

Geometry Math Standards Summary

Total Reviews		702		<p>Breakdown by Review Type</p> <p>A pie chart titled 'Breakdown by Review Type' showing two segments: a large dark grey segment for 'Keep As Is' at 91% and a smaller light grey segment for 'Suggest Changes' at 9%.</p>										
Keep As Is	642	Educator	530			<table border="1"> <thead> <tr> <th colspan="2">Change Suggestions</th> </tr> </thead> <tbody> <tr> <td>Removed</td> <td>21</td> </tr> <tr> <td>Rewritten</td> <td>32</td> </tr> <tr> <td>Broken Up</td> <td>1</td> </tr> <tr> <td>Moved to a Different Level</td> <td>6</td> </tr> </tbody> </table>	Change Suggestions		Removed	21	Rewritten	32	Broken Up	1
		Change Suggestions												
		Removed	21											
		Rewritten	32											
		Broken Up	1											
		Moved to a Different Level	6											
		Elected Official	0											
		Institution or Higher Education Faculty	0											
K-12 Administrator	37													
Member of Organization	1													
Other	37													
Parent/Guardian	37													
Student	0													
Suggest Changes	60	Educator	51											
		Elected Official	0											
		Institution or Higher Education Faculty	0											
		K-12 Administrator	2											
		Member of Organization	0											
		Other	0											
		Parent/Guardian	7											
		Student	0											

Standard	Count of Keep	% of Keep	Count of Suggest Changes	% of Suggest Changes	Count of New Level	Count of New Description	Count of Broken	Count of Removed
Math.Content.H SG-C.A.1	18	95%	1	5%	0	0	0	1
Math.Content.H SG-C.A.2	19	100%	0	0%	0	0	0	0
Math.Content.H SG-C.A.3	17	89%	2	11%	0	1	0	1
Math.Content.H SG-C.B.5	16	80%	4	20%	3	1	0	0
Math.Content.H SG-CO.A.1	19	100%	0	0%	0	0	0	0
Math.Content.H SG-CO.A.2	17	89%	2	11%	0	2	0	0
Math.Content.H SG-CO.A.3	17	89%	2	11%	0	2	0	0
Math.Content.H SG-CO.A.4	15	79%	4	21%	0	0	0	4
Math.Content.H SG-CO.A.5	17	89%	2	11%	0	2	0	0
Math.Content.H SG-CO.B.6	16	84%	3	16%	0	3	0	0
Math.Content.H SG-CO.B.7	16	84%	3	16%	0	0	0	3
Math.Content.H SG-CO.B.8	17	89%	2	11%	0	2	0	0
Math.Content.H SG-CO.C.10	18	95%	1	5%	0	1	0	0
Math.Content.H SG-CO.C.11	18	100%	0	0%	0	0	0	0
Math.Content.H SG-CO.C.9	19	100%	0	0%	0	0	0	0
Math.Content.H SG-CO.D.12	15	75%	5	25%	0	4	0	1
Math.Content.H SG-CO.D.13	17	89%	2	11%	0	1	0	1
Math.Content.H SG-GMD.A.1	18	95%	1	5%	0	0	0	1
Math.Content.H SG-GMD.A.3	19	100%	0	0%	0	0	0	0
Math.Content.H SG-GMD.B.4	19	100%	0	0%	0	0	0	0
Math.Content.H SG-GPE.A.1	18	86%	3	14%	1	2	0	0
Math.Content.H SG-GPE.B.4	19	100%	0	0%	0	0	0	0

