

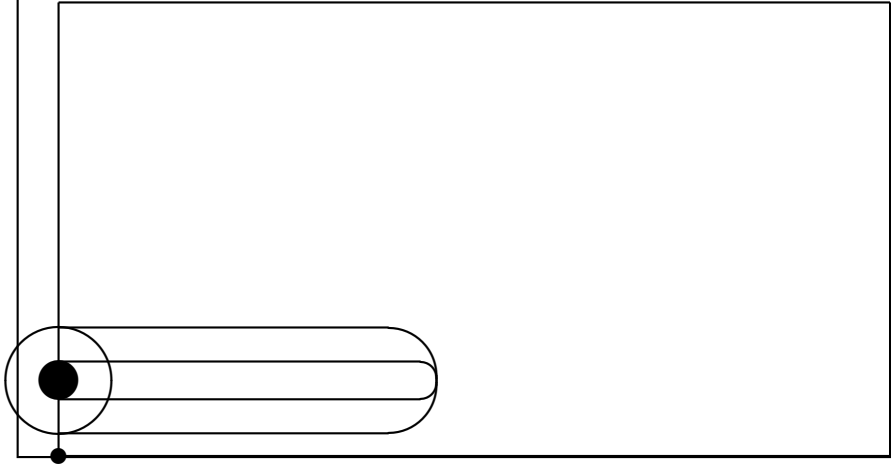
LaTeX Experiments
Part II: Pictures

AeAeA

January 24, 2020

1 Picture environment

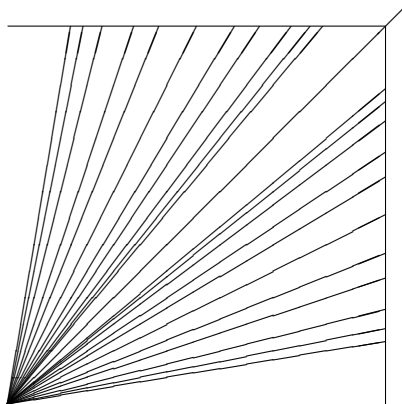
- <https://en.wikibooks.org/wiki/LaTeX/Picture>
- https://www.overleaf.com/learn/latex/Picture_environment



1.1 line

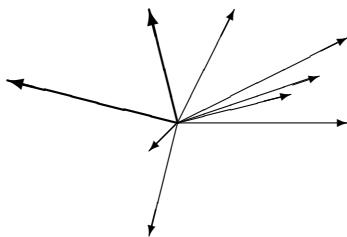
`\put(x,y){\line(x1,y1){length}}`

The components of the direction vector (x_1, y_1) of the line segment `\line(x1,y1){length}` are restricted to the integers $(-6, -5, \dots, 5, 6)$ and they have to be coprime. The figure below illustrates all 25 possible slope values in the first quadrant.



