate equally? How many $3/4$-cup servings are in $2/3$ of a cup of yogurt? How wide is a rectangular strip of land with length $3/4$ mi & are $1/2$ square mi?</i></p> <p>CC.6.NS.4 – Find the greatest common factor of two whole numbers less than or equal to 100 & the least common multiple of two whole numbers less than or equal to 12. Use the 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>For example, express $36 + 8$ as $4(9 + 2)$.</i></p> <p>CC.6.EE.7 – Solve real-world & mathematical problems by writing & solving equations of the form $x + p = q$ & $px = q$ for cases in which p, q, & x are all nonnegative rational numbers.</p>	<p>Students find the least common multiple (LCM) of a group of numbers.</p> <p>Students add and subtract fractions with unlike denominators.</p> <p>Students regroup mixed numbers to subtract.</p> <p>Students solve equations by adding and subtracting fractions.</p> <p>Students multiply mixed numbers.</p> <p>Students divide fractions and mixed numbers.</p> <p>Students solve equations by multiplying and dividing fractions.</p>	<p>Pre-Assessment: Chapter 5 Test</p> <p>Formative: Kickoffs (Bell Work) Worksheets Activities Exit Slips Quizzes</p> <p>Summative: Chapter 5 Test</p>	<p>Holt McDougal Mathematics, Grade 6 Chapter 5 (Text)</p> <p>Holt McDougal Mathematics, Grade 6 Chapter 5 (Resources)</p> <p>Holt McDougal Mathematics, Grade 6 Chapter 5 (Workbook)</p> <p>Kuta Software</p> <p>Math-Aids.com</p> <p>Getkahoot.com</p> <p>GradeCam.com</p> <p>My.hrw.com</p>
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<p style="text-align: center;">Unit 6: Data Collection & Analysis (10-13 Days)</p>	<p>CC.6.SP.1 – Recognize a statistical question as one that anticipates variability in the data related to the question & accounts for it in the answers. <i>For example, “How old am I?” is not a statistical question but “How old are the students in my school?” is a statistical question because one anticipates variability in students’ ages.</i></p> <p>CC.6.SP.2 – Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, & overall shape.</p> <p>CC.6.SP.3 – Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.</p> <p>CC.6.SP.4 – Display numerical data in plots on a number line, including dot plots, histograms, & box plots.</p> <p>CC.6.SP.5 – Summarize numerical data sets in relation to their context, such as by;</p> <p>5a – Reporting the number of observations.</p> <p>5b – Describing the nature of the attribute under investigation, including how it was measured & its units of measurement.</p> <p>5c – Giving quantities measures of center (median &/or mean) & variability (interquartile range &/or mean absolute deviation), as well as describing any overall pattern & any striking deviations from the overall pattern with reference to the context in which the data were gathered.</p> <p>5d – Relating the choice of measures of center & variability to the shape of the data distribution & the context in which the data are gathered.</p>	<p>Students find the range, mean, median, and mode of a data set.</p> <p>Students learn the effect of additional data and outliers.</p> <p>Students calculate, interpret, and compare measures of variation in a data set.</p> <p>Students record and organize data in line plots, frequency tables and histograms.</p> <p>Students describe and compare data distributions by their center, spread, and shape, using box-and-whisker plots or dot plots.</p>	<p>Pre-Assessment: Chapter 6 Test</p> <p>Formative: Kickoffs (Bell Work) Worksheets Activities Exit Slips Quizzes</p> <p>Summative: Chapter 6 Test</p>	<p>Holt McDougal Mathematics, Grade 6 Chapter 6 (Text)</p> <p>Holt McDougal Mathematics, Grade 6 Chapter 6 (Resources)</p> <p>Holt McDougal Mathematics, Grade 6 Chapter 6 (Workbook)</p> <p>Kuta Software</p> <p>Math-Aids.com</p> <p>Getkahoot.com</p> <p>GradeCam.com</p> <p>My.hrw.com</p>
