

THE CHALLENGES AND REWARDS OF STANDARDS BASED GRADING

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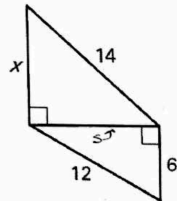
WHY SBG?

Name David Miller
Honors Geometry
Quiz: 7.1 - 7.2

$\frac{38}{50}$

Find the value of the missing side, x . Write your answer in simplified radical form.

1.



$$s^2 + 6^2 = 12^2$$

$$s^2 + 36 = 144$$

$$s^2 = 108$$

$$s = 6\sqrt{3}$$

$$x^2 + s^2 = 14^2$$

$$x^2 + 108 = 196$$

$$x^2 = 88$$

$$x = 2\sqrt{22}$$



WHY SBG?

Name: David Miller

Hon Geometry Quiz

Right Triangles

Standards & Questions	Score
Pythagorean Theorem 1 2	A
Triangle Inequality Theorem ③ 4 ⑤ ⑥ 7 ⑧	D
Converse of the Pythagorean Thm. 3 4 ⑤ 6 7	B

WHY DID WE MOVE TO SBG?

- **better feedback for students**
 - students gained clarity on what they know and where they need to improve
- **more focused assessments**
 - shorter assessments - 1 or 2 standards only
- **multiple assessments on the same standard**
 - teacher driven OR student request
- **chance to grade more qualitatively**
- **no more points collection**

WHAT RESOURCES GUIDED US?

- **Rodney Stutzman & Kimberly Race**
 - “EMRF: Everyday Rubric Grading” - Mathematics Teacher, January 2004
- **Shawn Cornally**
 - <http://shawncornally.com/wordpress/>
- **Riley Lark**
 - ActiveGrade
- **Dan Meyer**
 - blog.mrmeyer.com

HOW DID WE START?

- Refer to topics, not textbook sections
- Focus assessments on one or two standards
- Design grading rubric

	A = 95	B = 85	C = 75	D = 65	F = 55
Progress (30%) <ul style="list-style-type: none"> improvement consistency willingness perseverance <p>[This category will be called "Miscellaneous" for the online grade book.]</p>	<input type="checkbox"/> Consistent high achievement (above 90% level). -OR- <input type="checkbox"/> Consistent improvement (each assessment is better than the previous one). <input type="checkbox"/> Consistent perseverance on difficult concepts (even without high performance).	<input type="checkbox"/> Consistent medium-high achievement (above 80% level). -OR- <input type="checkbox"/> Mostly consistent improvement (a general trend of improvement, but with some lower performance allowed). <input type="checkbox"/> Mostly consistent perseverance on difficult concepts (often striving to succeed).	<input type="checkbox"/> Consistent medium achievement (above 70% level). -OR- <input type="checkbox"/> No discernable improvement (each assessment is about the same as the previous one). <input type="checkbox"/> Some perseverance on difficult concepts (often trying to maintain a medium level or performance)	<input type="checkbox"/> Consistent low achievement (above 60% level). -OR- <input type="checkbox"/> Inconsistent progress (a general trend of poorer performance) <input type="checkbox"/> Rare perseverance on difficult concepts (often not trying to be successful).	<input type="checkbox"/> Consistent very low achievement (below 60% level). -OR- <input type="checkbox"/> Consistent lack of improvement (each assessment is worse than the previous one). <input type="checkbox"/> No perseverance on difficult concepts.
Participation (30%) <ul style="list-style-type: none"> homework classwork notes discussions 	<input type="checkbox"/> More than 90% of homework completed. <input type="checkbox"/> More than 90% of class notes taken. <input type="checkbox"/> More than 90% of classwork completed. <input type="checkbox"/> Regularly (8-10 times per week) asks questions and/or contributes meaningfully to discussions.	<input type="checkbox"/> More than 75% of homework completed. <input type="checkbox"/> More than 75% of class notes taken. <input type="checkbox"/> More than 75% of classwork completed. <input type="checkbox"/> Often (6-8 times per week) asks questions and/or contributes meaningfully to discussions.	<input type="checkbox"/> More than 50% of homework completed. <input type="checkbox"/> More than 50% of class notes taken. <input type="checkbox"/> More than 50% of classwork completed. <input type="checkbox"/> Sometimes (4-6 times per week) asks questions and/or contributes meaningfully to discussions.	<input type="checkbox"/> Less than 50% of homework completed. <input type="checkbox"/> Less than 50% of class notes taken. <input type="checkbox"/> Less than 50% of classwork completed. <input type="checkbox"/> Rarely (2-4 times per week) asks questions and/or contributes meaningfully to discussions.	<input type="checkbox"/> Less than 10% of homework completed. <input type="checkbox"/> Less than 10% of class notes taken. <input type="checkbox"/> Less than 10% of classwork completed. <input type="checkbox"/> Does not ask questions and/or contribute meaningfully to discussions (less than twice per week)
Performance (40%) <ul style="list-style-type: none"> quizzes tests activities projects 	<input type="checkbox"/> Test scores average 90% - 100%. <input type="checkbox"/> Quiz, activity & project scores average 80% - 100%.	<input type="checkbox"/> Test scores average 80% - 90%. <input type="checkbox"/> Quiz, activity & project scores average 70% - 90%.	<input type="checkbox"/> Test scores average 70% - 80%. <input type="checkbox"/> Quiz, activity & project scores average 60% - 80%.	<input type="checkbox"/> Test scores average 60% - 70%. <input type="checkbox"/> Quiz, activity & project scores average 50% - 70%.	<input type="checkbox"/> Test scores average below 60%. <input type="checkbox"/> Quiz, activity & project scores average below 50%.

