

# Secondary II Honors Year at a Glance 2016 – 2017

**It is expected that teachers will collaborate with their grade level IPLCs to determine the order and pacing of the standards/topics within each quarter**

Flexible Pacing	Standards (in any order)	Topics Related to Standards	Walch Alignment	Assessment Window
<b>1<sup>st</sup> Semester</b>				
<b>Secondary II HONORS</b>				
<b>August 24 – December 12<sup>th</sup></b>	G.CO.9	Prove theorems about lines and angles	5.5.1 5.5.2	<b>Pre-Assessment (Required): Aug 24<sup>th</sup> – Sept 2<sup>nd</sup></b>  <b>Secondary II District Final Dec 12<sup>th</sup> – Dec 21<sup>st</sup></b>
	G.CO.10	Prove theorems about triangles	5.6.1 5.6.2 5.6.3 5.6.4	
	G.CO.11	Prove theorems about parallelograms	5.7.1 5.7.2	
	G.SRT.1	Verify properties of dilations	5.2.1 5.2.2	
	G.SRT.2	Use similarity transformations to prove similarity	5.3.1	
	G.SRT.3	Use similarity transformations to establish AA	5.3.2	
	G.SRT.4	Prove theorems about triangles	5.4.1 5.4.2 5.4.3	
	G.SRT.5	Use triangle congruence and similarity to solve problems	5.4.4	
	G.SRT.6	Derive trigonometric ratios for acute angles using side ratios in right triangles	5.8.1	
	G.SRT.7	Relationships between sine and cosine of complementary angles	5.8.3	

G.SRT.8	Use trig ratios and Pythagorean Theorem to solve right triangles	5.9.1 5.9.2 5.9.3
F.TF.8	Prove the Pythagorean identity	5.9.4 5.9.5
G.GMD.1	Give informal arguments for area and volume formulas	6.5.1 6.5.2
G.GMD.3	Use volume formulas to solve problems	6.5.2
G.C.1	Prove all circles are similar	6.1.1
G.C.2	Relationships among angles, radii, and chords	6.1.1 6.1.2 6.1.3
G.C.3	Constructions of inscribed and circumscribed circles of triangles and squares	6.2.1 6.2.2 6.2.3
G.C.4	Construct a tangent line to a circle	6.3.1
G.C.5	Length of an arc and area of a sector	6.4.1 6.4.2
G.GPE.1	Derive the equation of a circle	6.6.1
G.GPE.4	Use coordinates to prove simple geometric theorems algebraically	6.7.1
G.GPE.6	Find a point on a line that divides the segment into a given ratio	5.1.1
S.ID.5**	Summarize data in a two-way frequency tables	Secondary I 4.2.1
S.CP.1	Describe events as subsets of a sample space using characteristics of the outcome	4.1.1
S.CP.4	Construct and interpret two-way frequency tables	4.2.2
S.CP.5	Understand and explain conditional probability (no calculations)	Not covered in Walch
S.CP.6	Find conditional probability	Not covered in Walch
HONORS: G.GPE.2	Derive the equation of parabola	6.6.2

	HONORS: G.GPE.3	Derive the equations of ellipses and hyperbolas	Not covered in Walch	
	HONORS: S.CP.2	Determine if two events are independent	4.1.3	
	HONORS: S.CP.3	Understand and interpret conditional probability	4.2.1 4.2.2	
	HONORS: S.CP.7	Apply the addition rule	4.1.2	
	HONORS: S.CP.8	Apply the multiplication rule	4.2.3	
<b>SECONDARY III HONORS</b>				
<b>December 13<sup>th</sup> – January 18<sup>th</sup></b>	A.SSE.1**	Interpret polynomial and rational expressions in terms of its context	2A.1.1 2A.1.1 2A.2.2 2A.2.3 2B.1.1	
	A.SSE.2	Use the structure of an expression to rewrite it	2A.2.1 2A.2.2 2A.2.3 2B.1.1 2B.1.3 2B.1.4 2B.1.5	
	A.APR.1	Operations on polynomials	2A.1.2 2A.1.3	
	A.APR.2	Know and apply the Remainder Theorem	2A.3.2	
	A.APR.3	Identify zeros of polynomials and use zeros to graph the function	2A.3.3 2A.3.4	
	A.APR.4	Prove polynomial identities	2A.2.1 2A.2.2 2A.2.3	
	A.APR.5	Know and apply the Binomial Theorem	2A.2.3	

	F.IF.7c	Graph polynomial functions, identify zeros, and show end behavior	2A.3.1 2A.3.3	
	F.BF.3	Transformations on graphs	4B.2.1 4B.2.2 4B.4.1 4B.4.3	
	A.REI.2 (radical)	Solve simple radical equations in one variable (radicals only)	2B.2.2	
	N.CN.8	Extend polynomial identities to the complex numbers	2A.2.2	
	N.CN.9	Know the Fundamental Theorem of Algebra	2A.3.3	
	HONORS: N.CN.3	Find the conjugate of a complex number	Not covered in Walch	
	HONORS: N.CN.4	Represent complex numbers on the complex plane	Not covered in Walch	
	HONORS: N.CN.5	Represent the operations on the complex plane	Not covered in Walch	
	HONORS: N.CN.6	Calculate the distance between numbers as the modulus	Not covered in Walch	
	HONORS: N.CN.10	Multiply complex numbers in polar form and use DeMoirvre's Theorem	Not covered in Walch	

