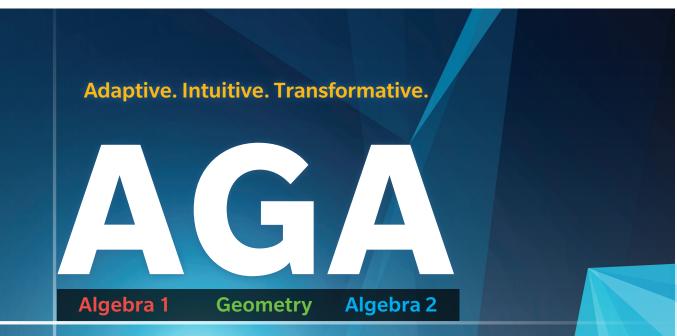


hmhco.com



## **Scope and Sequence**

	Algebra 1	Geometry	Algebra 2
Number and Quantity			
The Real Number System (N-RN)			
Properties of exponents to rational exponents			
Properties of exponents	•		$\diamond$
Radical notation	•		♦
Properties of rational and irrational numbers	<u> </u>		-
Sum or product of (non-zero) rational number and irrational number	•		♦
Sum or product of two rational numbers	•		<b>♦</b>
Quantities (N-Q)	1 1		1
Reasoning and units to solve			
Accuracy to limitation on measurement	•		
Data display	•		
Graphical display	•		
Interpret units in a formula	•		
Scale and origin in graph	•		
Units to solve multi-step problems	•		
The Complex Number System (N-CN)	11		
Arithmetic operations			
a+bi form of a complex number, a and b real			•
Add complex numbers			•
Complex number <i>i</i> such that <i>i</i> <sup>2</sup> =-1			•
Multiply complex numbers			•
Subtract complex numbers			•
Complex numbers in polynomial identities and equations	<u> </u>		
Quadratic equation with real coefficient(s) and complex solution(s)			•
Algebra			
Seeing Structure in Expressions (A-SSE)			
Function concept and function notations	<u></u>		
Coefficient	•		♦
Factor	•		<b></b>
Product in an expression	•		<b></b>
Rewrite an expression	•		♦
Term	•		♦
Equivalent forms of expressions to solve problems			
Complete the square	•		♦
Equivalent form production	•		♦
Properties of exponents: exponential function transformation			↓ ↓
Properties of exponents: sum of a finite geometric series formula			•
Property of quantity explanation			<b></b>



	Algebra 1	Geometry	Algebra 2
	•		<b>♦</b>
ns (A-APR)			
	1		1 .
	•		<ul><li>◇</li><li>◇</li></ul>
	•		<b>♦</b>
	•		<b>♦</b>
	1		
			•
			•
			•
	1		1
onships			•
	1		1
			•
			•
			•
			•
	1		
	•		<ul> <li>◇</li> <li>◇</li> <li>◇</li> <li>◇</li> <li>◇</li> <li>◇</li> <li>◇</li> <li>◇</li> <li>◇</li> </ul>
	•		<b></b>
	•		<b>◇</b>
	•		♦
	•		<b>♦</b>
	•		$\diamond$
	•		$\diamond$
	•		♦
	•		<b>♦</b>
			•
			<b>\$</b>
	•		<b>♦</b>
			<u> </u>
	•		$\diamond$
	•		<ul> <li>◇</li> <li>◇</li> <li>◇</li> </ul>
	•		<b>♦</b>
			•
			<u> </u>
	•		♦

