

# Output to reMarkable paper tablet

Drawj2d can generate drawings in the [reMarkable paper tablet](#)'s internal line drawing format. Thus using Drawj2d you can create an editable notebook page (not limited to annotations). Once transferred to your device, you can insert the page into an existing notebook using the move functionality of the reMarkable.

## In case you just want to convert a pdf to a rM notebook

On the command line type (no scaling or scaled down) `echo image pageA5.pdf | drawj2d -Trmn echo image pageA4.pdf 1 0 0 0.7 | drawj2d -Trmn ;# reMarkable 2 echo image pageA4.pdf 1 0 0 0.8 | drawj2d -Trmdoc ;# reMarkable Paper Pro` It writes a notebook file *out.rmn* or *out.rmdoc*. Then upload it using [RCU](#) or the reMarkable desktop app.

For multipage pdf have a look at [pdf2rmnnotebook](#) (Linux) or [rmn-combine](#) (a [Perl](#) script to combine multiple page rmn files into a single notebook rmn file) or [rmcat](#).

## ... or write text to a rM notebook

Have a look at the Drawj2d [Examples for reMarkable tablet](#).

## ... or have shape library as a rM notebook

Download a [Shape Library for reMarkable tablet](#).

## HowTo

1. Create a drawing using a [text editor](#) (with UTF-8 encoding support). An example input file *thales.hcl* is shown below.

Preview on screen: `drawj2d -Tscreen -W157 -H209 thales.hcl`

- *reMarkable 2*: device screen width  $\cong$  157 mm, height = 209 mm
- *reMarkable 2*: monochrome display, drawj2d will map colours to black, grey or white
- *reMarkable Pro*: device screen width  $\cong$  179 mm, height = 239 mm. Preview `drawj2d -Tscreen -W168 -H239 thales.hcl`
- *reMarkable Pro*: colour display, pen colours black, grey or white, blue (inkblue), red (inkred), green, yellow, cyan, magenta and (highlighter colours) pink, lightgray, lightgreen and lightyellow. Drawj2d will map darkgray to black, darkgreen to green, orange to yellow, darkorange to red, brown to gray, violet and purple to magenta and any other colour to black, grey or white (depending on the brightness).
- a line font is implemented in drawj2d: *font Lines*, *font Lines italic* or *font LinesMono*. Truetype fonts will display the outlines only
- images will be approximated with monochrome lines. Usable for b/w scans (drawings or text) but not pictures, avoid resolution  $\gg$  200 dpi.

2. Create the reMarkable page

Drawj2d will generate a reMarkable notebook containing the line drawing. If you intend to transfer it to the device using a local cable or wlan connection choose the output type *rmn* (tar archive). If you just need the raw page data (e.g. to replace a page in an existing notebook) choose the output type *rm*. The output type *rmdoc* (zip archive) can be used for a local transfer to the device using its USB web interface or for an upload to the cloud storage using the reMarkable desktop app.

- RCU (tar of notebook): `drawj2d -Trmn thales.hcl → out-thales.rmn`
- raw page data (single page): `drawj2d -Trm thales.hcl → out-thales.rm`
- rmdoc (zip of notebook): `drawj2d -Trmdoc thales.hcl → out-thales.rmdoc`

3. Transfer the notebook page to the paper tablet There are several options.

Transfer the notebook to the device using [RCU](#)

- RCU is an easy to use software. Upload the notebook file *\*out-thales.rmn\**
- The program costs a few dollars. It is worth its price. There are downloads for Windows, Linux, Mac and FreeBSD.

Transfer the notebook to the device using its USB web interface or upload it to the cloud storage using the [reMarkable](#) desktop app

- Transferring files using a USB cable and a browser (any OS). Upload the notebook file *\*out-thales.rmdoc\**.
- The reMarkable desktop app connects your Windows or Mac computer to the cloud storage. Upload the notebook file *\**

The page created by drawj2d should now appear in the notebook *thales* on your reMarkable tablet. You can edit it like a page drawn directly on the device.

