Write right!


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Vigorous writing is concise. A sentence should contain no unnecessary words, a paragraph no unnecessary sentences, for the same reason that a drawing should have no unnecessary lines and a machine no unnecessary parts. This requires not that the writer make all his sentences short, or that he avoid all detail and treat his subjects only in outline, but that every word tell.


Write to express,
not to impress.
~ Gregory Ciotti
The Creative Process vs. The Writing Process

Deer Sur, I wud reely lyke a job wid yur organys-orginyz- firm .....
The Writing Process

adapted from image source: <http://www.lirvin.net/WGuides/recursive2.jpg>
In support of $\sum$ ath 4 Real

The Productive Procrastination mindset

There is so much to do today!

I am just going do ________ today!

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Enough worry and procrastination.

Just Write!

- Starting is the hardest part.
- Plan time just to write, without distractions.
- Remember writing is non-linear!
- Spell and grammar check later!
- Use “comments” to keep track of source information.
When in doubt, cite.

You must cite a reference when you:
- Discuss, summarize, or paraphrase the ideas of an author
- Provide a direct quotation
- Use statistical or other data

Common knowledge does not require citation.

Instead of WYSIWYG editors, typesetting systems like \TeX [1] or \LaTeX [2] can be used.

References


Citations

Core Components of an APA Reference:

**Author Rules:**
1. Initials are separated and ended by a period eg Mitchell, J.A.
2. Multiple authors are separated by commas and an ampersand eg Mitchell, J.A., Thomson, M., & Coyne, R.
3. Multiple authors with the same surname and initial: add their name in square brackets eg Mendeley, J. [James].

**Date Rules:**
1. Date refers to date of publishing
2. If the date is unknown ‘n.d’ is used in its place eg Mendeley, J.A. (n.d)

**Title Rules:**
1. The format of this changes depending on what is being referenced.

**Publisher Rules:**
1. If in the US: the city and two letter state code must be stated eg San Francisco, CA
2. If not in the US: the city and country must be stated eg Sydney, Australia

**Example Citation:**
Author’s surname, initial(s). (Date Published). Title of source. Location of publisher: publisher. Retrieved from URL

*image source: <https://www.mendeley.com/guides/apa-citation-guide>
What is Plagiarism?

- using another person’s ideas or words as their own.

“Top Individual Sources Plagiarized by Students

Among papers from secondary students, Wikipedia was used in 7.99 percent of the cases of matched text, just beating out Yahoo Answers, which came in at 7.55 percent. The remainder of the top five individual sources for plagiarism among secondary students included Answers.com (3.37 percent), eNotes (2.9 percent), and Slideshare (2.38 percent).”


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The author of the quotation has made a spelling error! Acknowledge the error it by writing [sic] after the word.

“Plagiarism - DONT[sic]!

- If you copy text put it in quotation marks and cite the source.
- Do not copy proofs of theorems unless it is really necessary for the thesis.
- Your examiners will be particularly alert to plagiarism.” (1)


Image source: <https://www.grammarly.com/blog/sic/>
Critical Friend
Is the organization clear? coherent? Any content vague or unnecessary? Audience?

Leave time MORE writing and revising.

A great paper doesn’t write itself. A first draft should be unrefined but organized!
Revisions bring clarity, brevity and logical flow of the paper.

Let's eat gramps.

Image source: <http://img.viralnova.com/000/062/017/desktop-1406813083.png>
Cognitive load for the reader.

(Sweller, 2010)

Revising Techniques

- Remove needless complexity
- Important information first
- Refine sentences
- Remove redundancy
- Detail when required

Clear and concise! Cognitive Load!

adapted from: http://people.physics.illinois.edu/Celia/Lectures/Fluff.pdf

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Writing Resources

https://columbiacollege-ca.libguides.com/apascholarlyvoice/writingconcisely

https://academicguides.waldenu.edu/writingcenter/
If \( d \) is Bob’s distance above the ground in feet, then \( d = 100 - 16t^2 \), where \( t \) is the number of seconds after Bob’s Flugelputz-Levitator is activated. Solving for \( t \) in the equation \( 100 - 16t^2 = 0 \), we find that \( t = 2.5 \). Bob hits the ground after 2.5 seconds.