Algebraic solution (exact)       • $\diamondsuit$ Graphical solution (approximate)       • $\diamondsuit$ Solution for two equations in two variables       • $\diamondsuit$ System of one linear equation and one quadratic equation       • $\diamondsuit$ <b>Graphical solutions for equations and inequalities</b> • $\diamondsuit$ Absolute value function       • $\diamondsuit$ Approximate solution from graph       • $\diamondsuit$ Exponential function       • $\diamondsuit$ Graph on a coordinate plane       • $\diamondsuit$ Intersection(s) as solution(s       • $\diamondsuit$ Linear function       • $\diamondsuit$ $\bigcirc$ Linear inequality solution as a half-plane       • $\bigcirc$ $\bigcirc$ Linear inequality solution as a half-plane       • $\bigcirc$ <th></th> <th>Algebra 1</th> <th>Geometry</th> <th>Algebra 2</th>		Algebra 1	Geometry	Algebra 2
Linear equation       ●       ◇         Linear inequality       ●       ◇         Quadratic equation: by inspection       ●       ◇         Quadratic equation: complete the square       ●       ◇         Quadratic formula       ●       ◇         System of equations       ●       ◇         Algebraic solution (exact)       ●       ◇         Graphical solution (approximate)       ●       ◇         Solution for two equations in two variables       ●       ◇         System of one linear equation and one quadratic equation       ●       ◇         Caraphical solution form graph       ●       ◇         Exponential function       ●       ◇         Absolute value function       ●       ◇         Intersection(s) as solution(s       ●       ◇         Linear inequality solution as a half-plane       ●       ◇         Linear inequality solution as a half-plane       ●       ◇         Linear inequality solution as a half-plane       ●       ◇         Solution set to a system of inequalities as intersection of correspond- ing half-planes       ●       ◇         Solution set to a system of inequalities as intersection of correspond- ing half-planes       ●       ◇         Tune	Complex solutions			•
Linear inequality       • <ul> <li>Quadratic equation: complete the square</li> <li>Quadratic equation: complete the square</li> <li>Quadratic formula</li> <li>•             <li>Quadratic formula</li> <li>•             <li>Quadratic formula</li> <li>•             <li>Quadratic formula</li> <li>•             <li>•               Algebraic solution (exact)             •             <li>•             <li>•               Graphical solution (exact)             •             <li>•             <li>•               Solution for two equations in two variables             •             <li>•             <li>•               System of one linear equation and one quadratic equation             •             <li>•             <li>•               Approximate solution from graph             •             <li>•             <li>•             <li>•               Approximate solution from graph             •             <li>•             <li>•             <li>•               Intersection(s) as solution(s             •             <li>•             <li>•             <li>•               Linear function             •             <li>•             <li>•             <li>•</li> <li>•</li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></li></ul>	Factorization	•		♦
Quadratic equation: by inspection <ul> <li>Quadratic equation: complete the square</li> <li>Quadratic formula</li> <li>Quadratic solution (exact)</li> <li>Graphical solution (approximate)</li> <li>Quadratic equation</li> <li>Quadratic for two equations in two variables</li> <li>Quadratic equation and one quadratic equation</li> <li>Quadratic formula</li> <li>Quadratic formula</li> <li>Quadratic equation and one quadratic equation</li> <li>Quadratic formula function</li> <li>Quadratic form graph</li> <li>Quadratic forming forming</li></ul>	Linear equation	•		♦
Quadratic equation: complete the square       ●       ◇         Quadratic formula       ●       ◇         System of equations       ●       ◇         Algebraic solution (exact)       ●       ◇         Graphical solution (approximate)       ●       ◇         Solution for two equations and one quadratic equation       ●       ◇         Graphical solutions for equations and inequalities       ◇       ◇         Approximate solution from graph       ●       ◇       ◇         Exponential function       ●       ◇       ◇         Graphical solution as a half-plane       ●       ◇       ◇         Linear function       ●       ◇       ◇       ○         Linear function       ●       ◇       ◇       ○ <td>Linear inequality</td> <td>•</td> <td></td> <td>♦</td>	Linear inequality	•		♦
Quadratic formula       ●       ◇         System of equations        ◇         Algebraic solution (exact)       ●       ◇         Graphical solution (approximate)       ●       ◇         Solution for two equations in two variables       ●       ◇         System of one linear equation and one quadratic equation       ●       ◇         Graphical solutions for equations and inequalities       >       ◇         Absolute value function       ●       ◇       ◇         Approximate solution from graph       ●       ◇       ◇         Exponential function       ●       ◇       ◇         Graph on a coordinate plane       ●       ◇       ◇         Intersection(s) as solution(s       ●       ◇       ◇         Linear inequality solution as a half-plane       ●       ◇       ○         Logarithmic function       ●       ●       ◇       ○         Solution set to a system of inequalities as intersection of correspond-ing half-planes       ●       ◇       ○         Solution set to a system of inequalities as intersection of correspond-ing half-planes       ●       ◇       ○         Table of values       ●       ●       ◇       ○       ○       ○       ○	Quadratic equation: by inspection	•		♦
System of equations         Algebraic solution (exact)       ●       ◇         Graphical solution (approximate)       ●       ◇         Solution for two equations in two variables       ●       ◇         System of one linear equation and one quadratic equation       ●       ◇         Graphical solutions for equations and inequalities       ●       ◇         Absolute value function       ●       ◇         Approximate solution from graph       ●       ◇         Exponential function       ●       ◇         Graph on a coordinate plane       ●       ◇         Intersection(s) as solution(s       ●       ◇         Linear function       ●       ◇         Intersection(s) as solution as a half-plane       ●       ◇         Logarithmic function       ●       ◇       ○         Solution set to a system of inequalities as intersection of correspond-ing half-planes       ●       ◇         Solution set to a system of inequalities as intersection of correspond-ing half-planes       ●       ◇         Solution set to a system of inequalities as intersection of correspond-ing half-planes       ●       ◇         Table of values       ●       ●       ◇       ●         Function set to a system of inequalities as inte	Quadratic equation: complete the square	•		♦
Algebraic solution (exact)       •       ◇         Graphical solution (approximate)       •       ◇         Solution for two equations in two variables       •       ◇         System of one linear equation and one quadratic equation       •       ◇         Graphical solutions for equations and inequalities       •       ◇         Absolute value function       •       ◇         Approximate solution from graph       •       ◇         Exponential function       •       ◇         Graph on a coordinate plane       •       ◇         Intersection(s) as solution(s       •       ◇         Linear function       •       ◇         Logarithmic function       •       ◇         Logarithmic function       •       ◇         Logarithmic function       •       ◇         Polynomial function       •       ◇         Solution set to a system of inequalities as intersection of corresponding half-planes       ◇       ◇         Table of values       •       ◇       ◇         Functions concept and function notations       •       ◇       ◇         Element of the domain, x       •       ◇       ◇       ◇       ◇       ◇       ◇       ◇	Quadratic formula	•		♦
Graphical solution (approximate) <ul> <li>Solution for two equations in two variables</li> <li>System of one linear equation and one quadratic equation</li> <li>System of one linear equation and one quadratic equation</li> <li>System of one linear equations and inequalities</li> </ul> Approximate solutions for equations and inequalities <ul> <li>System of one linear equation and one quadratic equation</li> <li>System of one linear equations and inequalities</li> </ul> Approximate solutions for equations and inequalities <ul> <li>System of one graph</li> <li>System of one graph on a coordinate plane</li> <li>System of one graph</li> <li>System of one graph</li> <li>System of one graph</li> <li>System of one graph on a coordinate graph one graph on a coordinate graph</li></ul>	System of equations		1	1
Solution for two equations in two variables••System of one linear equation and one quadratic equation••Graphical solutions for equations and inequalities••Absolute value function•••Approximate solution from graph•••Exponential function•••Graph on a coordinate plane•••Intersection(s) as solution(s•••Linear function•••Logarithmic function•••Rational function•••Solution set to a system of inequalities as intersection of corresponding half-planes••Solution set to a system of inequalities as intersection of corresponding half-planes••Functions••••Functions••••Solution set to a system of inequalities as intersection of corresponding half-planes••Table of values••••Functions••••Interpreting Functions (F-IF)•••Functions••••Element of the domain, x•••Element of the domain, x•••Element of the range, f(x)•••Function of f•••Graph of f for equation $y=f(x)$ ••Gupt of f for enguatis to input x••<	Algebraic solution (exact)	•		$\diamond$
System of one linear equation and one quadratic equation       ●       ◇         Graphical solutions for equations and inequalities       Absolute value function       ●       ◇         Absolute value function       ●       ◇       ◇         Approximate solution from graph       ●       ◇       ◇         Exponential function       ●       ◇       ◇         Graph on a coordinate plane       ●       ●       ◇         Intersection(s) as solution(s       ●       ◇       ○         Linear function       ●       ◇       ○         Logarithmic function       ●       ◇       ○         Rational function       ●       ●       ○       ○         Solution set to a system of inequalities as intersection of corresponding half-planes       ●       ○       ○         Table of values       ●       ○       ○       ○       ○       ○         Functions       ●       ○	Graphical solution (approximate)	•		♦
