Mathematics Public Feedback on the Draft Standards
Standards for Mathematical Practice

comment #	Coding	Role	Comments on Specific MP standards	Notes
1	MP.4	K12 ParentGuardian	If real world applications are so important, why do they stop learning about money in 4th grade? Teach them how to balance checking accounts, calculate interest, determine growth on investments and depreciation on assets over time. Teach them how to do their taxes, how to live within their means, how to figure out if they can afford the payments on something. If somebody had taught this stuff 40 years ago, maybe the nation wouldn't be so deep in debt.	Comment not about MP but about content standards. No action necessary.
2	MP.1	K12 Teacher	If you must keep the Standards for Mathematical Practices..personally don't think they are necessary, than thank you for the definitions. It is hard to explain these to parents and a definition helps.	General comment. No action necessary.
3	MP.1	K12 ParentGuardian	What is the process for students that think differently and may not understand? I understand that it is up to the teacher to help with different learning styles , however, I would like to see A process that shows what the plan of action is for students that aren't meeting the standards. If it is the responsibility of each teacher to deliver the material, not every teacher will do it the same and where is the checks and balances that the teacher is teaching these standards?	Comment not about MP, comment about differeniated instruction and reteaching. No action necessary.

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comment #	Coding	Role	Comments on Specific MP standards	Notes
4	MP.1	K12 ParentGuardian	Same standard for all grade levels and are developmentally inappropriate and no research to back this up! Kindergartners are not mathematically proficient students?! We don't want them to struggle and be frustrated at this level because they will just hate math from the start! Too much to ask of all grade levels! Remove the standards for mathematical practice for K-12!	General comment about all MP standards and not specific feedback on a single standard. The MP standards are the same for each grade level but implemented at the developmental level of the students in the classroom. The MP stem "mathematical proficient students" refers to being matheamtically proficient at a Kindergarten level if the student is in Kindergarten, specific to proficiency at the grade level the student is currently in.
5	MP.2	K12 ParentGuardian	Same standard for all grade levels and are developmentally inappropriate and no research to back this up! Kindergartners are not mathematically proficient students! We don't want them to struggle and be frustrated at this level because they will just hate math from the start! Too much to ask of all grade levels! Remove the standards for mathematical practice for K-12!	General comment about all MP standards and not specific feedback on a single standard. The MP standards are the same for each grade level but implemented at the developmental level of the students in the classroom. The MP stem "mathematical proficient students" refers to being matheamtically proficient at a Kindergarten level if the student is in Kindergarten, specific to proficiency at the grade level the student is currently in.

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comment #	Coding	Role	Comments on Specific MP standards	Notes
6	MP.3	K12 ParentGuardian	Same standard for all grade levels and are developmentally inappropriate and no research to back this up! Kindergartners are not mathematically proficient students! We don't want them to struggle and be frustrated at this level because they will just hate math from the start! Too much to ask of all grade levels! Remove the standards for mathematical practice for K-12!	General comment about all MP standards and not specific feedback on a single standard. The MP standards are the same for each grade level but implemented at the developmental level of the students in the classroom. The MP stem "mathematical proficient students" refers to being matheamtically proficient at a Kindergarten level if the student is in Kindergarten, specific to proficiency at the grade level the student is currently in.
7	MP.4	K12 ParentGuardian	Same standard for all grade levels and are developmentally inappropriate and no research to back this up! Kindergartners are not mathematically proficient students! We don't want them to struggle and be frustrated at this level because they will just hate math from the start! Too much to ask of all grade levels! Remove the standards for mathematical practice for K-12!	General comment about all MP standards and not specific feedback on a single standard. The MP standards are the same for each grade level but implemented at the developmental level of the students in the classroom. The MP stem "mathematical proficient students" refers to being matheamtically proficient at a Kindergarten level if the student is in Kindergarten, specific to proficiency at the grade level the student is currently in.

