

# 1 Basic Report Writing

## 1.1 Subsection

### 1.1.1 Subsubsection

With some text in it.

### 1.1.2 Another subsubsection

Hello world. Here's some text in the first paragraph of this subsubsection.

Here's another paragraph in the same subsubsection.

# 2 Math

## 2.1 Some Random Equation

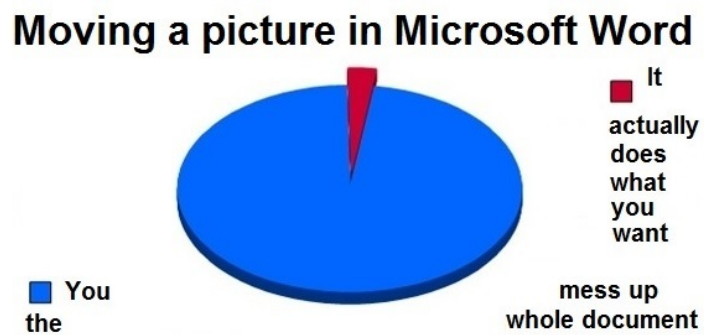
$$y = \sqrt[3]{\frac{5x}{x^2}}$$

This is an inline math equation:  $y = x^2 + 2x + 4$  ...in the paragraph following Some Random Equation.

# 3 Figures and Images

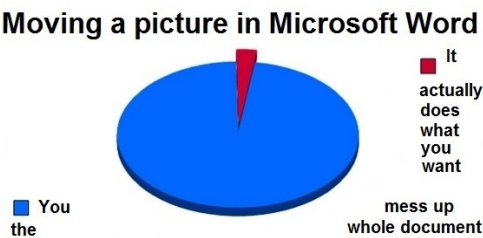
## 3.1 Basic Figure

Figure 1: A funny LaTeX meme

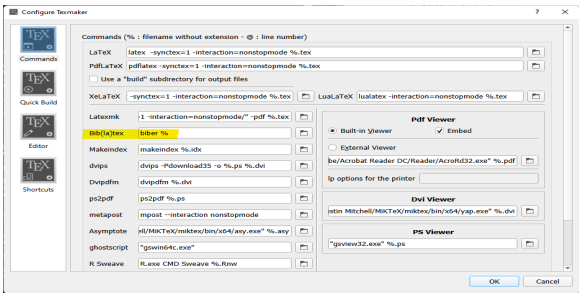


For more examples and settings, [click this link](#).

## 3.2 Side-by-Side Figures



(a) Caption for 'a' [Maxim]



(b) Caption for 'b'

Figure 2: Theory of xyz

## 4 Lists

### 4.1 Non-numbered List

- First item
- Second item
  - First second item
  - Second second item
- ! Last item with custom exclamation point marker

### 4.2 Numbered Lists

1. Numbered
2. list of
3. things
  - (a) first thing
  - (b) second thing
- ! exclaimed item

NOTE this item

- custom arrow bullet in list
4. list cont.

## 5 Tables

Table 1: a table

head1	head2	head3
cell4	cell5	cell6
cell7 W/kg	cell8 N	cell9 seconds

## 6 Code

```
1 import pandas as pd
2 from tools.loading import print_loading_bar
3
4
5 data_source_str = "wordle-solver/data/words_3000" # Designates data to process
6
7 # Open list of words
8 fh = open(data_source_str + "_raw.txt")
9 LENGTH = len(fh.readlines()) # get number of words
10 fh = open(data_source_str + "_raw.txt") # reopen file handle
11
12 # Load letter frequency lookup table
13 freqs = pd.read_csv("wordle-solver/data/lookup_char-freqs.csv", index_col=0)
14
15 # Initialize data storage
16 words = pd.DataFrame()
17
18 WORD_LENGTH = 5 # Word length setting (Wordle is currently a 5-letter game)
19
20 # Process list of words
21 for i, word in enumerate(fh):
22
```

```

23     print_loading_bar(i, LENGTH, title="Preparing word data: ", size=100, no_newline=True)
24
25     word = word.strip().lower()
26
27     if len(word) == WORD_LENGTH:
28         words.loc[i, 'word'] = word
29         score = 0
30         for j in range(WORD_LENGTH):
31             col = 'char'+str(j)
32             words.loc[i, col] = word[j]
33             score = freqs.loc[word[j], col] + score
34         words.loc[i, 'score'] = score
35
36 words = words.sort_values('score', ascending=False)
37 words.to_csv(data_source_str + "_clean.csv")

```

For more code examples and parameters, [click this link](#).

## 7 Citations

I'm citing something, here. [1]

## References

- [1] Albert Einstein. “Zur Elektrodynamik bewegter Körper. (German) [On the electrodynamics of moving bodies]”. In: *Annalen der Physik* 322.10 (1905), pp. 891–921. DOI: <http://dx.doi.org/10.1002/andp.19053221004>.