Graphical solutions for equations and inequalities         Absolute value function <ul> <li>Approximate solution from graph</li> <li>Important solution from graph</li> <li>Important solution from graph</li> <li>Important solution</li> <li>Important solution solutions</li> <li>Important solution solutions</li> <li>Important solution solutions</li> <li>Important solution solution solutions</li> <li>Important solution solution solution solution solution solutions</li> <li>Important solution solution</li> <li>Important solution solution</li> <li>Important solution</li></ul>	Solution for two equations in two variables	•		♦
Absolute value function <ul> <li>Approximate solution from graph</li> <li>Seponential function</li> <li>Seponential function for foresponding half-planes</li> <li>Seponential function function for for seponding half-planes</li> <li>Seponential function notations</li> </ul> <ul> <li>Seponential function notations</li> <li>Seponential function notations</li> <li>Seponential function f</li> <li>Seponential function f</li> <li>Seponential function</li> <li< td=""><td>System of one linear equation and one quadratic equation</td><td>•</td><td></td><td>♦</td></li<></ul>	System of one linear equation and one quadratic equation	•		♦
Approximate solution from graph       Image: Constraint of the state	Graphical solutions for equations and inequalities	1	I	
Exponential functionImage: Sequence as a functionImage: Sequence as a functionGraph on a coordinate planeImage: Sequence as a functionImage: Sequence as a functionImage: Sequence as a functionIntersection(s) as solution(sImage: Sequence as a functionImage: Sequence as a functionSequence as a functionImage: Sequence as a functionImage: Sequence as a functionImage: Sequence as a functionSequence as a functionImage: Sequence as a functionImage: Sequence as a functionImage: Sequence as a functionSequence as a functionImage: Sequence as a functionImage: Sequence as a functionImage: Sequence as a functionSequence as a functionImage: Sequence as a functionImage: Sequence as a functionImage: Sequence as a functionSequence as a functionImage: Sequence as a functionImage: Sequence as a functionImage: Sequence as a functionSequence as a functionImage: Sequence as a functionImage: Sequence as a functionImage: Sequence as a functionSequence as a functionImage: Sequence as a functionImage: Sequence as a functionImage: Sequence as a functionSequence as a functionImage: Sequence as a functionImage: Sequence as a functionImage: Sequence as a functionSequence as a functionImage: Sequence as a functionImage: Sequence as a functionImage: Sequence as a functionSequence as a functionImage: Sequence a	Absolute value function	•		<b>♦</b>
Graph on a coordinate plane•·Intersection(s) as solution(s•·Linear function•·Linear inequality solution as a half-plane•·Logarithmic function••Polynomial function••Rational function••Solution set to a system of inequalities as intersection of corresponding half-planes•Table of values•• <b>Functions</b> Interpreting Functions (F-IF)Element of the domain, xElement of the domain, x•Element of the range, $f(x)$ •Function f•Function f•Function f•Caraph of f for equation $y=f(x)$ •Output of f corresponds to input x•Sequence as a function•Sequence as a function•Sequence as a function•Applications in context	Approximate solution from graph	•		<b>♦</b>
Intersection(s) as solution(sImage: Solution (s) as a half-planeImage: Solution (s) as a half-planeLinear inequality solution as a half-planeImage: Solution (s) as a half-planeImage: Solution (s) as a half-planeLogarithmic functionImage: Solution (s) as a half-planeImage: Solution (s) as a half-planeImage: Solution (s) as a half-planePolynomial functionImage: Solution (s) as a half-plane (s) as a	Exponential function	•		$\diamond$
Linear functionImage: Constraint of the domain, xLinear inequality solution as a half-planeImage: Constraint of the domain, xLogarithmic functionImage: Constraint of the domain, xSelement of the domain, xImage: Constraint of the domain, xElement of the domain, xImage: Constraint of the domain, xSelement of the domain, xImage: Constraint of the domain, xSelement of the domain, xImage: Constraint of the domain, xSelement of the domain, xImage: Constraint of the domain, xSelement of the domain, xImage: Constraint of the domain, xSelement of the domain, xImage: Constraint of the domain, xSelement of the domain, xImage: Constraint of the domain, xSelement of the domain, xImage: Constraint of the domain, xSelement of the domain, xImage: Constraint of the domain, xSelement of the domain, xImage: Constraint of the domain, xSelement of the constraint of the domain, xImage: Constraint of the constrain	Graph on a coordinate plane	•		$\diamond$
Linear inequality solution as a half-plane       ●       ◇         Logarithmic function       ●       ◇         Polynomial function       ●       ◇         Rational function       ●       ◇         Solution set to a system of inequalities as intersection of correspond- ing half-planes       ●       ◇         Table of values       ●       ◇         Functions Functions (F-IF)         Functions (F-IF)         Function concept and function notations         Element of the domain, x       ●       ◇         Element of the range, f(x)       ●       ◇         Function of       ●       ◇         Function notation       ●       ◇         Graph of f for equation y=f(x)       ●       ◇         Output of f corresponds to input x       ●       ◇         Sequence as a function       ●       ◇         Applications in context       ●       ◇	Intersection(s) as solution(s	•		<b>♦</b>
Logarithmic functionImage: Constraint of the second s	Linear function	•		<b>♦</b>
Polynomial functionImage: Constraint of the system of inequalities as intersection of corresponding half-planesImage: Constraint of the system of inequalities as intersection of corresponding half-planesSolution set to a system of inequalities as intersection of corresponding half-planesImage: Constraint of the system of inequalities as intersection of corresponding half-planesTable of valuesImage: Constraint of the system of the system of the domain, xImage: Constraint of the domain, xElement of the domain, xImage: Constraint of the state of the range, f(x)Image: Constraint of the state of t	Linear inequality solution as a half-plane	•		<b>♦</b>
Rational functionImage: constraint of the system of inequalities as intersection of corresponding half-planesImage: constraint of the system of inequalities as intersection of corresponding half-planesTable of valuesImage: constraint of the system of the domain, xImage: constraint of the system	Logarithmic function			•
Solution set to a system of inequalities as intersection of corresponding half-planesImage: Corresponding half-planesTable of valuesImage: Corresponding half-planesImage: Corresponding half-planesTable of valuesImage: Corresponding half-planesImage: Corresponding half-planesFunctionsFunctions (F-IF)Function concept and function notationsElement of the domain, xImage: Corresponding half-planesElement of the domain, xImage: Corresponding half-planesImage: Corresponding half-planesFunction fImage: Corresponding half-planesImage: Corresponding half-planesFunction notationImage: Corresponding half-planesImage: Corresponding half-planesGraph of f for equation $y=f(x)$ Image: Corresponding half-planesImage: Corresponding half-planesOutput of f corresponds to input xImage: Corresponding half-planesImage: Corresponding half-planesSequence as a functionImage: Corresponding half-planesImage: Corresponding half-planesApplications in contextImage: Corresponding half-planesImage: Corresponding half-planes	Polynomial function	•		$\diamond$
ing half-planes• $\checkmark$ Table of values••FunctionsInterpreting Functions (F-IF)Function concept and function notationsElement of the domain, x•Element of the range, $f(x)$ ••Function f••Function notation••Graph of f for equation $y=f(x)$ ••Output of f corresponds to input x••Sequence as a function••Applications in context	Rational function			•
Functions         Interpreting Functions (F-IF)         Function concept and function notations         Element of the domain, x <ul> <li></li></ul>	Solution set to a system of inequalities as intersection of correspond- ing half-planes	•		\$
Interpreting Functions (F-IF)         Function concept and function notations         Element of the domain, x <ul> <li></li></ul>	Table of values	•		♦
Function concept and function notations         Element of the domain, x <ul> <li></li></ul>	Functions	1	I	1
Element of the domain, x       •       ◇         Element of the range, f(x)       •       ◇         Function f       •       ◇         Function notation       •       ◇         Graph of f for equation y=f(x)       •       ◇         Output of f corresponds to input x       •       ◇         Sequence as a function       •       ◇         Applications in context       •       ◇	Interpreting Functions (F-IF)			
Element of the range, f(x)       •       •         Function f       •       •         Function notation       •       •         Graph of f for equation y=f(x)       •       •         Output of f corresponds to input x       •       •         Sequence as a function       •       •         Applications in context       •       •	Function concept and function notations			
Function f       •       ◇         Function notation       •       ◇         Graph of f for equation y=f(x)       •       ◇         Output of f corresponds to input x       •       ◇         Sequence as a function       •       ◇         Applications in context       •       ✓	Element of the domain, x	•		$\diamond$
Function notation       •       ◇         Graph of f for equation y=f(x)       •       ◇         Output of f corresponds to input x       •       ◇         Sequence as a function       •       ◇         Applications in context       •       ●	Element of the range, $f(x)$	•		♦
Graph of f for equation y=f(x)       •       •         Output of f corresponds to input x       •       •         Sequence as a function       •       •         Applications in context       •       •	Function f	•		$\diamond$
Output of f corresponds to input x     •     ◇       Sequence as a function     •     ◇       Applications in context     •     ●	Function notation	•		<b>♦</b>
Sequence as a function   Applications in context	Graph of $f$ for equation $y=f(x)$	•		$\diamond$
Applications in context	Output of f corresponds to input x	•		$\diamond$
	Sequence as a function	•		$\diamond$
Average rate of change	Applications in context	·		
	Average rate of change	•		<b>♦</b>