**Improvements**?
This is clearer:

If \( d \) is Bob’s distance above the ground in feet, then

\[
d = 100 - 16t^2,
\]

where \( t \) is the number of seconds after Bob’s Flugelputz-Levitator is activated. Solving for \( t \) in the equation

\[
100 - 16t^2 = 0,
\]

we find that \( t = 2.5 \). Bob hits the ground after 2.5 seconds.
6 Basic Rules for Making Charts and Graphs
Check the data
Include Units
Explain encodings
Label axes
Include your sources
Consider your audience

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Remove to improve (the data-ink ratio)

https://www.darkhorseanalytics.com/blog/data-looks-better-naked
The art of writing science

“Writing the clearest, easiest to read papers possible is the one-and-only goal. And there is no single “right way” to do this that fits all stories under all circumstances. Remember: writing is an experimental science. Just keep experimenting until you find a way that works for the task at hand.”


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References


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“Online Writing Lab (OWL)”, (n.d.). Retrieved from https://owl.english.purdue.edu/owl/


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Typesetting with LaTeX!

Why use LaTeX?
# LaTeX vs. WYSIWYG

<table>
<thead>
<tr>
<th>Criterion</th>
<th>WYSIWYG</th>
<th>LaTeX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document Editing</td>
<td>Users need to use the same tool.</td>
<td>Users can arbitrary use any text editor.</td>
</tr>
<tr>
<td>Changing format</td>
<td>The entire document needs to be checked for any unwanted results.</td>
<td>The class and some commands need to be changed.</td>
</tr>
<tr>
<td>Layout quality</td>
<td>The quality of the layout depends on the user skills.</td>
<td>The standard Layout is already high quality.</td>
</tr>
<tr>
<td>Huge contents</td>
<td>Program crashes and instability likely happen with large documents, especially if high-quality graphics are used.</td>
<td>Faster since only text and formatting commands merged and the separate typesetting steps are only done.</td>
</tr>
<tr>
<td>Bibliography &amp; Citation</td>
<td>Requires additional tool such as Endnote.</td>
<td>Professionally handled by the built-in BibTeX.</td>
</tr>
<tr>
<td>compatibility</td>
<td>Low compatibility with all editors &amp; OSs.</td>
<td>High compatibility with all editors &amp; OSs.</td>
</tr>
<tr>
<td>Backward compatibility</td>
<td>Is not fully supported.</td>
<td>Is fully supported.</td>
</tr>
<tr>
<td>Split work into many files</td>
<td>Usually no practicable solution available.</td>
<td>Available.</td>
</tr>
<tr>
<td>Cost</td>
<td>Some are free with limited features.</td>
<td>Free.</td>
</tr>
</tbody>
</table>

Image Source: [https://www.slideshare.net/MohamedAlrshah/latex-workshop-essentials-and-practices](https://www.slideshare.net/MohamedAlrshah/latex-workshop-essentials-and-practices)
In support of \sum \text{ath 4 Real}

Open a browser

https://www.overleaf.com?r=7e57751c&rm=d&rs=b

Register

Let’s start from their example.

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New Project

Project Name

Cancel Create
Math Modeling Report

\author{} Team’s Control Number
\section{} Summary
Introduction
The Model
The Solutions
Testing Results
Strengths and Weakness
Future Work
References

This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.
Add a numbered mathematical equation:

\begin{equation}
\label{eq:integer}
your \text{equation}
\end{equation}

Add a reference to that numbered equation:

Equation~\ref{eq:integer},
Add the AMS packages to preamble:

\usepackage{amsmath, amssymb}
Missing a Table of Contents.

\newpage
\tableofcontents
\newpage

just after
\maketitle

This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.
Add a List of Figures.
Add \listoffigures\newpage just after \tableofcontents\newpage

This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.
Put the References on a page of its own!

Add a Table!
Playtime

Things to try:

• add math specific packages (ams*)
• play with formatting the Table
• add another image
• add another bibliographic entry to “dot”.bib
  • google scholar, or journal database
• remove section numbers
• format a long equation. \begin{split}
Feedback/Comments

In support of \( \sum \text{ath 4 Real} \)

\( \sum \text{ath 4 Real} \)

Robert Jordan  B.Eng, B.Sc Honours, B.Ed, OCT# 639674

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