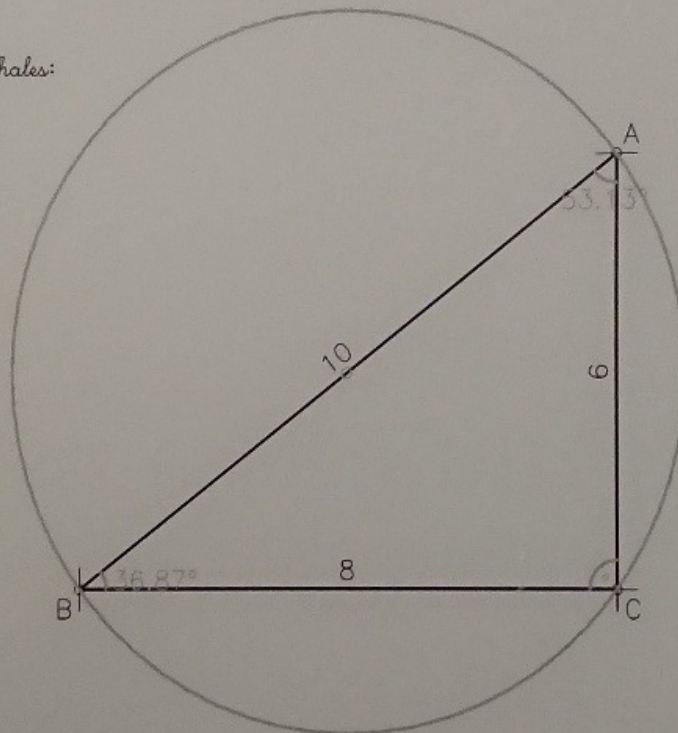
10.01.2021

# Thales, Pythagoras

Using drawj2d (<https://drawj2d.sourceforge.io>)

wiki <https://sourceforge.net/p/drawj2d/wiki/reMarkable>

Thales:



Angles:  $\alpha + \beta + \gamma = 53.13 + 36.87 + 90 = 180^\circ$

Pythagoras:

$$\left. \begin{array}{l} a^2 + b^2 = 8^2 + 6^2 = 100 \\ c^2 = 10^2 = 100 \end{array} \right\} \rightarrow a^2 + b^2 = c^2$$

## Input files

Embed a pdf page. In the most simple case the drawj2d input file (suffix *.hcl*) contains just one line.

```
image page.pdf
```

### reMarkable 2:

Embed page 5 of an A4 sized (297mm x 210mm) pdf file, scale to fit the tablet height ( $297 * 0.7 = 208\text{mm} < 209\text{mm}$ ), right justified ( $9 + 210 * 0.7 = 156\text{mm} < 157\text{mm}$ ).

```
moveto 9 0
image article.pdf 5 0 0 0.7
```

### reMarkable Pro:

Embed page 5 of an A4 sized (297mm x 210mm) pdf file, scale to fit the tablet height ( $297 * 0.8 = 238\text{mm} < 239\text{mm}$ ), right justified ( $210 * 0.8 = 168\text{mm} \leq 179\text{mm} - 11\text{mm}$ ).

```
image article.pdf 5 0 0 0.8
```

For more options refer to the [manual](#). Pdf files are interpreted, thus drawj2d redraws the vector data (instead of embedding a picture). Thus the rM notebook page will consist of lines that can be edited on the device. Fonts will render as outlines (limitation of the rM notebook file format).

More information - [Drawj2d web site](#) - [Wiki Examples page](#) - [Drawj2d Manual](#)

Is the program useful for you? Consider [supporting Drawj2d](#).

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## Example drawj2d input file *thales.hct*

```
font Lines

moveto 15 10; label {Geometry} BL
movetox 140; label "[today]" BW

font bold 6
moveto 15 20
text {Thales, Pythagoras}
font plain 4
text {using Drawj2d (https://drawj2d.sourceforge.io)}
text {wiki https://sourceforge.net/p/drawj2d/wiki/reMarkable}

moveto 15 50
font italic
label {Thales:}

moveto 30 120
block
  unitlength 1.0 cm
  set B {0 0}
  set C {8 0}
  set A {8 -6}
  dimline dots; font plain
  dimline $B $C; label C SE
  dimlineto $A; label A NE
  dimlineto $B; label B SW
  pen gray
  dimangle $B $A $C
  dimangle $C $B $A
  dimangle $A $C $B
  dot [geom.online $A $B 0.5]
  circle [geom.dist $A]
endblock

pen black
moveto 15 150
font italic
label {Angles:}
moverel 25 0
font plain
label { $\alpha + \beta + \gamma =$  }

moveto 15 160
font italic
label {Pythagoras:}
moverel 25 7
font plain
label { $a^2 + b^2 =$  }
moverel 0 7
label { $c^2 =$  }
```