

# Drawj2d / Wiki / reMarkable

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
```

It writes a notebook file *out.rmn*. Then upload it using [RCU](#).

For multipage pdf have a look at [pdf2rmnotebook](#) (Linux).

## 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`

- device screen width  $\cong$  157 mm, height = 209 mm
- monochrome display, drawj2d will map colours to black, grey or white
- a line font is implemented in drawj2d: *font Lines* or *font Lines italic*. Truetype fonts will display the outlines only
- images will be approximated with black 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 want to upload it to the cloud storage choose the output types *rmapi* (zip archive) or *rm* (raw page data).

- RCU (tar of notebook) : `drawj2d -Trmn thales.hcl  $\rightarrow$  out-thales.rmn`
- rMAPI (zip of notebook): `drawj2d -Trmapi thales.hcl  $\rightarrow$  out-thales.zip`
- rMAPI (single page): `drawj2d -Trm thales.hcl  $\rightarrow$  out-thales.rm`

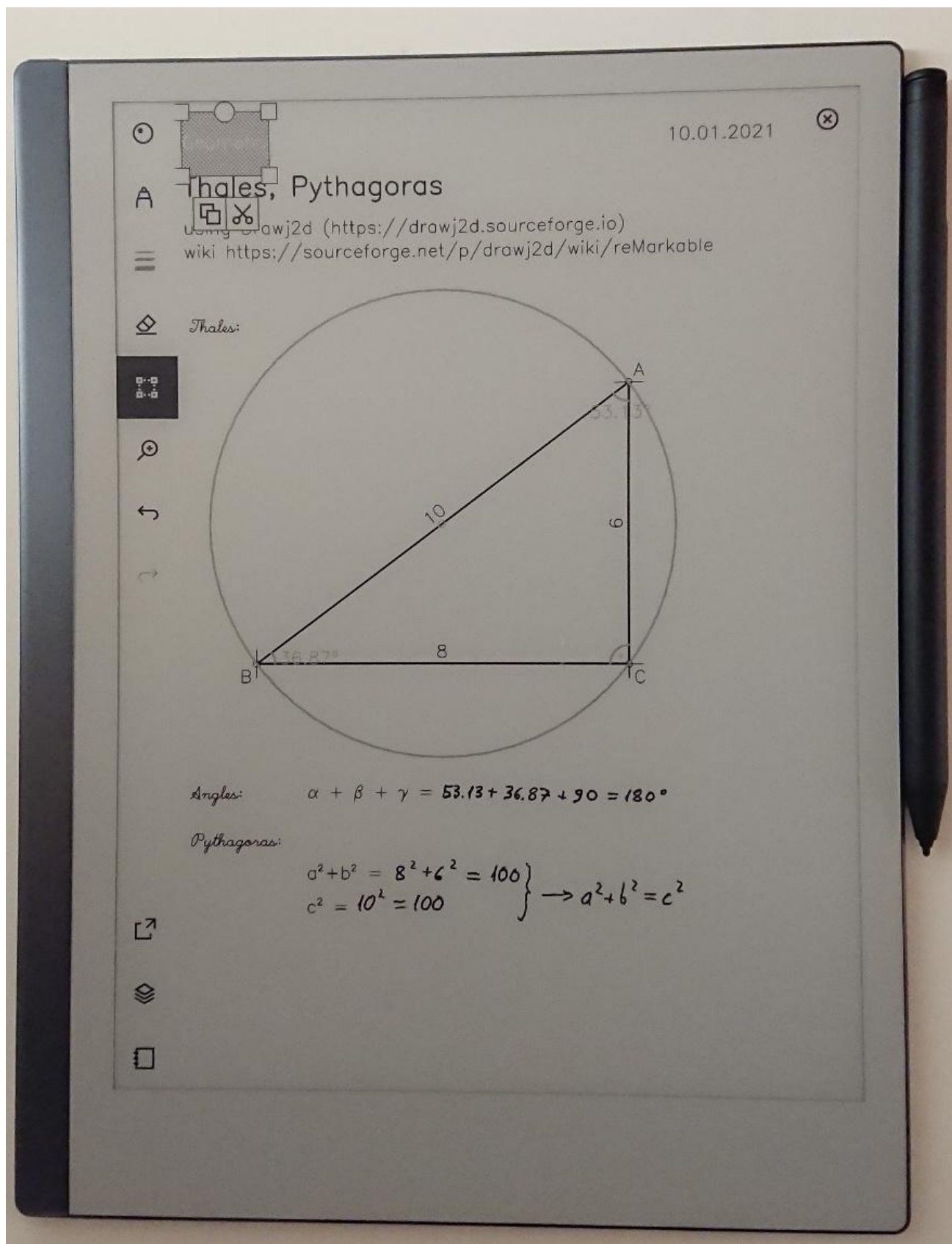
### 3. Upload the notebook to the device using [RCU](#)

- 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.

### 4. Upload the notebook to the cloud storage using [rMAPI](#)

- `rmapi put out-thales.zip`
- There are downloads for Linux, Mac and Windows. For Windows the program file is *rmapi.exe*, add the suffix ".exe" if it is missing.
- The first time rMAPI connects to the cloud storage you are prompted to enter a one-time code (log into your reMarkable account to get it).

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



## Input files

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

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
```

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](#).

## Example drawj2d input file *thales.hcl*:

```
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 { $c^2 =$  }
```