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<p style="text-align: center;">Unit 7: Proportional Reasoning (15-20 Days)</p>	<p>CC.6.RP.1 – Understand the concept of a ratio & use ratio language to describe a ratio relationship between two quantities. <i>For example, “The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak.” “For every vote candidate A received, candidate C received nearly three votes.”</i></p> <p>CC.6.RP.2 – Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. <i>For example, “This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is $3/4$ cups of flour to each cup of sugar.” “We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger.”</i></p> <p>CC.6.RP.3 – Use ratio & rate reasoning to solve real-world & mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.</p> <p>3a – Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, & plot the pairs of values on the coordinate plane. Use tables to compare ratios.</p> <p>3b – Solve unit rate problems including those involving unit pricing & constant speed. <i>For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?</i></p> <p>3c – Find a percent of a quantity as a rate per 100 (e.g, 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part & the percent.</p> <p>CC.6.NS.6 – Understand a rational number as a point on the number line. Extend number line diagrams & coordinate axes familiar from previous grades to represent points on the line & in the plane with</p>	<p>Students write ratios and rates and find unit rates.</p> <p>Students use a table to find equivalent ratios and rates.</p> <p>Students graph ordered pairs on a coordinate grid.</p> <p>Students write and solve proportions.</p> <p>Students write percents as decimals and as fractions.</p> <p>Students write decimals and fractions as percents.</p> <p>Students find the percent of a number.</p> <p>Students solve problems involving percents.</p>	<p>Pre-Assessment: Chapter 7 Test</p> <p>Formative: Kickoffs (Bell Work) Worksheets Activities Exit Slips Quizzes</p> <p>Summative: Chapter 7 Test</p>	<p>Holt McDougal Mathematics, Grade 6 Chapter 7 (Text)</p> <p>Holt McDougal Mathematics, Grade 6 Chapter 7 (Resources)</p> <p>Holt McDougal Mathematics, Grade 6 Chapter 7 (Workbook)</p> <p>Kuta Software</p> <p>Math-Aids.com</p> <p>Getkahoot.com</p> <p>GradeCam.com</p> <p>My.hrw.com</p>
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	<p>negative number coordinates.</p> <p>6c – Find & position integers & other rational numbers on a horizontal or vertical number line diagram; find & position pairs of integers & other rational numbers on a coordinate plane.</p>			
Unit 8: Measurement & Geometry (15-20 Days)	<p>CC.6.RP.3d – Use ratio reasoning to convert measurement units: manipulate & transform units appropriately when multiplying or dividing quantities.</p> <p>CC.6.EE.2c - Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). <i>For example, use the formulas $V = s^3$ & $A = 6s^2$ to find the volume & surface area of a cube with side lengths $s = 12$.</i></p> <p>CC.6.G.1 – Find the area of right triangles, other triangles, special quadrilaterals, & polygons by composing into rectangles or decomposing into triangles & other shapes; apply these techniques in the context of solving real-world & mathematical problems.</p> <p>CC.6.G.2 – Find the volume of a right rectangular prism with the fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, & show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = lwh$ & $V = bh$ to find the volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world & mathematical problems.</p> <p>CC.6.G.4 – Represent three-dimensional figures using nets made up of rectangles & triangles, & use</p>	<p>Students convert customary units of measure.</p> <p>Students convert metric units of measure.</p> <p>Students estimate the area of irregular figures.</p> <p>Students find the area of rectangles and parallelograms.</p> <p>Students find the area of triangles and trapezoids.</p> <p>Students break a polygon into simpler parts to find its area.</p> <p>Students estimate and find the volumes of rectangular prisms and triangular prisms.</p> <p>Students find the surface areas of prisms, pyramids, and cylinders.</p>	<p>Pre-Assessment: Chapter 8 Test</p> <p>Formative: Kickoffs (Bell Work) Worksheets Activities Exit Slips Quizzes</p> <p>Summative: Chapter 8 Test</p>	<p>Holt McDougal Mathematics, Grade 6 Chapter 8 (Text)</p> <p>Holt McDougal Mathematics, Grade 6 Chapter 8 (Resources)</p> <p>Holt McDougal Mathematics, Grade 6 Chapter 8 (Workbook)</p> <p>Kuta Software</p> <p>Math-Aids.com</p> <p>Getkahoot.com</p> <p>GradeCam.com</p> <p>My.hrw.com</p>

	<p>the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world & mathematical problems.</p>			