	Algebra 1	Geometry	Algebra 2
Domain as related to graph	•		<b>♦</b>
End behavior	•		<b>◇</b>
Graph key features	•		<b>♦</b>
Intercepts	•		<b>♦</b>
Interval behavior (increase, decrease)	•		<b>♦</b>
Periodicity			•
Relative maximum(s) and minimum(s)			•
Symmetry	•		$\diamond$
Table key features	•		<b>♦</b>
Analyze functions			
Absolute value functions			•
Compare function represented graphically to algebraically	•		<b>♦</b>
Cube root functions	•		<b>♦</b>
Exponent properties	•		<b>♦</b>
Exponential functions	•		<b>♦</b>
Exponential growth or decay	•		$\diamond$
Graph key features	•		$\diamond$
Linear functions	•		$\diamond$
Logarithmic functions			•
Piecewise-defined functions			•
Polynomial functions	•		$\diamond$
Quadratic functions	•		$\diamond$
Quadratic function expressed factored, completing the square	•		$\diamond$
Square root functions	•		$\diamond$
Trigonometric functions			•
Write functions	•		•
Building Functions (F-BF)			
Relationship between two quantities			
Arithmetic sequence	•		$\diamond$
Calculation from a context	•		<b>♦</b>
Combine function types arithmetically	•		<b>♦</b>
Compose function (composite)			•
Explicit expression	•		$\diamond$
Geometric sequence	•		$\diamond$
Recursive process	•		$\diamond$
New functions from existing function			
Even function	•		$\diamond$