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comment #	Coding	Role	Comments on Specific MP standards	Notes
8	MP.5	K12 ParentGuardian	Same standard for all grade levels and are developmentally inappropriate and no research to back this up! Kindergartners are not mathematically proficient students! We don't want them to struggle and be frustrated at this level because they will just hate math from the start! Too much to ask of all grade levels! Remove the standards for mathematical practice for K-12!	General comment about all MP standards and not specific feedback on a single standard. The MP standards are the same for each grade level but implemented at the developmental level of the students in the classroom. The MP stem "mathematical proficient students" refers to being matheamtically proficient at a Kindergarten level if the student is in Kindergarten, specific to proficiency at the grade level the student is currently in.
9	MP.6	K12 ParentGuardian	Same standard for all grade levels and are developmentally inappropriate and no research to back this up! Kindergartners are not mathematically proficient students! We don't want them to struggle and be frustrated at this level because they will just hate math from the start! Too much to ask of all grade levels! Remove the standards for mathematical practice for K-12!	General comment about all MP standards and not specific feedback on a single standard. The MP standards are the same for each grade level but implemented at the developmental level of the students in the classroom. The MP stem "mathematical proficient students" refers to being matheamtically proficient at a Kindergarten level if the student is in Kindergarten, specific to proficiency at the grade level the student is currently in.

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comment #	Coding	Role	Comments on Specific MP standards	Notes
10	MP.7	K12 ParentGuardian	Same standard for all grade levels and are developmentally inappropriate and no research to back this up! Kindergartners are not mathematically proficient students! We don't want them to struggle and be frustrated at this level because they will just hate math from the start! Too much to ask of all grade levels! Remove the standards for mathematical practice for K-12!	General comment about all MP standards and not specific feedback on a single standard. The MP standards are the same for each grade level but implemented at the developmental level of the students in the classroom. The MP stem "mathematical proficient students" refers to being matheamtically proficient at a Kindergarten level if the student is in Kindergarten, specific to proficiency at the grade level the student is currently in.
11	MP.8	K12 ParentGuardian	Same standard for all grade levels and are developmentally inappropriate and no research to back this up! Kindergartners are not mathematically proficient students! We don't want them to struggle and be frustrated at this level because they will just hate math from the start! Too much to ask of all grade levels! Remove the standards for mathematical practice for K-12!	General comment about all MP standards and not specific feedback on a single standard. The MP standards are the same for each grade level but implemented at the developmental level of the students in the classroom. The MP stem "mathematical proficient students" refers to being matheamtically proficient at a Kindergarten level if the student is in Kindergarten, specific to proficiency at the grade level the student is currently in.

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comment #	Coding	Role	Comments on Specific MP standards	Notes
12	MP.1	Other	The additional language contained within this standard is taken directly from Core Standards website. While the committee appears to have taken some creative license by re-wording and/or re-structuring sentences, MP.1 is, in all likelihood, plagerism and in no way improves the standards. Rather, it more deeply embeds Common Core in Arizona.	General comment. General commenta bout all MP standards and not specific feedback on a single standard even though the coding is referenced to MP. 1. No action necessary or requested.
13	MP.2	Other	The additional language contained within this standard is taken directly from Core Standards website. While the committee appears to have taken some creative license by re-wording and/or re-structuring sentences, MP.2 is, in all likelihood, plagerism and in no way improves the standards. Rather, it more deeply embeds Common Core in Arizona.	General comment. General comment about all MP standards and not specific feedback on a single standard even though the coding is referenced to MP. 2. No action necessary or requested.
14	MP.3	Other	The additional language contained within this standard is taken directly from Core Standards website. While the committee appears to have taken some creative license by re-wording and/or re-structuring sentences, MP.2 is, in all likelihood, plagerism and in no way improves the standards. Rather, it more deeply embeds Common Core in Arizona.	Repeated from comment on MP.2 because coding is not changed but references MP.2