INTERMEDIATE STEPS

- shift to standards
 - giving feedback on individual standards
 - no quiz or test grades
- grade calculations
 - utilized ActiveGrade
 - most recent score only
- give students ownership of scores
 - additional assessments

WHAT REWARDS DID WE SEE?

- students talk less about points and more about what they know
- students engage in more focused relearning
- students ask about topics not section numbers
- opportunity to give higher quality feedback

WHAT CHALLENGES DID WE FACE?

- First scoring rubric was unsustainably complex
- Student buy-in / School culture
- Not transparent enough for parents
- How to design and grade Unit Tests
- Identifying and wording standards

WHERE ARE WE NOW?

Mike - AP Calculus

- teacher's choice for additional assessments
- decaying average 75% most recent (ActiveGrade)
- limited tests in favor of multiple quizzes
- generic scoring rubric
- score each question; average for standard score

5 (A)	4 (B)	3 (C)	2 (D)	1 (F)
Calculus, algebra & arithmetic is correct.	Calculus is mostly correct ; algebra / arithmetic errors.	Minor Calculus error(s) present.	Major Calculus error(s) present.	No significant attempt was made.
"I know the content."	"I knows some of the content but have a few gaps."	"I know some of the content but I don't understand thoroughly."	"I've seen the content but I don't know enough do anything."	"I don't know the content."

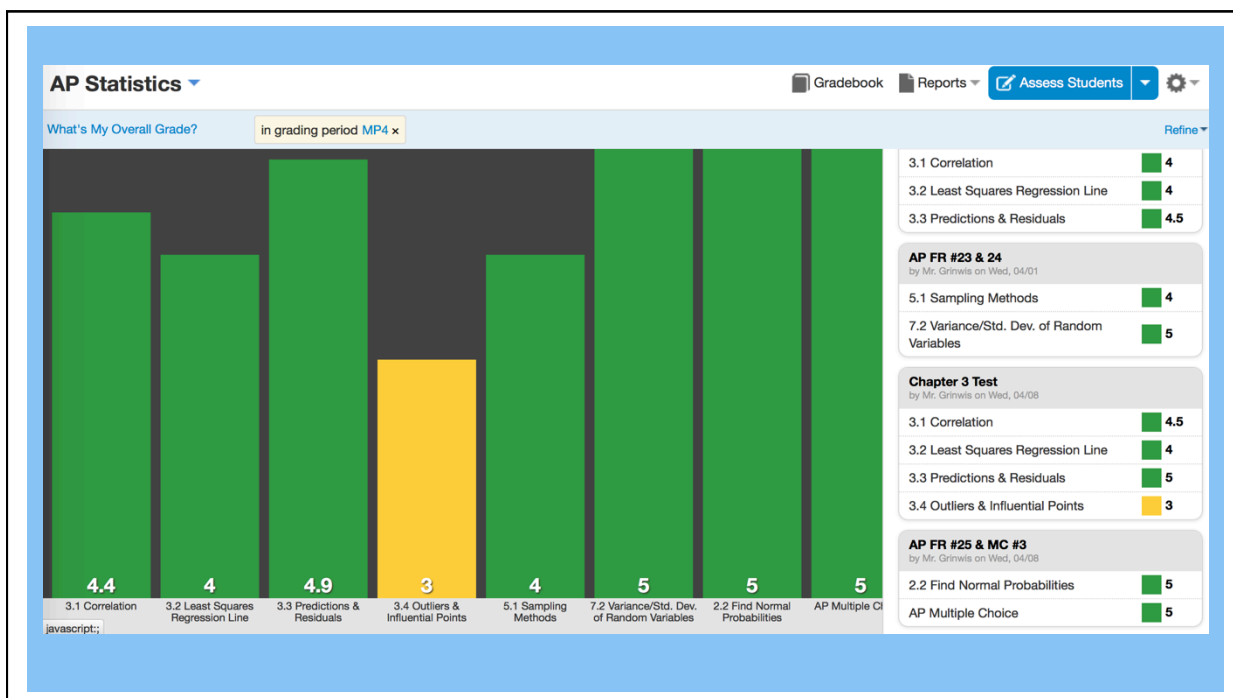
WHERE ARE WE NOW?

