Discussion Forum
Triumphs and Tragedies—Online to Remote to Face-to-Face

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Discussion Forums—Multi-purpose Tool

- Foster community and class cohesiveness
- Increase active engagement with mathematics
  - Answering others questions
  - Trouble-shooting errors
  - Justifying steps in problem solving
- Increase interactions with the instructor
Benefits to Students

- Add an additional resource for problem-solving
- Can be accessed 24/7
- Particularly useful for students with LDs
- Writing about mathematics for others engages deeper thinking and reasoning
- Stronger connections in the brain = longer retention
- Active Learning
To Require...or Not to Require

Pro
- Students will participate and reap the benefits
- Increase opportunities for learning and engaging with the material

Con
- More stress on students
- More grading for you

If you don’t require it, they won’t do it.
Netiquette Rules 1

Working online may make communication more difficult since you don't see each other’s body language. In particular, jokes and sarcasm do not translate well in Discussion Forums.

1. Before posting, check if anyone has already asked the question and received a reply.
2. Stay on topic—do not post irrelevant material.
3. Do not type in ALL CAPS! It is interpreted as screaming.
Netiquette Rules 2

4. Do not write anything that sounds angry or sarcastic, even as a joke, because without hearing tone of voice, it could be misunderstood.
5. Remember to say “please” and “thank you” when asking for or receiving help.
6. Respect the opinions of others, even when, especially when, you do not agree with them. Softly, softly.
7. Be brief. Long paragraphs are hard to read online.
8. Absolutely NO badmouthing of others, name calling, or rudeness. This is grounds for being barred from the class.
Let’s Talk About Rubrics
Keep It Simple...or You WILL Regret It
# The Worst Ever to Implement

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Excellent</th>
<th>Good</th>
<th>Reasonable</th>
<th>Needs Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Put correct Problem info in Subject line. 4.3.5</td>
<td>Correctly listed chapter, section, and problem number and put in subject line. +1</td>
<td>Correctly listed chapter, section, and problem number in main post, but not in subject line. +0.7</td>
<td>Correctly listed section and problem number, but not chapter. +0</td>
<td>Missing information on chapter, section, and problem number. +0</td>
</tr>
<tr>
<td>Theorems and Properties that justify a step are briefly listed in the right margin. For example, $2(x + 3) = 2x + 6$ Distrib Prop. Justify all calculus steps, major algebra steps, and no arithmetic steps.</td>
<td>Properties and/or theorems are (briefly) named in the right margin for all calculus steps, major algebra steps, and no arithmetic steps. +3</td>
<td>Listed most theorems and properties but omitted minor detail. +2</td>
<td>Listed some theorems and properties but omitted many. +1</td>
<td>Failed to list theorems and properties to justify steps in the right margin. +0</td>
</tr>
<tr>
<td>Writeup of the problem. Student followed Homework Guidelines document.</td>
<td>Demonstrated through figures, graphs, mathematical language and symbols a full and complete understanding of the problem. Steps are logical and clearly explained, and properties and/or theorems are (briefly) named. +5</td>
<td>Used enough figures, graphs, and mathematical language and symbols for students to follow. Steps were logical but a few steps were skipped or were not well explained. +4</td>
<td>Used enough figures, graphs, and mathematical language and symbols for students to follow. Properties and theorems were not named. +3</td>
<td>Failed to solve the problem in such a way that another student could follow it to solve a similar problem. OR Misunderstood the problem in such a way that the solution set up contained errors or such that the processes used would not solve the problem. +1</td>
</tr>
<tr>
<td>Computation</td>
<td>Answer is correct. +1</td>
<td>Answer is close to being correct. +0.7</td>
<td>Answer contains numerous errors. +0</td>
<td>Answer is incorrect and completely off base. +0</td>
</tr>
</tbody>
</table>

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**Note:** The grading criteria are based on a scale where +5 indicates excellent performance, +3 indicates reasonable performance, +2 indicates needs improvement, +1 indicates needs significant improvement, and +0 indicates poor performance.
# Better to Implement

<table>
<thead>
<tr>
<th>Method used to solve and process</th>
<th>Level 3</th>
<th>Level 2</th>
<th>Level 1</th>
<th>Level 0</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7 pt</td>
<td>5 pt</td>
<td>3 pt</td>
<td>0 pt</td>
<td>7 pt</td>
</tr>
</tbody>
</table>

**Initial Feedback**

- Very good writeup. Possibly minor error, but overall well done!
- Average writeup. Some error and/or lack of simplification.
- Your writeup needs improvement to be college level. There are major errors and/or hard to follow the logic.
- Either your writeup is too poorly done for credit, or you posted no problem (it wasn't your week or you forgot).