2 <sup>nd</sup> Semester				
<b>January 19<sup>th</sup> – June 7<sup>th</sup></b>	F.IF.7d**	Graph rational functions, identify zeros, and asymptotes	Not covered in Walch	<b>Secondary III Honors District Semester Assessment Mar 13<sup>th</sup> – Mar 24<sup>th</sup></b>
	A.APR.6	Rewrite simple rational expressions in different forms	2B.1.2 2B.1.5	
	A.REI.2 (rational)	Solve simple rational equations in one variable (rational only)	2B.2.1	
	A.APR.7	Operations on rational expressions	2B.1.3 2B.1.4 2B.1.5	

A.REI.11	Solve systems of equations	2B.2.3 2A.4.1
S.ID.4	Use mean and standard deviation of a data set to fit it to a normal distribution	1.1.1 1.1.2 1.1.3
S.IC.1	Make inferences about population parameters	1.2.1
S.IC.3	Recognize the purposes of and differences among surveys, experiments, and observations	1.3.1 1.3.2
S.IC.4	Use data from a survey to estimate a population mean	1.4.1 1.4.2 1.4.3 1.4.4
S.IC.6	Evaluate reports based on data	1.5.3
F.TF.1	Understand radian measure	3.1.1
F.TF.2	Explain and understand the unit circle	3.1.1 3.1.2 3.1.4
F.TF.3	Use special triangles to determine sine, cosine, and tangent	3.1.3 Secondary II 5.8.2
HONORS: F.TF.4	Use the unit circle to explain symmetry and periodicity of trig functions	Not covered in Walch
HONORS: F.TF.9	Prove the addition and subtraction formulas for sine, cosine, and tangent	Secondary II 5.9.6
HONORS: F.IF.7d**	Graph rational functions, identify point discontinuities	Not covered in Walch
HONORS: F.IF.7f	Define a curve parametrically and draw its graph	Not covered in Walch
F.TF.5	Modeling trig functions	3.3.1 3.3.2

F.TF.7**	Use inverse trig functions to solve trig equations	Not covered in Walch	<b>Secondary III HONORS District Final May 22<sup>nd</sup> – June 2<sup>nd</sup></b>
F.IF.7e	Graph exponential and logarithmic functions	4A.3.1 4A.3.2 4A.2.4	
F.BF.4a**	Find inverse functions, include linear, quadratics, exponential, logarithmic, rational, square root, and cube root	4A.1.1 4A.1.2 4A.2.1	
F.LE.3**	Observe that increasing exponential graphs exceed other increasing graphs	Not covered in Walch	
F.LE.4	Relationships between logarithms and e	4A.2.1 4A.2.2 4A.2.3	
G.SRT.9	Derive the formula $A = \frac{1}{2} ab \sin (C)$	3.2.1	
G.SRT.10	Prove the Laws of Sines and Cosines and use them to solve problems	3.2.1 3.2.2	
G.SRT.11	Apply the Law of Sines and Cosines to find unknown measurements in triangles	3.2.3	
HONORS: F.TF.6	Understand that restricting the domain on a trig function allows the inverse to be constructed	4A.1.4	
HONORS: F.BF.1c	Composition of functions	4B.2.4	
HONORS: F.BF.4bcd	Verify inverses by composition, find inverses of functions in various forms, find an inverse by restricting the domain	4A.1.3 4A.1.4 4B.2.5	
HONORS: F.BF.5	Understand the inverse relationship between exponents and logarithms and use to solve problems	F.BF.5	
A.CED.1	Create equations and inequalities in one variable (include linear, quadratic, simple rational, and exponential functions)	4B.1.1	
A.CED.2	Create equations in two or more variables, graph equations	4B.4.1	
A.CED.3	Represent constraints and interpret solutions	4B.1.2	
A.CED.4	Rearrange formulas to highlight a quantity of interest	4B.1.3	
F.BF.1b	Combine functions using arithmetic operations	4B.2.3	

	F.IF.4	Interpret key features of graphs and tables and sketch graphs	4A.2.5 4B.4.1 4B.3.1 4B.4.2	
	F.IF.5	Relate the domain of a function to its graph	4A.2.5 4B.4.1 4B.3.1 4B.4.2	
	F.IF.6	Calculate and interpret average rate of change	4B.3.1 4B.3.2 4B.3.3	
	F.IF.7b**	Graph square root, cube root, and piecewise functions, including step and absolute value functions	4B.4.2 Secondary II 2.7.1	
	F.IF.8	Write a function in different but equivalent forms	4A.2.2 4A.2.3	
	F.IF.9	Compare properties of two function in different representations	4B.3.3	
	F.BF.3	Transformations on graphs	4B.4.3	
	F.LE.5**	Interpret parameters of a function in terms of a context	Not covered in Walch	
	G.GMD.4	Identify the shapes of 2-D cross sections; identify 3-D objects	4B.5.1	
	G.MG.1	Use geometric shapes to describe objects	4B.5.1	
	G.MG.2	Apply concepts of density	4B.5.2	
	G.MG.3	Apply geometric methods to solve design problems	4B.5.3	
	A.SSE.4**	Understand the formula for the sum of a series and use it to solve problems	2A.5.1 2A.5.2 2A.5.3	
	HONORS: G.GMD.2	Give an informal argument using Cavalieri's principle for volume	Secondary II 6.5.3	
	HONORS: S.CP.9	Permutations and combinations of compound events	Secondary II 4.3.1 4.3.2	

\*\* Standard modified, see standards for changes