	Algebra 1	Geometry	Algebra 2
Graph effect from change	•		$\diamond$
Find Inverse function	•		♦
Odd function	•		♦
Linear, Quadratic, and Exponential Models (F-LE)		l	
Construct and compare linear, quadratic, exponential models			
Constant percent growth or decay rate of change	•		$\diamond$
Constant rate of change	•		<b>♦</b>
Exponential function growth exceeds polynomial function growth	•		<b>♦</b>
Exponential model function growth	•		♦
Function construction from a graph, relationship description, input-output pairs (tables)	•		\$
Linear model function growth	•		<b>♦</b>
Parameter interpretation	•		<b>♦</b>
Interpret Functions			
Parameters in a linear function	•		•
Parameters in an exponential function	•		•
Trigonometric Functions (F-TF)		<u> </u>	_
Domain from unit circle			
Counterclockwise traversal around unit circle			•
Radian measure as arc length subtended by an angle in unit circle			•
Unit circle in coordinate plane			•
Periodic phenomena			
Amplitude			•
Frequency			•
Midline			•
Trigonometric identities			_
Pythagorean identity proof			•
Geometry			
Congruence (G-CO)			
Transformations in the plane			
Defined terms: angle, circle, perpendicular line, parallel line, line segment		•	
Definition of rotation, reflection, and translation		•	
Draw transformed figure		٠	
Rotation and reflection		•	
Sequence of a transformation		•	
Transformation as a function		•	