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comment #	Coding	Role	Comments on Specific MP standards	Notes
15	MP.4	Other	The additional language contained within this standard is taken directly from Core Standards website. While the committee appears to have taken some creative license by re-wording and/or re-structuring sentences, MP.2 is, in all likelihood, plagerism and in no way improves the standards. Rather, it more deeply embeds Common Core in Arizona.	Repeated from comment on MP.2 because coding is not changed but references MP.2
16	MP.5	Other	The additional language contained within this standard is taken directly from Core Standards website. While the committee appears to have taken some creative license by re-wording and/or re-structuring sentences, MP.2 is, in all likelihood, plagerism and in no way improves the standards. Rather, it more deeply embeds Common Core in Arizona.	Repeated from comment on MP.2 because coding is not changed but references MP.2
17	MP.6	Other	The additional language contained within this standard is taken directly from Core Standards website. While the committee appears to have taken some creative license by re-wording and/or re-structuring sentences, MP.2 is, in all likelihood, plagerism and in no way improves the standards. Rather, it more deeply embeds Common Core in Arizona.	Repeated from comment on MP.2 because coding is not changed but references MP.2

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comment #	Coding	Role	Comments on Specific MP standards	Notes
18	MP.7	Other	The additional language contained within this standard is taken directly from Core Standards website. While the committee appears to have taken some creative license by re-wording and/or re-structuring sentences, MP.2 is, in all likelihood, plagerism and in no way improves the standards. Rather, it more deeply embeds Common Core in Arizona.	Repeated from comment on MP.2 because coding is not changed but references MP.2
19	MP.8	Other	The additional language contained within this standard is taken directly from Core Standards website. While the committee appears to have taken some creative license by re-wording and/or re-structuring sentences, MP.2 is, in all likelihood, plagerism and in no way improves the standards. Rather, it more deeply embeds Common Core in Arizona.	Repeated from comment on MP.2 because coding is not changed but references MP.2

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comment #	Coding	Role	Comments on Specific MP standards	Notes
20	MP.4	K12 ParentGuardian	K.MP.4; 1.MP.4; 2.MP.4 --This paragraph again has no place in the lower elementary grades for developmentally appropriateness. Children need to be given concrete ideas to practice and repeat over and over again (skill and drill). Young children cannot reason at this age appropriately to see if their own models need "improving... if it has not served its purpose."	The MP standards do not contain developmental suggestions. The MP standards are not taught in isolation but must be taught through the math content standards. An exmple of MP 4 could be determining equation is represented by a word problem and solving it. Students would not necessary need to write the equation, but they understand the action of the problem and can solve for it. REasoning is different at each grade level and for that matter for each child. Reasoning can actually at K,1,2 involve understanding and knowledge of fact families. Students need to truely understand numbers and what they mean to apply to making 10 or making 20.
21	MP.5	K12 ParentGuardian	K.MP.5; 1.MP.5; 2.MP.5 --Children ages 7 and under are egocentric according to world reknowned developmental psychologist Jean Piaget. They cannot see things from another's point of view and "(understand) the thinking of others." This cognitive demand is developmentally inappropriate.	MP.5 references using appropriate tools which include paper and pencil. The comment does not match the standard referenced.

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comment #	Coding	Role	Comments on Specific MP standards	Notes
22	MP.6	K12 ParentGuardian	K. MP.6; 1.MP.6; 2.MP.6 --PLEASE bring on an independent child psychologist to review all of the standards. Not a single logical parent who has had multiple children will agree that all of their 5, 6, and 7 year-olds can be expected to "...clearly communicate to others and craft careful explanations to convey their reasoning... and record their work clearly and concisely." This expectation is rather comical! Parents do not know whether to laugh at this or to cry for their small children.	Mp.5 references to communicating precisely to others. Kindergarten students can and should use mathematical language appropriate to their age and grade level and can communicate that understanding. There is not an expectation that Kindergarten students would be expected to clearly communicate with vocabulary from 2nd grade or with content from second grade.
23	MP.7	K12 ParentGuardian	K.MP.7; 1.MP.7; 2.MP.7 --It is wonderful that this paragraph acknowledges the need to learn about patterns in mathematics. The very first sentence proves that learning about patterns and sequences is a very important core concept. THE KINDERGARTEN STANDARDS ARE MISSING PATTERNS AND SEQUENCES. Please add this to the standards. Every kinder should be able to finish a pattern such as circle, circle, square, circle, circle, _____. But core standard is MISSING!	Shape or geometric patterns are part of the Early childhood standards and if a student was not fluent with these patterns, then instruction would differentiate for this learning.

