THE REWARDS AND CHALLENGES OF STANDARDS BASED GRADING

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WHY SBG?

Name: David Miller
Honors Geometry
Quiz: 7.1 - 7.2

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

1. \[ x^2 + 6^2 = 12^2 \]
   \[ x^2 + 36 = 144 \]
   \[ x^2 = 108 \]
   \[ x = 6\sqrt{3} \]

\[ 14^2 + x^2 = (6\sqrt{3})^2 \]
\[ 196 + x^2 = 108 \]
\[ x^2 = 88 \]
\[ x = 2\sqrt{22} \]
WHY SBG?

OBJECTIVES

- Why SBG?
- Share our journey
  - Successes & failures
  - Where we are now
- MetaGrading
  - Analyze your own grading practices
WHY DID WE MOVE TO SBG?

● Dissatisfaction with the point system
  ○ Disproportionate penalties for the same mistake
  ○ Penalizing students for non-assessed concepts
  ○ Point grubbing
● Your grade should reflect what you know
  ○ Not how many points you accumulated
● Chance to grade more qualitatively
  ○ Even though we’re number people
  ○ Rubrics aren’t just for the humanities anymore

WHY DID WE MOVE TO SBG?

● Better feedback for students
  ○ students gained clarity on what they know and where they need to improve
● More frequent and focused assessments
  ○ shorter assessments - 1 or 2 standards only
● Multiple assessments on the same standard
  ○ teacher driven OR student request
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
OUR JOURNEY

● Our transition year ('09-'10)
  ○ Algebra 1

● Progress, Participation, Performance
  ○ Focused assessments, but still point-based

● Rubric-based overall grade
OUR JOURNEY

- Shift to Standards-Based (‘10 & beyond)
  - Giving feedback on individual standards
  - No quiz or test grades
- Grade calculations
  - Most recent score only
  - Decaying average
  - Utilized ActiveGrade
- Give students ownership of scores
  - Additional assessments

WHAT REWARDS DID WE SEE?

- Opportunity to give higher quality feedback
- Grades more accurately reflect what students have learned
- Students talk less about points and more about what they know/don’t know
- Students engage in more focused relearning
- Students ask about topics not section numbers
WHAT CHALLENGES DID WE FACE?

- First scoring rubric was unsustainably complex
- Student buy-in / School culture
- Transparency for parents
- Explaining the grading process to parents/students/other teachers
- Identifying and wording standards
- How to design and grade Unit Tests
- Creating additional assessments

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
### 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

<table>
<thead>
<tr>
<th>5 (A)</th>
<th>4 (B)</th>
<th>3 (C)</th>
<th>2 (D)</th>
<th>1 (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculus, algebra &amp; arithmetic is correct.</td>
<td>Calculus is mostly correct; algebra / arithmetic errors.</td>
<td>Minor Calculus error(s) present.</td>
<td>Major Calculus error(s) present.</td>
<td>No significant attempt was made.</td>
</tr>
<tr>
<td>“I know the content.”</td>
<td>“I knows some of the content but have a few gaps.”</td>
<td>“I know some of the content but I don’t understand thoroughly.”</td>
<td>“I’ve seen the content but I don’t know enough do anything.”</td>
<td>“I don’t know the content.”</td>
</tr>
<tr>
<td>A (5)</td>
<td>B (4)</td>
<td>C (3)</td>
<td>D (2)</td>
<td>F (1)</td>
</tr>
<tr>
<td>-------</td>
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</tr>
<tr>
<td>Statistical Reasoning is correct. Solution is appropriate &amp; complete.</td>
<td>Statistical Reasoning is mostly correct. Minor procedural errors or incomplete explanation.</td>
<td>Statistical error(s) present. Incorrect/incomplete solution but reasonable foundation.</td>
<td>Major Statistical error(s) present. Solution is incomplete and incorrect.</td>
<td>No significant attempt was made.</td>
</tr>
<tr>
<td>“I know the content.”</td>
<td>“I knows some of the content but have a few gaps.”</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Standards &amp; Questions</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td>1 4 11 12 14 15</td>
</tr>
<tr>
<td>Least Squares Regression Line</td>
<td>2 5 9 16 17</td>
</tr>
<tr>
<td>Predictions &amp; Residuals</td>
<td>6 7 8 10 18 19</td>
</tr>
<tr>
<td>Outliers &amp; Influential Points</td>
<td>3a 3b 13</td>
</tr>
</tbody>
</table>
Overall Grade

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

<table>
<thead>
<tr>
<th>Grade</th>
<th>Requirements</th>
<th>My Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Requires an average of at least 4.5 over All Standards</td>
<td>☒ 4.4</td>
</tr>
<tr>
<td>B</td>
<td>Requires an average of at least 3.5 over All Standards</td>
<td>☑ 4.4</td>
</tr>
<tr>
<td>C</td>
<td>Requires an average of at least 2.5 over All Standards</td>
<td>☑ 4.4</td>
</tr>
<tr>
<td>D</td>
<td>Requires an average of at least 1.5 over All Standards</td>
<td>☑ 4.4</td>
</tr>
<tr>
<td>F</td>
<td>Requires an average of at least 0 over All Standards</td>
<td>☑ 4.4</td>
</tr>
</tbody>
</table>
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
● General 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
### METAGRADING

- Grade your own grading practices
  - What do your students take away from their grades?
  - How do your students view grades?

- How to begin?
  - Start small
  - Topics over textbook sections
  - Use more focused assessments
  - Don’t fear the rubric

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

Contact us:
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