	Algebra 1	Geometry	Algebra 2
Transformation representation		٠	
Translation versus stretch		•	
Undefined terms: point, line, distance along a line, distance around a circular arc		•	
Rigid motion congruence			,
Determine congruency		٠	
Transform a figure		٠	
Triangle congruency criteria (ASA, SAS, SSS)		٠	
Prove geometric theorems			,
Line and angle		٠	
Parallelogram		٠	
Triangle		٠	
Geometric construction			
Compass		•	
Equilateral triangle, square, regular hexagon inscribed in a circle		٠	
Paper folding		٠	
Reflective devices		٠	
Software		٠	
Straightedge		٠	
String		٠	
Similarity, Right Triangles, Trigonometry (G-SRT)			,
Similarity transformations			
AA triangle criterion		٠	
Definition of similarity		٠	
Dilation given center and scale factor		٠	
Similar triangles		٠	
Prove similarity theorems			
Geometric figure relationships		٠	
Triangles		٠	
Trigonometric ratios and right triangles			
Cosine as ratio of adjacent to hypotenuse		٠	
Pythagorean Theorem		٠	
Sine and cosine relationship		٠	
Sine as ratio of opposite to hypotenuse		٠	
Solve right triangles		٠	
Tangent as ratio of opposite to adjacent		٠	
Trigonometric ratio definitions for acute angles		٠	



	Algebra 1	Geometry	Algebra 2
Circles (G-C)			
Circle theorems			
Angles of a quadrilateral inscribed in a circle		٠	
Chords		•	
Circumscribed circle in a triangle		•	
Inscribed angle		•	
Inscribed circle in a triangle		•	
Radii		•	
Similarity		•	
Arc length and area of sectors			
Arc length intercepted by an angle as ratio		٠	
Area of a sector formula		٠	
Radian measure		٠	
Expressing Geometric Properties with Equations (G-GPE)			
Conic section equation and geometry			
Center		•	•
Complete the square		•	•
Directrix		•	•
Equation of a circle		•	•
Equation of a parabola		•	•
Focus		•	•
Radius		•	•
Algebraic proofs of geometric theorems			
Area computation, triangle and rectangle		•	
Coordinates		•	
Perimeter computation, polygon		•	
Segment partition for a given ratio		•	
Slope of parallel lines		•	
Slope of perpendicular lines		٠	
Geometric Measurement and Dimension (G-GMD)			
Volume formulas			1
Area of a circle		•	$\diamond$
Cavalieri's principle		•	
Circumference of a circle		•	<b>◇</b>
Problem solving		•	<b>♦</b>
Volume of a cone		•	<b>♦</b>
Volume of a cylinder		•	<b>♦</b>
Volume of a pyramid			
		•	<b>♦</b>