<p>Unit 9: Integers & Coordinate Plane (10-15 Days)</p>	<p>CC.6.NS.5 – Understand that positive & negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive & negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.</p> <p>CC.6.NS.6 – Understand a rational number as a point on the number line. Extend number line diagrams & coordinate axes familiar from previous grades to represent points on the line & in the plane with negative number coordinates.</p> <p>6a – 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, e.g., $-(-3) = 3$, & that 0 is its own opposite.</p> <p>6b – 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.</p> <p>6c – Find & position integers & other rational numbers on a horizontal or vertical number line diagram; find & position pairs of integers & other rational numbers on a coordinate plane.</p> <p>CC.6.NS.7 – Understand ordering & absolute value of rational numbers.</p> <p>7a – Interpret statements of inequality as statements about the relative position of the two numbers on a number line diagram. <i>For example, interpret $-3 > -7$ as a statement that -3 is located</i></p>	<p>Students identify and graph integers and find opposites.</p> <p>Students compare and order integers.</p> <p>Students locate and graph points on a coordinate plane.</p> <p>Students draw polygons in the coordinate plane and find the lengths of their sides.</p> <p>Students use translations, reflections, and rotations to change the positions of figures in the coordinate plane.</p>	<p>Pre-Assessment: Chapter 9 Test</p> <p>Formative: Kickoffs (Bell Work) Worksheets Activities Exit Slips Quizzes</p> <p>Summative: Chapter 9 Test</p>	<p>Holt McDougal Mathematics, Grade 6 Chapter 9 (Text)</p> <p>Holt McDougal Mathematics, Grade 6 Chapter 9 (Resources)</p> <p>Holt McDougal Mathematics, Grade 6 Chapter 9 (Workbook)</p> <p>Kuta Software</p> <p>Math-Aids.com</p> <p>Getkahoot.com</p> <p>GradeCam.com</p> <p>My.hrw.com</p>

	<p><i>to the right of -7 on a number line oriented from left to right.</i></p> <p>7b – Write, interpret, & explain statements of order for rational numbers in real-world contexts. <i>For example, write $-3^{\circ}\text{C} > -7^{\circ}\text{C}$ to express the fact that -3°C is warmer than -7°C.</i></p> <p>CC.6.NS.8 – Solve real-world & mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates & absolute value to find distance between points with the same first coordinate or the same second coordinate.</p> <p>CC.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 & mathematical problems.</p>			
<p>Unit 10: Functions (10-15 Days)</p>	<p>CC.6.RP.3 – Use ratio & rate reasoning to solve real-world & mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.</p> <p>3a – Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, & plot the pairs of values on the coordinate plane. Use tables to compare ratios.</p> <p>CC.6.EE.8 – Write an inequality of the form $x > c$ or $x < c$ to represent a constant or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.</p> <p>CC.6.EE.9 – Use variables to represent two quantities in a real-world problem that change in relationship to</p>	<p>Students use data in a table to write an equation for a function and use the equation to find a missing value.</p> <p>Students represent linear functions using ordered pairs and graphs.</p> <p>Students find rates of change and slope.</p> <p>Students read and write inequalities and graph them on a number line.</p>	<p>Pre-Assessment: Chapter 10 Test</p> <p>Formative: Kickoffs (Bell Work) Worksheets Activities Exit Slips Quizzes</p> <p>Summative: Chapter 10 Test</p>	<p>Holt McDougal Mathematics, Grade 6 Chapter 10 (Text)</p> <p>Holt McDougal Mathematics, Grade 6 Chapter 10 (Resources)</p> <p>Holt McDougal Mathematics, Grade 6 Chapter 10 (Workbook)</p> <p>Kuta Software</p> <p>Math-Aids.com</p> <p>Getkahoot.com</p>

<p>one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent & independent variables using graphs & tables, & relate these to the equation. <i>For example, in a problem involving motion at constant speed, list & graph ordered pairs of distances & times, & write the equation $d = 65t$ to represent the relationship between distance & time.</i></p>			<p>GradeCam.com</p> <p>My.hrw.com</p>
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