<table>
<thead>
<tr>
<th>explanations / justifications</th>
<th>Level 3</th>
<th>Level 2</th>
<th>Level 1</th>
<th>Level 0</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3 pt</td>
<td>2 pt</td>
<td>1 pt</td>
<td>0 pt</td>
<td>3 pt</td>
</tr>
</tbody>
</table>

**Initial Feedback**

- Nice explanation! Easy to follow logic.
- A bit more explanation might improve clarity.
- Need more explanation.
- Either your writeup is too poorly done for credit, or you posted no problem (it wasn't your week or you forgot).
Easier to Implement

**Level 5**
10 points minimum
Perfect!

**Level 4**
9 points minimum
Outstanding work!

**Level 3**
8 points minimum
Well done!

**Level 2**
6 points minimum
Needs more attention to detail and work on concepts.

**Level 1**
4 points minimum
Needs work to fully explain problem and accurately produce answer.

**Level 0**
0 points minimum
No problem posted.
<table>
<thead>
<tr>
<th></th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent write-up, followed guidelines, great justifications</td>
<td>Good write-up, mostly followed guidelines, good justifications</td>
<td>Some major conceptual errors, failed to follow guidelines, or no justifications</td>
<td>No write-up</td>
<td></td>
</tr>
</tbody>
</table>
Or is it Easiest?

Consider Ungrading
Or is it Easiest?

Consider Ungrading

**Pro**

- Students grade themselves, so you do not have to do it.
- Increases personal responsibility.
- Frees instructor to just participate and focus on content feedback.
- Reduces student anxiety.
- Better for URM groups.

**Con**

- Students grade themselves.
  - 1/30 might “fudge” their grade.
Table Discussion

- Design a simple to implement rubric at your table.
- Use 5 or fewer levels.
- Share methods.
- Does the course level affect your rubric?
- What do you think of ungrading?
Keep the Write-up Guidelines Separate from the Rubric

1. Work all problems on **blank printer paper**.
2. Every problem starts on the left margin. No double or triple columns. The more “white” or “blank” space there is, the easier it is for your brain to solve the problems.
3. Highlight every problem number or circle it.
4. Copy the problem or paste a picture of it.
5. Show every step with mathematical justification to the side. Write for the struggling classmate, not the instructor.
6. Circle the answer.
7. Draw a horizontal bar between problems. Leave a ½ inch gap.
Sample Write-ups

2. Find the $y$-intercept of $f(x) = 2x + 4$.

\[ y = 4 \]
21. Write the equation of the graph after the indicated transformation. The graph of \( y = \sqrt{x} \) reflected across the \( y \)-axis and is translated 4 units to the left and up 9 units.

\[
y = \sqrt{x} \quad \text{reflected across } y\text{-axis } \Rightarrow y = f(-x)
\]

so \( y = \sqrt{-x} \) translated 4 units left = \( y = f(x+4) \)

where \( d = 4 \)
So \( y = \sqrt{-(x+4)} \)

translated 9 units up \( y = f(x) + b \)

where \( b = 9 \)

So \( y = \sqrt{-(x+4)} + 9 \)
2.4.41

DETERMINE WHETHER $f$ IS EVEN, ODD, OR NEITHER.

$f(x) = x^4 - 2x^2 + 6$

EVALUATE $f(-x)$ TO FIND IF IT IS EVEN

$f(-x) = (-x)^4 - 2(-x)^2 + 6$

$f(-x) = x^4 - 2x^2 + 6$

SINCE $f(-x) = f(x)$ IT IS EVEN

Another Excellent Write-up
Tips and Techniques
Keeping it Easier
Tips for Effective Forums

• Give them flexibility: require 10-12 posts in 15-week course, or fewer
• If they haven’t posted in two weeks, send an email
• Send email at three points in the semester saying how many posts they should have to that point
• Check the forum every other day or every two days
• Always check on weekends
• Have due dates same day of every week, one day after homework due or one day before
Tips for Effective Forums

• Respond to every post
  • Super, superb, excellent, effective, nicely done, well done, outstanding, great, clear and easy to follow, well written, great work, fantastic job, spot-on

• Use their name in your response

• Refer to something specific they did
  • Great work, Kyle, I love the sketches on the side!

• Acknowledge when they post a more difficult problem

• Praise well written solutions with good justifications

• Call attention to concepts they’ll see again
Different Types of Forums

• Two groups: posters and responders
  • Switch groups mid-semester (students get confused with weekly switching)

• Groups of three post solutions: collaborative learning

• Video solutions with closed captioning
  • Individual or groups of three

• Set up groups after drop deadline for more stability
Tips and Techniques

From the Audience Questions?
Thanks for coming!

• Please complete the evaluation in Whova
  • Click on Home button in Whova
  • Click on Surveys under Additional Resources
  • Click on Session Feedback
  • Search for the Session number
    • S021 Discussion Forum Triumphs and Tragedies: Online to Remote to F2F