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comment #	Coding	Role	Comments on Specific MP standards	Notes
24	MP.8	K12 ParentGuardian	K.MP.8; 1.MP.8; 2.MP.8 --Again, please bring on an independent child psychologist to review ALL of the standards. Hypothesizing in mathematics for young children does not appear to be developmentally appropriate. Curriculum specialists are not child psychologists. A good developmental child psychologist will have a much better understanding of what a young child is capable of doing. Also communicating with precision is not an appropriate cognitive demand for a child 7 years or younger.	General comment. This comment encompasses all standards and is not specific to MP.8. Precision also includes the use of mathematical vocabulary that would include vocabulary for a specific grade level.
25	MP.7	K12 Administrator	Requesting more detail.	Any additional details if needed would be included in support documents.
26	MP.8	K12 Administrator	Requesting more detail.	Any additional details if needed would be included in support documents.
27	MP.6	K12 Administrator	Requesting that the phrases "carefully formulated explanations" and "appropriate mathematical terminology" be added to the first sentence. It would read- Mathematically proficient students clearly communicate to others, using appropriate mathematical terminology, and craft carefully formulated explanations to convey their reasoning."	Added in -appropriate mathematical terminology. Deleted carefully formulated from narrative.

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comment #	Coding	Role	Comments on Specific MP standards	Notes
28	MP.1	K12 Teacher	This comment applies to all of the Mathematical Practice standards listed in the comparison document. It is not helpful to restate the exact same MP standards over and over again for every grade level. Some sort of delineation appropriate to grade level would be much more useful. e.g., http://www.k12.wa.us/corestandards/pubdocs/mpbygradelevel.pdf which does this in a form. Interestingly the Washington State document references the 2010 AZ standards...	Grade level specific examples of the individual MP standards if needed, would be included in support documents.
Fall 2016 Public Comments found in Draft that reference SMP - Data from Introduction and General Comments				
			Comment	**Row Number 10/04/16 file - Notes included in Introduction section or General Comments**

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comment #	Coding	Role	Comments on Specific MP standards	Notes
		1	I think that the progression of fluency was clarified, time progressions were needed, and money standards and progressions were needed. Students in third grade are coming to us deficient in money concepts-counting money, etc. I also really like how you made the mathematical practices understandable and they give teacher friendly explanations of each. Great! The only thing that I did not see was the chart at the end with all the types of word problems that can be developed at the grade levels	41
		2	The primary grades especially continue with measurement instead of having it drop off completely and show up again in an older grade. As things progress in math, this just makes sense. I agree that it is good that mathematical practices continues.	188

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comment #	Coding	Role	Comments on Specific MP standards	Notes
		3	I'm pleased that the integrity of the 2010 standards were kept in tact. I strongly agree with the new narrative definitions for the mathematical practice standards. These have revolutionized how students approach solving complex mathematical problems/situations. I don't object to time and money being added as standards. The “P” (plus) standards are an innovative addition that will benefit our advanced students.	207
		4	The addition of the narratives for mathmatical practices is helpful.	
		5	The 2010 standards were much longer, but the inclusion of the examples and the aligning of the practices was very useful. It is very helpful when there is a question of what is being required by that standard. The 2016 standards are streamlined and would be easier for quick reference.	361
		6	The explanation of mathematical practices was necessary and helpful. The fluency progression is aligned nicely.	491

