Export by **pandoc**.

1 Test of maths

1.1 Hand-typed

Everyone knows[1] that $e^{i\theta} = \cos\theta + i\sin\theta$[2]. It results that:

$$e^{i\pi} + 1 = 0 \tag{1}$$

This equation 1, known as Euler's formula, is one of the best known formulas of elementary maths.

1.2 Sage-generated

Table 1: Addition formulas, générated by the Sage snippet lst:FA.

$\sin(a+b) = \cos(b)\sin(a) + \cos(a)\sin(b)$
$\sin(a-b) = \cos(b)\sin(a) - \cos(a)\sin(b)$
$\cos(a+b) = \cos(a)\cos(b) - \sin(a)\sin(b)$
$\cos(a-b) = \cos(a)\cos(b) + \sin(a)\sin(b)$
$\tan(a+b) = -\dfrac{\tan(a)+\tan(b)}{\tan(a)\tan(b)-1}$
$\tan(a-b) = \dfrac{\tan(a)-\tan(b)}{\tan(a)\tan(b)+1}$

The results in table 1 (generated by the Sage snippet in listing 1) should be known perfectly by any college candidate (yes, even in humanities...).

2 Figures

The figure 1 (generated by the code snippet of listing 2) whil be placed by LaTeX at some "convenient" place.

3 Citations

Citation attempt with a `cite:` link : [1,2]

Another attempt, using a `\cite{}` LaTeX{} macro : [3]

[1] or should know...
[2] This is de Moivre's formula

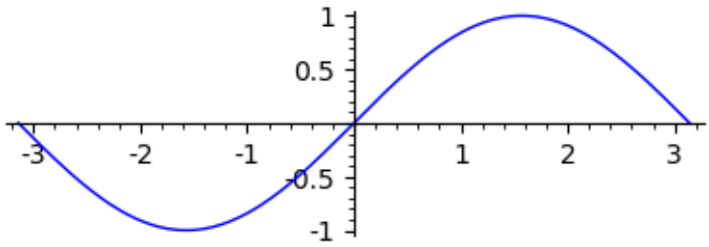

Figure 1: A well-known figure, generated by the Sage snippet ||lst:SageFig]].

4 Conclusions

4.1 What works

- Maths (inline, displayed or math environments) are correctly displayed. There is some support for referencing (isolated) equations. See §1.
- Tables are correctly displayed and referenced. (Ditto).
- Figures are correctly displayed and referenced. See §2
- Citations can be correctly retrieved and bibliographies can be correctly generated, as shown in §3.

The latter requires some ingenuity: My source contains the following snippet at the place where the references are needed:

```
(cond ( ;; This allows export to DOCX/ODT :
       (eq org-export-current-backend 'pandoc)
       "* References\n\#+bibliography: CRCInnovation2019.bib\n\#+PANDOC_OPTIONS: csl:vancouv
      ;;This allows export to LaTeX/PDF with the builtin exporter :
      ((eq org-export-current-backend 'latex)
       "[[bibliographystyle:vancouver]]\n[[bibliography:CRCInnovation2019.bib]]")
      ;; This leaves enough information to allow org-reftex to find its file :
      (t "\#+bibliography: CRCInnovation2019"))
```

The resulting trick leaves enough information in the source file to be able to use `org-reftex-citation` function (`C-c C-x [`) but not enough for the `org-ref-helm-insert-cite-link` (`C-c ]`).

One also notes that the `:results` type **has** to be `raw` ; using `org` prepends a comma to the intended result...

4.2 What doesn't (in any exporter)

- Links are not expanded in captions, and print litteraly.

  A test show that `org-ref ref:` links do expand in captions when exported by the native LaTeX{} exporter. They are, however, unusable for my

purpose, since they do not export (i.e. print litteraly) to anything else...

4.3 Support depending on the exporter

4.3.1 Built-in LaTeX{} exporter

- Listings (code snippets) are numbered and labeled as figures.

4.3.2 All `pandoc` exporters

- References appear necessarily at the end of the document.

  I understand that this a long-known deficiency of `pandoc`; some workaround exist for `HTML` output, but do not seem to apply to `.docx` nor `.pdf` outputs.

4.3.3 `Pandoc` LaTeX{} exporter (`ox-pandoc`)

- Code snippets are correcly numbered, but neither their captions nor the numbers appear in the resulting PDF.
- (A pecadillo) In text, the string `\LaTeX{}` exports literally as `LaTeX{}`, not the expected symbol...

4.3.4 `Pandoc .docx` exporter

- I have been unable to get numbered sections.

  I understand that this might be a limitatin of `pandoc` itself, and can be fixed by substituting another `.docx` template.

- I have been unable to master the position of some elements: both table and figures appear at the left of the page.

A Some listings

A.1 Maths

Generation of table tab:FA

```
def matable():
    a,b=SR.var("a, b")
    LF=[sin, cos, tan]
    T=[f(v)==f(v).trig_expand() for f in LF for v in[a+b, a-b]]
    return [[r"\(\displaystyle {}\)".format(latex(f))] for f in T]
matable()
```

A.2 Figures

Generation of the figure fig:SageFig.

```
plot(sin, -pi,pi, figsize=4, aspect_ratio=1)
```

References

1. Chenouard A, Rambaud J, Gouot U, Bergounioux J. Phone triage in paediatric intensive care: One-year report from a French tertiary care center. Intensive Care Med. 2016 Feb;42(2):297–8.

2. Bergounioux J, Elisee R, Prunier A-L, Donnadieu F, Sperandio B, Sansonetti P, et al. Calpain activation by the Shigella flexneri effector VirA regulates key steps in the formation and life of the bacterium's epithelial niche. Cell Host Microbe. 2012 Mar;11(3):240–52.

3. Loganadane G, Hendriks L, Le Péchoux C, Levy A. The Current Role of Whole Brain Radiation Therapy in Non-Small Cell Lung Cancer Patients. J Thorac Oncol. 2017 Oct;12(10):1467–77.