Math.Content.H SG-GPE.B.5	19	100%	0	0%	0	0	0	0
Math.Content.H SG-GPE.B.6	14	74%	5	26%	0	2	0	3
Math.Content.H SG-GPE.B.7	18	100%	0	0%	0	0	0	0
Math.Content.H SG-MG.A.1	18	95%	1	5%	1	0	0	0
Math.Content.H SG-MG.A.2	17	81%	4	19%	1	1	0	2
Math.Content.H SG-MG.A.3	17	85%	3	15%	0	1	1	1
Math.Content.H SG-SRT.A.1a	16	94%	1	6%	0	0	0	1
Math.Content.H SG-SRT.A.1b	14	82%	3	18%	0	2	0	1
Math.Content.H SG-SRT.A.2	18	100%	0	0%	0	0	0	0
Math.Content.H SG-SRT.A.3	16	94%	1	6%	0	1	0	0
Math.Content.H SG-SRT.B.4	15	79%	4	21%	0	4	0	0
Math.Content.H SG-SRT.B.5	19	100%	0	0%	0	0	0	0
Math.Content.H SG-SRT.C.6	19	100%	0	0%	0	0	0	0
Math.Content.H SG-SRT.C.7	19	95%	1	5%	0	0	0	1
Math.Content.H SG-SRT.C.8	19	100%	0	0%	0	0	0	0

Math.Content.HSG-C.A.1

This is naturally observed in circles unit.

Math.Content.HSG-C.A.2**Math.Content.HSG-C.A.3**

Superfluous

Construct the inscribed and circumscribed circles of a triangle, prove properties of angles for a quadrilateral inscribed in a circle and use these properties to find angle measures for a quadrilateral inscribed in a circle.

Math.Content.HSG-C.B.5

Use the fact that the length of the arc intercepted by an angle is proportional to the radius, and define the radian measure of the angle as the constant proportionality. **Derivation is college level and has no place in a course ALL students are required to take for graduation. We must remember that more students are NOT pursuing a college career than ever these days. **

Math.Content.HSG-CO.A.1

I am a strong supporter of Common Core State Standards, as I believe that these standards will help Louisiana children to become better prepared for the rigors of college, and/or to become better qualified for rewarding, well-paying careers. I recognize that Common Core State Standards were developed by the states---not by the federal government---and that they are not a prescribed curriculum, but rather are a set of standards that will empower Louisiana children to be elevated to the same levels of academic achievement as their counterparts in states that maintain high expectations for their students. Please do not pander to cynical, manipulative people with political agendas who claim that Common Core State Standards are something other than a set of academically ambitious standards that were developed by the states! Since it is in the interest of our great nation to provide ambitious academic standards for our students, true patriots who love America should be strong, vocal supporters of Common Core State Standards.

It is a great starting point for Geometry. Most students are familiar with these terms, but focusing on the concept of "precise" is important!

Need for appropriate terminology and academic vocabulary related to the content.

Math.Content.HSG-CO.A.2

Covers transformations well

Describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).

Represent transformations in the plane using, e.g., geometry software and tools of geometry; describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).

Math.Content.HSG-CO.A.3

A nice discovery and class discussion.

Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself. Identify lines of symmetry and angles of rotation.

This standard should be combined with CO.A.5

Math.Content.HSG-CO.A.4

I am debating on whether the terms angles of rotation and perpendicular bisectors should be added to this to further clarify.
It is difficult to assess this Content Standard.
The EOC does not assess students on this skill effectively, so it's hard to justify keeping it in the classroom setting.
The standard is ambiguous at best.
This standard is difficult to test.
Math.Content.HSG-CO.A.5
CO.A.2 and CO.A.3 should be included in this Standard
Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using the Cartesian plane and applying mathematical truths. Example: $x+2$, $y-4$
Math.Content.HSG-CO.B.6
Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure.
Math.Content.HSG-CO.B.7
Standard is already covered in CO.B.6. Triangles are only special because of the congruence shortcuts, which are covered in CO.B.8.
This standard is already covered in B6 and B8
This standard is already covered in CO.B.6 and CO.B.8.
Math.Content.HSG-CO.B.8
Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.
Although I understand what was intended with this standard, I find it written in a vague manner. Most approaches to teaching this standard involves the use of complicated proofs. Others simply have students flip or turn cut out images to prove that rigid motions map one figure onto another. The question here is whether this was intended to be almost a formal proof, or a simple hands-on activity.
Use the criteria for triangle congruence (ASA, SAS, and SSS) to prove triangle congruence. **there is no need to reinvent the wheel here. **
Math.Content.HSG-CO.C.10
Prove theorems about triangles.
Does this mean to prove properties of triangles (sum of angles in a triangle is 180, angles opposite congruent sides in an isosceles triangles are congruent) or does this include proving triangle congruence by SSS,SAS, ASA, AAS, HL?
Math.Content.HSG-CO.C.11
Math.Content.HSG-CO.C.9
Math.Content.HSG-CO.D.12
This is not tested on the ACT and is rarely needed unless a student specifically seeks drafting, engineering - etc. in which case, they will have long forgotten high school drawing. It consumes weeksof class time for little benefit. Also, most schools have no money for fancy tools and access to the technology necessary to truly benefit here.
combine with CO.D.13