Matt - AP Statistics, Hon. Geometry

- student's choice for additional assessments
- decaying average 75% most recent (ActiveGrade)
- most standards assessed twice through quizzes, tests, AP practice
- generic scoring rubric
- score each standard based on all questions

5 (A)	4 (B)	3 (C)	2 (D)	1 (F)
Statistical Reasoning is correct. Solution is appropriate & complete.	Statistical Reasoning is mostly correct. Minor procedural errors or incomplete explanation.	Minor Statistical error(s) present. Solution is incomplete but correct.	Major Statistical error(s) present. Solution is incomplete and incorrect.	No significant attempt was made.
"I know the content."	"I knows some of the content but have a few gaps."	"I know some of the content but I don't understand thoroughly."	"I've seen the content but I don't know enough do anything."	"I don't know the content."

Standards & Questions	Score
Correlation 1 4 11 12 14 15	
Least Squares Regression Line 2 5 9 16 17	
Predictions & Residuals 6 7 8 10 18 19	
Outliers & Influential Points 3a 3b 13	



Overall Grade

Overall Grade: **B** Calculated based on custom policy Overall Grading Policy

Grade	Requirements	My Score
A	Requires an average of at least 4.5 over All Standards	✘ 4.4
B	Requires an average of at least 3.5 over All Standards	✔ 4.4
C	Requires an average of at least 2.5 over All Standards	✔ 4.4
D	Requires an average of at least 1.5 over All Standards	✔ 4.4
F	Requires an average of at least 0 over All Standards	✔ 4.4

Close

WHERE ARE WE NOW?

Mike - Algebra 1, Algebra 2

- limited additional assessments
 - try for equal amounts of all standards
- all assessments equally weighted (eSchools+)
- frequent quizzes & unit tests
- generic scoring rubric
- score each question; average for standard score

WHERE ARE WE NOW?

Matt - Algebra 1

- limited additional assessments
 - try for equal amounts of all standards
- all assessments equally weighted (eSchools+)
- frequent quizzes & unit tests
- generic scoring rubric
- score each question; average for entire assessment; record A/B/C/D/F

SCORE	Explanation of the Score:	What I want you to learn from the score:	Numerical Score
A+	Algebra & Arithmetic is completely correct. The solution is complete.	I know the topic completely.	100
A	Algebra is correct. The solution is complete. There are minor arithmetic errors.	I know the topic.	95
B	Algebra is correct. There are calculation errors in the solution.	I know the topic but I made a calculation mistake.	85
C	Some minor Algebra errors are present. The solution is incomplete but on the "right track".	I know some parts of the topic but I'm still learning parts of it.	75
D	Major Algebra error(s) are present. The solution is incomplete and incorrect.	I don't really understand the topic thoroughly enough.	65
F	Almost no attempt was made to provide a solution.	I've seen the topic but I don't know enough to do anything.	50

WHAT ARE YOUR QUESTIONS?