



# Integrated Math 1- Honors

J.S. Morton HS District 201  
2015 - 2016

Teacher:

Phone:

Email:

Classroom: Room

Web: [www.edline.net](http://www.edline.net)

## What will students learn in this course?

SEMESTER 1 Key Concepts	Standards - Learning Targets <i>Students can...</i>
<b>KC 1: Expressions, Equations, &amp; Inequalities</b>	A. Interpret the structure of expressions. (A.SSE.1a) B. Solve linear equations in one variable, including real-world problems. (A.REI.3) C. Solve linear inequalities in one variable, including real-world problems. (A.REI.3) D. Rewrite a literal equation and formula for a specified variable. (A.CED.4) E. Apply units consistently when solving a real-world problem (N.Q.2, N.Q.3)
<b>KC 2: Fundamentals of Geometry</b>	A. Draw or describe a rigid transformation(s) when given a geometric figure. (G.CO.1, G.CO.2). B. Given geometric figures, use rigid motion to determine congruence. (G.CO.6, G.CO.2, G.CO.3, G.CO.4, G.CO.5). C. Determine necessary conditions to demonstrate two triangles are congruent. (G.CO.7). D. Investigate the relationship between angle pairs formed by intersecting lines. (G.CO.9).
<b>KC 3: Reasoning and Proof</b>	A. Use laws of logic and reasoning to establish a basis for proof (prepares for G.CO.9, 10, & 11). B. Prove and apply theorems about lines and angles (G.CO.9). C. Prove and apply theorems relating to triangles (G.CO.10). D. Prove and apply theorems about parallelograms (G.CO.11).
<b>KC 4: Introduction to Functions</b>	A. Explain the difference between domain and range and provide a basic definition of a function (F.IF.1). B. Evaluate the domain of a function and understand how function notation can be applied to real-world problems (F.IF.2). C. Explain the relationship between sequences and functions (F.IF.3). D. Convert a table or graph into a function (F.IF.4, F.IF.5, F.IF.6). E. Calculate the average rate of change of a function, represented by function notation, graph, or table, over a specific domain interval (F.IF.6).
<b>KC 5: Linear Relationships</b>	A. Write an explicit formula of an arithmetic sequence which models a given situation (F.IF.3, F.BF.2). B. Verify the relationship between points on a line and the equation (A.REI.10). C. Determine the correct model (equation/inequality) for representing real-world situations (A.CED.1). D. Identify variables and quantities needed to graph the equation that best models the problem (A.CED.2, A.CED.4).

<p><b>KC 6: Linear Modeling</b></p>	<p>A. Translate between words and symbols in a real-world context (A.SSE.1).  B. Interpret the relationship between two quantities in context of real-world applications (A.CED.1, A.CED.2, A.CED.3).  C. Interpret key features of graphs and tables (F.IF.4, F.IF.5, F.IF.6).  D. Write a function that describes a real-world problem (F.BF.1A).  E. Graphically represent equations and inequalities (F.IF.7a &amp; b).</p>
<p><b>KC 7: Systems</b></p>	<p>A. Represent real-world situations through linear systems (A.CED.3).  B. Utilize multiple methods (elimination, substitution, and graphing) to solve linear systems of equations. (A.REI.5, A.REI.6)  C. Determine how the solutions of a system of linear inequalities can be interpreted and represented graphically. (A.REI.11, A.REI.12)  D. Determine how the solution(s) of linear systems can be represented and interpreted. (A.REI.11, A.REI.12)</p>
<p><b>Semester 1 Final Exam</b></p>	<p>Test items covering the learning targets (Targets 1A – 7D).</p>