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comment #	Coding	Role	Comments on Specific MP standards	Notes
		7	The standards are few but very deep. The document is not overwhelming until you begin to teach the math and realize how much Math knowledge the students have to have in order to learn the standards. This is what I mean when I say they are deep. I like the math practices because they remind teachers and student the importance of persevering, and accuracy in basic counting and writing numbers.	538
		8	I'm only answering in regard to the K standards: There don't seem to be too many changes, but I do like that we are introducing decomposing numbers, more work on place value, and more algebraic thinking as these skills will all be built upon in subsequent grades. Also, there seems to be a big increase in the rigor of mathematical practices. I like that we are encouraging our students to think at DOK levels 3 and 4, as that is the foundation of a solid mathematics curriculum from K on up.	539
		9	I like that the introduction explains the difference between curriculum, standards, and instruction. It also does a great job defining and developing the mathematical practices.	582

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comment #	Coding	Role	Comments on Specific MP standards	Notes
		10	Again breaking down the defintions of the standards and curriculum is helpful. The precise definitions/narratives of the mathematical practices is helpful for teachers to have at a glance for improving instruction. The defintion of fluency is helpful.	583
		11	The narratives developed for each of the eight mathematical practices are very helpful.	584
		12	The narratives that were added to explain mathematical practice are a significant improvement. This enables a new teacher to understand the skills they need to develop in their students.	585
		13	The explanation of the mathematical practices is clear and developed. The explanation of fluency is a needed addition.	588
		14	It is great that the standards, curriculum and instruction are defined and explained. Mathematical practices explanation is appreciated.	590
		15	The explanation and definition of Curriculum, Instruction, and Standards is very helpful. The narratives developed about the 8 mathematical practices are helpful and clear.	591

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comment #	Coding	Role	Comments on Specific MP standards	Notes
		16	Thank you for keeping the progression of standards and for keeping the mathematical practices. This is going to help keep our students at a competitive level with the other states.	623
		17	The standards allow my children to be successful mathematicians who are able to think flexibly about numbers. They are able to utilize more mental strategies than with just traditional U.S. algorithms and I can see them using perseverance that they have not had in the past. The mathematical practices have helped my children develop grit.	632
		18	It is slightly better. It is more concise. Also, in 6th grade, 4 critical areas + Geometry has been increased to 5 critical areas, with Geometry included in those critical areas. Clarity across standards with is of benefit. Explanations of Standards of Mathematical Practice will give teachers a clearer understanding and more consistency for students around the state. The addition of real world examples is of benefit.	633

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comment #	Coding	Role	Comments on Specific MP standards	Notes
		19	I love the changes that were made. The standards keep with the math progression and still incorporate the mathematical practices. Thank you for doing this! I also appreciate the more defined explanation of what fluency is.	645
		20	I have reviewed the draft standards and support them for these three reasons. 1. The vertical and horizontal progressions stay true to the teaching and learning and understanding of mathematics. 2. The definition of fluency was much needed and appreciate how students can use methods and strategies as a vehicle to become fluent in mathematics not just a drill and kill model 3. Appreciate the narratives of the mathematical practices at each grade level.	681 - 5 times

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comment #	Coding	Role	Comments on Specific MP standards	Notes
		21	The explanation of the mathematical practices is very explicit and straight forward for teachers. The clarification in the writing of the standards and removal of examples is also very clear. I like the change of verbage from "using" to "connecting" when discussing strategies. Some teachers were not seeing that students need to be shown the connection (parents too!). STRATEGIES need to be stressed (perhaps a list).. When the algorithm is to be introduced should be explicit.	698
		22	Mathematical Practices are explained in more detail very helpful!	704
		23	I really like the explanations of the Mathematical Practices. Another section I appreciate as a parent trying to help my kids with their homework is the Common Problem Types/Examples. I also really like the Standards for Mathematical Content table. I do wonder if Modeling (currently only in high school) should not be brought down to 6-8th as well. When helping my boys recently I found myself emphasizing "an expression to represent" which is really a kind of model as are equations and graphs.	713

