Sample Notes November 2019

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# 1 Top Level Heading

Content here. Here is some inline-code . To run this example, navigate to the ./sample directory and run Make with the following command.

```
1 make pdf
```

## **Second Level Heading**

Here is some math using \$\$ with Latex:

$$y = mx + b$$

Here is inline math y=f(x) and more math using  $\ensuremath{ ext{equation}}$  environment:

$$\frac{\partial}{\partial t} \int_{V} \rho dV = \underbrace{-\oint_{S} \rho \underline{v} \cdot \underline{n} dS}_{\text{Net inflow of mass}} \tag{1}$$

### **Third Level Heading**

Variables can be put in the YAML metadata block as well. For example, to set the font size:

```
fontsize: "10pt"
```

### Paragraph Level Heading

Here is a paragraph.

## **Hyperlinks**

Here is a markdown hyperlink: Pandoc. Here is an HTML hyperlink: Pandoc.

Daniel Wiese 1

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# 2 Figures and Images

### **Figures**

Figures can be included, centered, and caption with either Markdown or HTML.

```
---
title: "Sample Notes"
date: "November 2019"
author: "Daniel Wiese"
subject: "Sample Notes"
keywords: [Markdown, Pandoc, Example]
lang: "en"
```

Figure 1: Sample image caption in Markdown

```
title: "Sample Notes"
date: "November 2019"
author: "Daniel Wiese"
subject: "Sample Notes"
keywords: [Markdown, Pandoc, Example]
lang: "en"
```

Figure 2: Sample image caption in HTML, italicized

### **Images**

Centering an *image*, that is without a caption that would be associated with a figure, seems not so straightforward. The easiest solution, if the behavior should be *only centered images in the entire document* seems to be to define all images as figures with a non-printing character for the caption, and use the following LaTeX (e.g. via <a href="include-in-header">include-in-header</a>) to not display the figure label at all.

```
\usepackage{caption}
captionsetup[figure]{labelformat=empty}
```

The Figure can be defined with

```
![\ ](./sample.png){width=200}
```

Alternatively, to center only specific images within a document, the following can be used in the Markdown

```
1 \centering
2 ![](./sample.png){width=200}
3 \raggedright
```

which produces

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```
---
title: "Sample Notes"
date: "November 2019"
author: "Daniel Wiese"
subject: "Sample Notes"
keywords: [Markdown, Pandoc, Example]
lang: "en"
```

Pure LaTeX also works, e.g.

```
title: "Sample Notes"
date: "November 2019"
author: "Daniel Wiese"
subject: "Sample Notes"
keywords: [Markdown, Pandoc, Example]
lang: "en"
```

## 3 Quotes and a Reference

Below is a quote with a reference [1].

Aerodynamics is fun!

## **References**

[1] J. D. A. Jr., *Fundamentals of aerodynamics*. McGraw-Hill Education, 2010 [Online]. Available: https://books.google.com/books?id=xwY8PgAACAAJ