Semester 2 Key Concepts	Standards – Learning Targets <i>Students can...</i>
<b>KC 8: Statistics</b>	<ul style="list-style-type: none"> <li>A. Use the appropriate measure of central tendency to compare center and spread of two or more different data sets (S.ID.1, S.ID.2, S.ID.3).</li> <li>B. Interpret the rate of change and intercept of a linear model in the context of the data (S.ID.7).</li> <li>C. Compute and interpret the correlation coefficient of a linear fit (S.ID.6, S.ID.8).</li> <li>D. Distinguish between correlation and causation (S.ID.9).</li> </ul>
<b>KC 9: Representations of Exponential Functions</b>	<ul style="list-style-type: none"> <li>A. Write and apply an explicit and recursive rule of a geometric sequence to describe a real-world context (F.IF.3, F.BF.2.).</li> <li>B. Write and graph exponential functions from a table or graph (A.REI.10, F.LE.2).</li> <li>C. Write exponential functions to describe a real-world context including growth and decay models (F.BF.2.).</li> <li>D. Distinguish between situations modeled with linear functions and exponential functions when presented with a real world problem. (F.LE.1, A.SSE.1).</li> </ul>
<b>KC 10: Comparing Mathematical Models</b>	<ul style="list-style-type: none"> <li>A. Interpret key features of graphs and tables (F.IF.4).</li> <li>B. Define a domain of a function and explain how it is represented in its graph or real-world situation (F.IF.5).</li> <li>C. Calculate and interpret the meaning of the rate of change of a function over a specified interval (F.IF.6).</li> <li>D. Determine the best model for the real world problem (linear equation/inequality and exponential) (A.CED.1).</li> <li>E. Use graphs and tables to compare the output values of linear and exponential functions (F.LE.3).</li> </ul>
<b>KC 11: Extending the Number System</b>	<ul style="list-style-type: none"> <li>A. Use properties of integer exponents and apply those to rational exponents. [N.RN.1]</li> <li>B. Rewrite expressions involving radicals and rational exponents using properties of exponents. [N.RN.2]</li> <li>C. Make decisions about the results of the sum and product of rational and irrational numbers. [N.RN.3]</li> <li>D. Solve an equation involving rational exponents. [A.CED.1]</li> </ul>
<b>KC 12: Quadratic Functions – Representations</b>	<ul style="list-style-type: none"> <li>A. Graph functions and show key features (zeros, intercepts, max/min, end behavior, domain, and range) of the graph. [F.IF.7a, F.IF. 7b]</li> <li>B. Add, subtract, and multiply polynomials and show why the solution is equivalent. [A.APR.1, A.CED.1, A.SSE.1 &amp; 2]</li> <li>C. Factor a quadratic expression and equation to reveal the zeros of the function it defines, and interpret those in context. [A.SSE.3] [F.IF.8a] [A.REI.4b]</li> <li>D. Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines, and interpret those in context. [A.SSE.3] [F.IF.8a] [A.REI.4b]</li> </ul>

<b>KC 13: Quadratic Functions— Working with Equations</b>	<p>A. Add, subtract, and multiply complex numbers. [N.CN.1, N.CN.2]</p> <p>B. Solve quadratic equations by taking square roots or completing the square resulting in imaginary solutions. [A.REI.4b, A.SSE.2, N.CN.7]</p> <p>C. Solve quadratic equations using the quadratic formula. [A.REI.4b, N.CN.7]</p> <p>D. Solve a system consisting of a line and quadratic equation algebraically and graphically. [A.REI.7]</p>
<b>KC 14: Modeling with Quadratic Functions</b>	<p>A. Interpret key features of quadratic functions based on a table or graph in a real-world situation. [F.IF.4]</p> <p>B. Determine the appropriate domain of a quadratic function that represents a mathematical or real world context. [F.IF.5, N.Q.2]</p> <p>C. Calculate the average rate of change over a specified interval of a quadratic. [F.IF.6]</p> <p>D. Create a quadratic equation to model a real-world situation. [A.CED.2, A.CED.4, F.BF.1]</p>
<b>Semester 2 Final Exam</b>	Test items covering the learning targets (Targets 8A – 14D).