Make formal geometric constructions with a variety of tools and methods (compass and straightedge).
Math.Content.HSG-CO.D.13
Wastes much needed instruction time and unless the students are equipped with exceptional tools, it is cumbersome and frustrating.
combine with CO.D.12
Math.Content.HSG-GMD.A.1
Too advanced
Math.Content.HSG-GMD.A.3
Math.Content.HSG-GMD.B.4
Math.Content.HSG-GPE.A.1
Derive the equation of a circle of given center and radius using the Pythagorean Theorem.
Derive the equation of a circle of given center and radius using the Pythagorean Theorem; find the center and radius of a circle given by an equation.
Math.Content.HSG-GPE.B.4
Math.Content.HSG-GPE.B.5
Math.Content.HSG-GPE.B.6
Should be added into the SRT standard
The same information can be obtained using similar right triangles.
What exactly is the point of this standard? It seems just out of left field with no real purpose.
Find the point on a directed line segment between two given points that partitions the segment in a given ratio. Relate partitioning a line segment to the dilation of a line segment.
Find the point on a line segment between two given points that partitions the segment in a given ratio.
Math.Content.HSG-GPE.B.7
Math.Content.HSG-MG.A.1
Math.Content.HSG-MG.A.2
Covered in Algebra - redundant
This could better be dealt with in a Science class.
Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot, using density to identify a metal).
Math.Content.HSG-MG.A.3
This standard is extremely broad and could be tested with a variety of problems. No way to properly prepare students for test questions related to this standard as this standard could have almost any application/design problem. I just think the range of problems associated with this standard is too broad as related to the other standards in Geometry. Maybe the standard should say design problems related to volume, area, or surface area. It should be more specific in general.

Please explain how you would break up the standard:

Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).

I'm not understanding what types of problems are involved. I'm not sure how to rewrite it.

Math.Content.HSG-SRT.A.1a

Ambiguous, Superfluous

Math.Content.HSG-SRT.A.1b

covered in one problem needs to be added to another standard in SRT

The dilation of a line segment is longer or shorter given by the scale factor.

Math.Content.HSG-SRT.A.2

Math.Content.HSG-SRT.A.3

Use the properties of similarity transformations to establish the AA criterion for two triangles to be similar and use the AA criterion to prove triangles similar.

Math.Content.HSG-SRT.B.4

Prove theorems about similar triangles.

Prove theorems about triangles.

Does this mean using the AA theorem to prove triangles similar? Does this mean using the side splitter theorem?

Math.Content.HSG-SRT.B.5

Math.Content.HSG-SRT.C.6

Math.Content.HSG-SRT.C.7

This is observed naturally in standard SRT.C.6

Math.Content.HSG-SRT.C.8

This standard is getting hidden in this course. For students who go into engineering, math, or any type of design profession using sin, cos, and tan to find side lengths in figures is important. The way this standard is written and displayed among so many other standards does not emphasize how much practice students really need to be able to find side lengths and angle measures in right triangles using these for real life applications.