Statistics and Probability         Interpreting Categorical and Quantitative Data (S-ID)         Single count or measurement variable         Box plot <ul> <li>Compare centers and spreads of data sets</li> <li>Dot plot</li> <li>Effects of outliers</li> <li>Simile area under the normal curve</li> <li>Simate population percentage</li> <li>Interpret shapes, centers, and spreads of data sets</li> <li>Orway frequency table</li> <li>Two-way frequency table</li> <li>Sit a linear model to data</li> <li>Sit function to data (linear, quadratic, exponential)</li> <li>Scatter plot</li> <li>Scatter</li></ul>				
Cross-section of three-dimensional object <ul> <li>Rotation of two-dimensional object</li> <li>Modeling with Geometry (G-MG)</li> </ul> Modeling with Geometry (G-MG) <ul> <li>Density based on area and volume</li> <li>Density based on area and volume</li> <li>Describe objects</li> <li>Design problem solutions</li> <li>Statistics and Probability</li> <li>Interpreting Categorical and Quantitative Data (S-ID)</li> <li>Single count or measurement variable</li> <li>Box plot</li> <li>Compare centers and spreads of data sets</li> <li>Ot plot</li> <li>Estimate population percentage</li> <li>Ot plot</li> <li>Estimate population percentage</li> <li>Ot plot</li> <li>Estimate population percentage</li> <li>Ot plot</li> <li>State set area under the normal curve</li> <li>Ot plot</li> <li>Ot plot</li> <li>Strategorical and quantitative variables</li> <li>Strategorize associations and trends</li> <li>Ot correlation and causation</li> <li>Orrelation coefficient</li></ul>		Algebra 1	Geometry	Algebra 2
Rotation of two-dimensional object <ul> <li>Modeling situations</li> <li>Density based on area and volume</li> <li>Describe objects</li> <li>Design problem solutions</li> <li>Statistics and Probability</li> </ul> <ul> <li>Statistics and Probability</li> </ul> Interpreting Categorical and Quantitative Data (S-ID)             Single count or measurement variable <ul> <li>Compare centers and spreads of data sets</li> <li>Ot plot</li> <li>Effects of outliers</li> <li>Statistigaram</li> <li>Commander the normal curve</li> <li>Commander the normal curve</li> <li>Comoral data sets</li> <li>Comoral data data sets</li> <li>Comoral data data sets</li> <li>Comoral data data</li> <li>Comorata data data</li> <li>Comoral</li></ul>		T		1 .
Modeling with Geometry (G-MG)         Modeling situations         Density based on area and volume         Describe objects         Design problem solutions         Statistics and Probability         Interpreting Categorical and Quantitative Data (S-ID)         Single count or measurement variable         Box plot <ul> <li>Compare centers and spreads of data sets</li> <li>Dot plot</li> <li>Effects of outliers</li> <li>Statimate area under the normal curve</li> <li>Statimate area area under the normal curve</li> <li>Statimate</li></ul>	-	_	•	♦
Modeling situations <ul> <li>Density based on area and volume</li> <li>Describe objects</li> <li>Design problem solutions</li> <li>Statistics and Probability</li> </ul> <ul> <li>Statistics and Probability</li> <li>Interpreting Categorical and Quantitative Data (S-ID)</li> <li>Single count or measurement variable</li> <li>Box plot</li> <li>Compare centers and spreads of data sets</li> <li>Dot plot</li> <li>Effects of outliers</li> <li>Stimate area under the normal curve</li> <li>Stimate area under the normal curve</li> <li>Stimate area under the normal curve</li> <li>Stimate population percentage</li> <li>Stimate population</li> <li>Stimate popul</li></ul>	Rotation of two-dimensional object		•	$\diamond$
Density based on area and volume       ●         Describe objects       ●         Design problem solutions       ●         Statistics and Probability       ●         Interpreting Categorical and Quantitative Data (S-ID)       ●         Single count or measurement variable       ●         Box plot       ●       ◇         Compare centers and spreads of data sets       ●       ◇         Dot plot       ●       ◇         Effects of outliers       ●       ◇         Estimate area under the normal curve       ●       ◇         Estimate population percentage       ●       ◇         Histogram       ●       ◇       ◇         Interpret shapes, centers, and spreads of data sets       ●       ◇       ◇         Normal distribution       ●       ◇       ◇       ◇         Two-way frequency table       ●       ◇       ◇       ◇         Fit function to data (linear, quadratic, exponential)       ●       ◇       ◇       ◇         Plot and analyze residuals       ●       ◇       ◇       ◇       ◇       ◇       ◇       ◇       ◇       ◇       ◇       ◇       ◇       ◇       >       ◇       ◇				
Describe objects•Design problem solutions•Statistics and ProbabilityInterpreting Categorical and Quantitative Data (S-ID)Single count or measurement variableBox plot•Compare centers and spreads of data sets•Dot plot•Effects of outliers•Estimate area under the normal curve•Estimate area under the normal curve•Estimate population percentage•Histogram•Interpret shapes, centers, and spreads of data sets•Normal distribution•Two-exaly frequency table•Two categorical and quantitative variables•Fit a linear model to data•Fit function to data (linear, quadratic, exponential)•Plot and analyze residuals•Recognize associations and trends•Recognize associations and trends•Correlation and causation•Correlation and causation•Correlation coefficient for a linear fit•Intercept (constant term)•Slope (rate of change)•Slope (rate of change)•Slope (rate of change)•Interceses•Interces about a population•Inferences about a population•		- <u>1</u>		1
Design problem solutions       ●         Statistics and Probability         Interpreting Categorical and Quantitative Data (S-ID)         Single count or measurement variable         Box plot       ●       ◇         Compare centers and spreads of data sets       ●       ◇         Dot plot       ●       ◇         Effects of outliers       ●       ◇         Estimate area under the normal curve       ●       ◇         Estimate population percentage       ●       ◇         Histogram       ●       ◇       ◇         Interpret shapes, centers, and spreads of data sets       ●       ◇       ◇         Normal distribution       ●       ◇       ◇       ◇         Two-way frequency table       ●       ◇       ◇       ◇         Fit a linear model to data       ●       ◇       ◇       ◇         Fit function to data (linear, quadratic, exponential)       ●       ◇       ◇       ○		_	•	
Statistics and Probability         Interpreting Categorical and Quantitative Data (S-ID)         Single count or measurement variable         Box plot <ul> <li>Compare centers and spreads of data sets</li> <li>Dot plot</li> <li>Effects of outliers</li> <li>Settimate area under the normal curve</li> <li>Settimate area under the normal curve</li> <li>Settimate population percentage</li> <li>Settimate population percentage</li> <li>Settimate area under the normal curve</li> <li>Settimate population percentage</li> <li>Settimate population percentage</li> <li>Settimate area under the normal curve</li> <li>Settimate population percentage</li> <li>Settimate population percentage</li> <li>Settimate population percentage</li> <li>Settimate population percentage</li> <li>Settimate population</li> <li>Settimate population</li> <li>Settimate population</li> <li>Settimate population</li> <li>Settimate population</li> <li>Settimate area under the normal curve</li> <li>Settimate population</li> <li>Settimate population</li> <li>Settimate population</li> <li>Settimate population</li> <li>Settimate population</li> <li>Settimate population</li> <li>Settimate population percentage</li> <li>Settimate population and rends</li> <li>Setter plot</li> <li>Setere plot</li> <li>Setter plot</li></ul>	Describe objects		•	
Interpreting Categorical and Quantitative Data (S-ID) Single count or measurement variable Box plot Compare centers and spreads of data sets Dot plot Effects of outliers Estimate area under the normal curve Estimate population percentage Histogram Histogra	Design problem solutions		•	
Single count or measurement variable         Box plot <ul> <li>Compare centers and spreads of data sets</li> <li>Dot plot</li> <li>Effects of outliers</li> <li>Setimate area under the normal curve</li> <li>Setimate population percentage</li> <li>Setimate population</li> <li>Setimate population</li> <li>Setimate population</li> <li>Setimate provide the population</li> <li>Setimate provide the population</li> <li>Setimate provide the population</li> <li>Setimate population</li> <li>Setimate population</li> <li>Setimate population</li> <li>Setimate provide the population</li> </ul>	Statistics and Probability			
Box plot       Image: Compare centers and spreads of data sets       Image: Compare centers cente	Interpreting Categorical and Quantitative Data (S-ID)			
Compare centers and spreads of data setsImage: Compare centers and spreads of data setsImage: Compare centers and spreads of data setsDot plotImage: Compare centers and spreads of data setsImage: Compare centers centers centers centers centers centersImage: Compare centers centers cente	Single count or measurement variable			1