### How will we know students have learned it?

Grade Scale	A Advanced/Exemplary	B Proficient	C Basic	D Needs Improvement	E Not Passing	I Incomplete
	4.0 – 5.0	3.0 – 3.9	2.0 – 2.9	1.0 – 1.9	0.0 – 0.9	Needs to complete or redo/retake

Key concept Weights	Semester 1		Semester 2	
	Expressions, Equations, and Inequalities	11.43%	Statistics	11.43%
Fundamentals of Geometry	11.43%	Representations of Exponential Functions	11.423	
Reasoning and Proof	11.43%	Comparing Mathematical Models	11.43%	
Introduction to Functions	11.43%	Extending the Number System	11.43%	
Linear Relationships	11.443	Quadratic Functions Representations	11.43%	
Linear Modeling	11.43%	Quadratic Functions—Working with Equations	11.43%	
Systems	11.42%	Modeling with Quadratic Functions	11.42%	
Semester 1 Exam	20.00%	Semester 2 Exam	20.00%	
<b>TOTAL</b>	<b>100%</b>	<b>TOTAL</b>	<b>100%</b>	

Within each key concept, assignments will be graded according to the following weights:

<b>Assignment Categories</b>	Common key concept assessments (Comprehensive key concept exams; 1 per key concept) *(CA)	60%
	Interim Classroom assessments (Quizzes, projects; 2-3 per key concept) (IA)	30%
	Formative Assignments (Homework, In-class assignments, etc.; varies) (FA)	10%

Formative assignments are 10% in each key concept because students should not be unduly penalized for mistakes during the learning process. The grade is primarily based on mastery of standards, and mastery is demonstrated on assessments.

<b>Course Requirements</b>	<i>What must every student pass to earn credit for the course?</i> Students must pass every key concept with at least a 1.0.
	<i>What must every student complete to earn credit for the course?</i> Students must complete every common key concept summative assessment (seven assessments for Semester 1 and seven assessments for Semester 2).
	<i>What other requirements must every student meet?</i> Students must meet requirements as specified by the Integrated Math 1 team.

Students who do not meet these requirements will receive an *I* (incomplete) for the semester. If requirements are not met within three weeks after the semester, the student will earn a grade of *E*.

## What will we do when students aren't learning?

### Extra Help

Students who are not passing the course are expected to seek extra help. Further, any student who wants to improve his or her performance and grade is encouraged to ask for support, as well.

- *Classroom:* Each day, a different teacher from the math department will be after school to support the students who are in need of redo's.
- *BLAST:* After school (see counselor for specific times and locations)
- *Freshman Improvement Program:* Available Monday – Friday (after school)
- Parents are strongly encouraged to use Skyward Family Access to be informed on students' progress. For assistance setting up a password, please contact your school and request to talk to your Parent Liaison.

### Re-do/Re-Take

Students are eligible and **expected** to re-do essays, projects, quizzes, labs and tests that do not meet or exceed standards. Daily assignments may be eligible for re-do only at the teacher's discretion. Students will be provided one opportunity for re-do on a given item, with any additional attempts at the teacher's discretion.

If not already required by the teacher, students must request a re-do within one week after receiving the graded assignment. The teacher will communicate any requirements that must be met prior to the re-do (i.e. after-school tutoring, extra practice assignments, etc.), as well as the deadline. Each day, a different teacher from the math department will be after school to support the students who are in need of redo's.

The maximum grade earned shall be full credit, given the original item is submitted on time with full effort. The teacher has the discretion to return any item, ungraded, that is incomplete or does not demonstrate full effort. That item will be subject to the teacher's late work policy, with the final grade reflecting any loss of credit due to late or incomplete submission.

Other than common assessments, teachers may provide an alternative assignment to demonstrate mastery.

---

## What will we do when students have already learned it?

Students who master the standards before the end of the key concept will be offered enrichment assignments or projects to extend their learning. Students who decline are expected to complete required key concept assignments and assessments.