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comment #	Coding	Role	Comments on Specific MP standards	Notes
		24	This glossary is woefully inadequate. An important mathematical practice is to use precision - not only in solving math problems accurately, but also in speaking about math. Neglecting to include a more comprehensive range of math vocabulary is a disservice to students and teachers alike. I realize that you have provided the caveat that this is an incomplete list. My suggestion is to fix the problem and make it more complete.	740
		25	While the standards have been sorted into "grade level" "content areas", the scope of standard coverage for each "content area" is too comprehensive to support mastery of the standards in the context of mathematical practices to prepare students for college expectations. Higher order thinking can be achieved with fewer standards applied in more contexts using the mathematical practices. Please consider reducing the scope of the standards to 15 standards per "grade level" "content area".	797

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comment #	Coding	Role	Comments on Specific MP standards	Notes
		26	I think the introduction is thoughtful and well written. I think that Arizona can make the standards "their own" by defining the Mathematical Practices at each grade level better. Here is the opportunity to identify proudly what Arizona students can do at their age appropriate development.	866
		27	I appreciate that it is simpler to read. With that said, we need the expanded version to be created as well. The old examples and explanations were great, informative, and important. Please provide them in an expanded document somewhere. I also would like the Mathematical Practices to be included again with each standard. That is very helpful and important. I also suggest that AZ determine priority standards to help focus teachers who work with students in poverty, ELL, and migrant kids.	866
		28	I feel the section on what the standards were not, was very informative for those who do not have an education background. I think it is important to include the mathematical practices section to the introduction.	885

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comment #	Coding	Role	Comments on Specific MP standards	Notes
		29	The Introduction clearly explains what the standards are and more importantly what they are not. The more detailed explanations of the mathematical practices were lacking in previous Arizona standards documents. It also explains how to read the nomenclature. The fluency progression is helpful. (There is a typo on this table - 3 Grade 6, it should say multiply not multiple.) The notes on literacy, technology and modeling also provide more guidance in their utilization.	898
		30	Gives a good overview; show vertical progression of skills; explains what a standard is and what it is not; math practices are explained; explains the numbering system for the standards	997

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comment #	Coding	Role	Comments on Specific MP standards	Notes
		31	2010 language removed that suggested "How" standards should be taught, I like that. 8 standards of mathematical practice "habits of mind" with narrative, even I had a shot at understanding some of that. Nice to see money standard added. I also like the section Technology Integration in Mathematics although I think it was pretty basic as most reference was to use of calculators. I wonder if the folks responsible for developing these standards reached out to small business in the state ?	1008
		32	The standards are relatively the same as the previous Arizona College and Career Ready Standards. Some prescriptive examples have been taking out but "how to's" remain throughout the standards esp. with Tables used as guidelines in K-3. "Standards for Mathematical Practice" need to be removed throughout the standards and are developmentally inappropriate across K-12. There is no evidence that developmental child psychologists have reviewed this work. Where are their technical notes?	1025
		33	I appreciate the mathematical practice explanations.	1057

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comment #	Coding	Role	Comments on Specific MP standards	Notes
		34	The introduction displays a good progression of standards from K-12. In addition, it effectively makes connections between the standards, mathematical practices, and fluency	1061
		35	I do not see developmental appropriateness addressed anywhere, I saw 1 item citing using research (def of fluency). The standards are largely identical. I don't see an AZ solution to the concerns parents had. It is good Alg I, 2, Geometry have separation, but virtually nothing changed in Geometry, K-3. The Mathematical Practice standards are worse, longer, prescriptive and almost copy the Core.org verbiage and are too much for k-3. MP is copy/pasted for each grade and signals "how to" in them.	1098
		36	The math practice are much more explicit with detailed explanations, much improved. I found the other changes to be relatively minor and not significant to change the meaning of most standards.	1100