Dot plot       ●       ●         Effects of outliers       ●       ◇         Estimate area under the normal curve       ●       ◇         Estimate population percentage       ●       ◇         Histogram       ●       ◇         Interpret shapes, centers, and spreads of data sets       ●       ◇         Normal distribution       ●       ◇         Two-way frequency table       ●       ◇         Two-way frequency table       ●       ◇         Fit anicar model to data       ●       ◇         Fit function to data (linear, quadratic, exponential)       ●       ◇         Plot and analyze residuals       ●       ◇       ◇         Recognize associations and trends       ●       ◇       ◇         Relative frequencies (joint, marginal, conditional)       ●       ◇       ◇         Scatter plot       ●       ◇       ◇       ◇         Interpret linear models        ◇       ◇       ◇         Correlation coefficient for a linear fit       ●       ◇       ◇       ◇         Intercept (constant term)       ●       ◇       ◇       ◇       ◇       ◇         Slope (rate of change)       ●	Box plot			♦
Effects of outliers <ul> <li>Stimate area under the normal curve</li> <li>Stimate area under the normal curve</li> <li>Stimate population percentage</li> <li>Stimate population</li> <li>Stimate population<!--</td--><td>Compare centers and spreads of data sets</td><td>•</td><td></td><td><b>♦</b></td></li></ul>	Compare centers and spreads of data sets	•		<b>♦</b>
Estimate area under the normal curve       ●       ◇         Estimate population percentage       ●       ◇         Histogram       ●       ◇         Interpret shapes, centers, and spreads of data sets       ●       ◇         Normal distribution       ●       ◇         Two-way frequency table       ●       ◇         Two-tategorical and quantitative variables       ●       ◇         Fit a linear model to data       ●       ◇         Fit function to data (linear, quadratic, exponential)       ●       ◇         Plot and analyze residuals       ●       ◇         Recognize associations and trends       ●       ◇         Relative frequencies (joint, marginal, conditional)       ●       ◇         Scatter plot       ●       ◇         Interpret linear models       ◇       ◇         Correlation and causation       ●       ◇         Correlation coefficient for a linear fit       ●       ◇         Interpret (constant term)       ●       ◇         Slope (rate of change)       ●       ◇         Making Inferences and Justifying Conclusions (S-IC)       ●       ◇         Random processes       ●       ●       ◇	Dot plot			
Estimate population percentageImage: Constant Cons	Effects of outliers	•		$\diamond$
Histogram•Interpret shapes, centers, and spreads of data sets•Normal distribution•Two-way frequency table•Two-ategorical and quantitative variables•Fit a linear model to data•Fit function to data (linear, quadratic, exponential)•Plot and analyze residuals•Recognize associations and trends•Relative frequencies (joint, marginal, conditional)•Scatter plot•Interpret linear modelsCorrelation and causation•Correlation coefficient for a linear fit•Intercept (constant term)•Slope (rate of change)•Making Inferences and Justifying Conclusions (S-IC)•Random processes••Inferences about a population••	Estimate area under the normal curve	•		<b>♦</b>
Interpret shapes, centers, and spreads of data sets Normal distribution Normal distrib	Estimate population percentage	•		<b>\$</b>
Normal distributionImage: Constant Sector Secto	Histogram			<b>♦</b>
Two-way frequency tableImage: Constant Sector S	Interpret shapes, centers, and spreads of data sets			<b>\$</b>
Two categorical and quantitative variables         Fit a linear model to data <ul> <li>Fit a linear model to data</li> <li>Comparing the second secon</li></ul>	Normal distribution	•		$\diamond$
Fit a linear model to data•◇Fit function to data (linear, quadratic, exponential)•◇Plot and analyze residuals•◇Recognize associations and trends•◇Relative frequencies (joint, marginal, conditional)•◇Scatter plot•◇Interpret linear models•◇Correlation and causation•◇Correlation coefficient for a linear fit•◇Intercept (constant term)•◇Slope (rate of change)•◇Making Inferences and Justifying Conclusions (S-IC)•Random processes••Inferences about a population••	Two-way frequency table	•		<b>♦</b>
Fit function to data (linear, quadratic, exponential)••Plot and analyze residuals•Recognize associations and trends•Relative frequencies (joint, marginal, conditional)•Scatter plot•Interpret linear models•Correlation and causation•Correlation coefficient for a linear fit•Intercept (constant term)•Slope (rate of change)•Making Inferences and Justifying Conclusions (S-IC)•Random processes••Inferences about a population••	Two categorical and quantitative variables			
Plot and analyze residuals•·Recognize associations and trends•·Relative frequencies (joint, marginal, conditional)•·Scatter plot•·Interpret linear models·Correlation and causation•·Correlation coefficient for a linear fit•·Intercept (constant term)•·Slope (rate of change)•·Making Inferences and Justifying Conclusions (S-IC)•Random processes•Inferences about a population•	Fit a linear model to data	•		$\diamond$
Recognize associations and trends••Relative frequencies (joint, marginal, conditional)••Scatter plot••Interpret linear models••Correlation and causation••Correlation coefficient for a linear fit••Intercept (constant term)••Slope (rate of change)••Making Inferences and Justifying Conclusions (S-IC)•Random processes•Inferences about a population•	Fit function to data (linear, quadratic, exponential)			$\diamond$
Relative frequencies (joint, marginal, conditional)       •       ◇         Scatter plot       •       ◇         Interpret linear models       •       ◇         Correlation and causation       •       ◇         Correlation coefficient for a linear fit       •       ◇         Intercept (constant term)       •       ◇         Slope (rate of change)       •       ◇         Making Inferences and Justifying Conclusions (S-IC)       ◇         Random processes       •       ●	Plot and analyze residuals	•		♦
Scatter plot       •       ◇         Interpret linear models       •       ◇         Correlation and causation       •       ◇         Correlation coefficient for a linear fit       •       ◇         Intercept (constant term)       •       ◇         Slope (rate of change)       •       ◇         Making Inferences and Justifying Conclusions (S-IC)       ◇         Inferences about a population       •       ●	Recognize associations and trends	•		<b>♦</b>
Interpret linear models         Correlation and causation <ul> <li></li></ul>	Relative frequencies (joint, marginal, conditional)	•		$\diamond$
Correlation and causation       •       ◇         Correlation coefficient for a linear fit       •       ◇         Intercept (constant term)       •       ◇         Slope (rate of change)       •       ◇         Making Inferences and Justifying Conclusions (S-IC)       ✓         Random processes       •       ●         Inferences about a population       •       ●	Scatter plot	•		$\diamond$
Correlation coefficient for a linear fit       •          Intercept (constant term)       •          Slope (rate of change)       •          Making Inferences and Justifying Conclusions (S-IC)           Random processes       •       •         Inferences about a population       •       •	Interpret linear models	· · ·		
Intercept (constant term)       •       •         Slope (rate of change)       •       •         Making Inferences and Justifying Conclusions (S-IC)       •       •         Random processes       •       •         Inferences about a population       •       •	Correlation and causation	•		$\diamond$
Slope (rate of change)     Image: Conclusions (S-IC)       Making Inferences and Justifying Conclusions (S-IC)       Random processes       Inferences about a population	Correlation coefficient for a linear fit			$\diamond$
Making Inferences and Justifying Conclusions (S-IC)         Random processes         Inferences about a population	Intercept (constant term)			$\diamond$
Random processes     Inferences about a population	Slope (rate of change)	•		<b>♦</b>
Inferences about a population •	Making Inferences and Justifying Conclusions (S-IC)	· · ·		
	Random processes			
Model consistent with results	Inferences about a population			•
	Model consistent with results			•

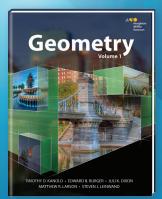


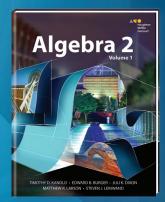
	Algebra 1	Geometry	Algebra 2
Sample surveys, experiments, and observational studies			
Compare a randomized experiment			•
Evaluate a report			•
Margin of error			•
Population mean or proportion			•
Randomization			•
Simulations			•
Conditional Probability and the Rules of Probability (S-CP)			
Independence and conditional probability			
Conditional probability		٠	•
Independent and conditional probability		٠	•
Independent probability determination		٠	•
Sample space description		٠	•
Two-way frequency table for probability		٠	•
Union (or), intersection (and), complement (not)		٠	•
Rules of probability			
Addition Rule of probability		٠	•
Conditional probability of A given B as a fraction		٠	•











An innovative digital-first program for your high school mathematics instruction!

hmhco.com/hmh-aga

Connect with us:

Houghton Mifflin Harcourt™ is a trademark of Houghton Mifflin Harcourt Publishing Company. © Houghton Mifflin Harcourt. All rights reserved. Printed in the U.S.A. 12/14 MS127927

hmhco.com • 800.225.5425