Other opportunities include: Mathletes, Math Tutoring in the Math Lab at East and Freshman Center.

---

## Procedures

- Students are expected to inquire about missed learning/assignments immediately upon return from an absence.
- Students will make up or re-take tests at the testing center, available from 8:00-8:45 on Late Start Days.
- Daily participation is expected.
- Students must bring their Inspiron 11 to class every day.
- All course materials, including the link to the online text book, are available on the class web page.
- Students must be in their seats before the bell rings to begin class.
- Parents are strongly encouraged to use Skyward Family Access to be informed on students' progress. For assistance setting up a password, contact your building's Parent Liaison.
  - East Jessica Ibarra 708-780-4000 or [jibarra@jasmorton.org](mailto:jibarra@jasmorton.org)
  - Freshman Center Linda Montejano 780-863-7900 or [lmontejano@jasmorton.org](mailto:lmontejano@jasmorton.org)
  - West Yadira Camacho 708-780-4100 or [ycamacho@jasmorton.org](mailto:ycamacho@jasmorton.org)

## Integrated Math 1 Assessment & Grading Rubric Plan

3 Levels of Assessment		
<i>Basic Questions</i>	3 per target	1 point each
<i>Proficient Questions</i>	2 per target	3 points each
<i>Advanced Questions</i>	Combination of targets	10 point section
<i>All points are cumulative</i>		

Equal-Interval Grading Scale		
5.0		Once student has earned a 4.0, they receive a 0.1 on the interval for each point earned on the Advanced level question. If less than a 4.0, each point earned gets added to their point total (i.e. 24 points + 2 points = 26 points)
4.0		Numerical equivalent of earning all the points from the proficient and basic level questions for each target i.e. All Basic and Proficient level questions are correct)
3.5		Halfway point of the range between a 3.0 and 4.0. (i.e. 5 targets = 40, 6 targets = 48) *Point totals are dependent on the number of key concept targets.
3.0		Numerical equivalent of earning all the points from the proficient level questions and one point from the basic level questions for each target.
2.5		Halfway point of the range between 2.0 and 3.0. (i.e. 5 targets = 30 points)
2.0		Numerical equivalent of earning all the points from the basic level questions and at least one point from each proficient level question for each target.
1.0	Retake suggested	Numerical equivalent of missing the minimum number of points necessary to demonstrate competency for <b><i>ONE</i></b> target. (Enter earned grade, leave comment of "Recommended Retake")
0.0	Must retake!	Numerical equivalent of missing the minimum number of points necessary to demonstrate competency for <b><i>MORE THAN ONE</i></b> target. (Enter earned grade, leave comment of "Mandatory Retake")

- Students' point total places them on the interval scale.

**Cut Score Table**

	Grade	Number of Targets		
		4	5	6
<b>Success Score</b>	5.0	46 points	55 points	64 points
	4.0	36 points	45 points	54 points
	3.5	32 - 35 points	40 - 44 points	48 - 53 points
	3.0	28 - 31 points	35 - 39 points	42 - 47-points
	2.5	24 - 27points	30 - 34 points	36 - 41points
	2.0	20 - 23 points	25 - 29 points	30 - 35 points
	1.0	16 - 19 points	20 - 24 points	24 - 29 points
	0.0	0-15 points	0-19 points	0 - 23 points

<b>Point Total Breakdown</b>		
<b>Key concept with 4 Learning Targets</b>	<b>Key concept with 5 Learning Targets</b>	<b>Key concept with 6 Learning Targets</b>
12 Basic Points 24 Proficient Points 10 Advanced Points 46 Total Points (4.0 would be 36 points)	15 Basic Points 30 Proficient Points 10 Advanced Points 55 Total Points (4.0 would be 45 points)	18 Basic Points 36 Proficient Points 10 Advanced Points 64 Total Points (4.0 would be 54 points)