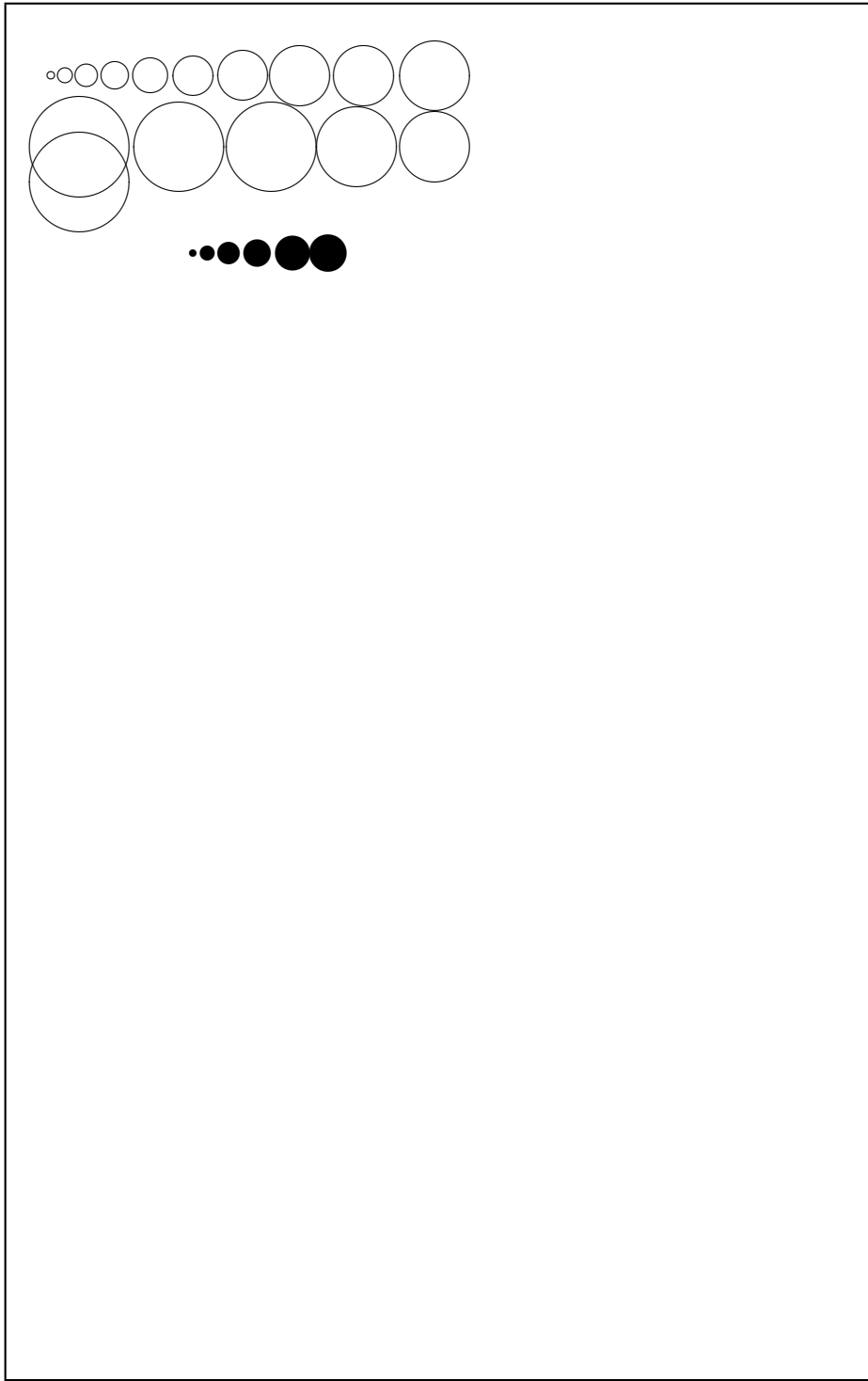
1.2 vector

For vectors, the components of the direction vector are even more narrowly restricted than for line segments, namely to the integers $(-4, -3, \dots, 3, 4)$. Components also have to be coprime. Notice the effect of the `\thicklines` command on the two arrows pointing to the upper left.



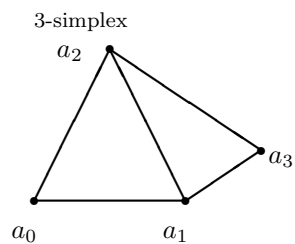
1.3 circle

The `picture` environment only admits diameters up to approximately 14mm (40pt) for circles and 5mm (14.2pt) for disks, and even below this limit, not all diameters are possible.

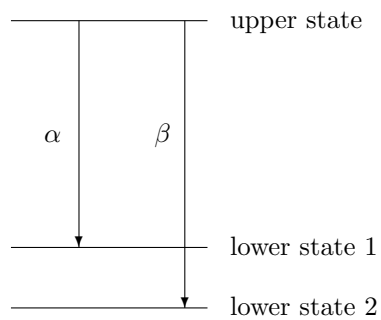


1.4 layout, vector and qbezier

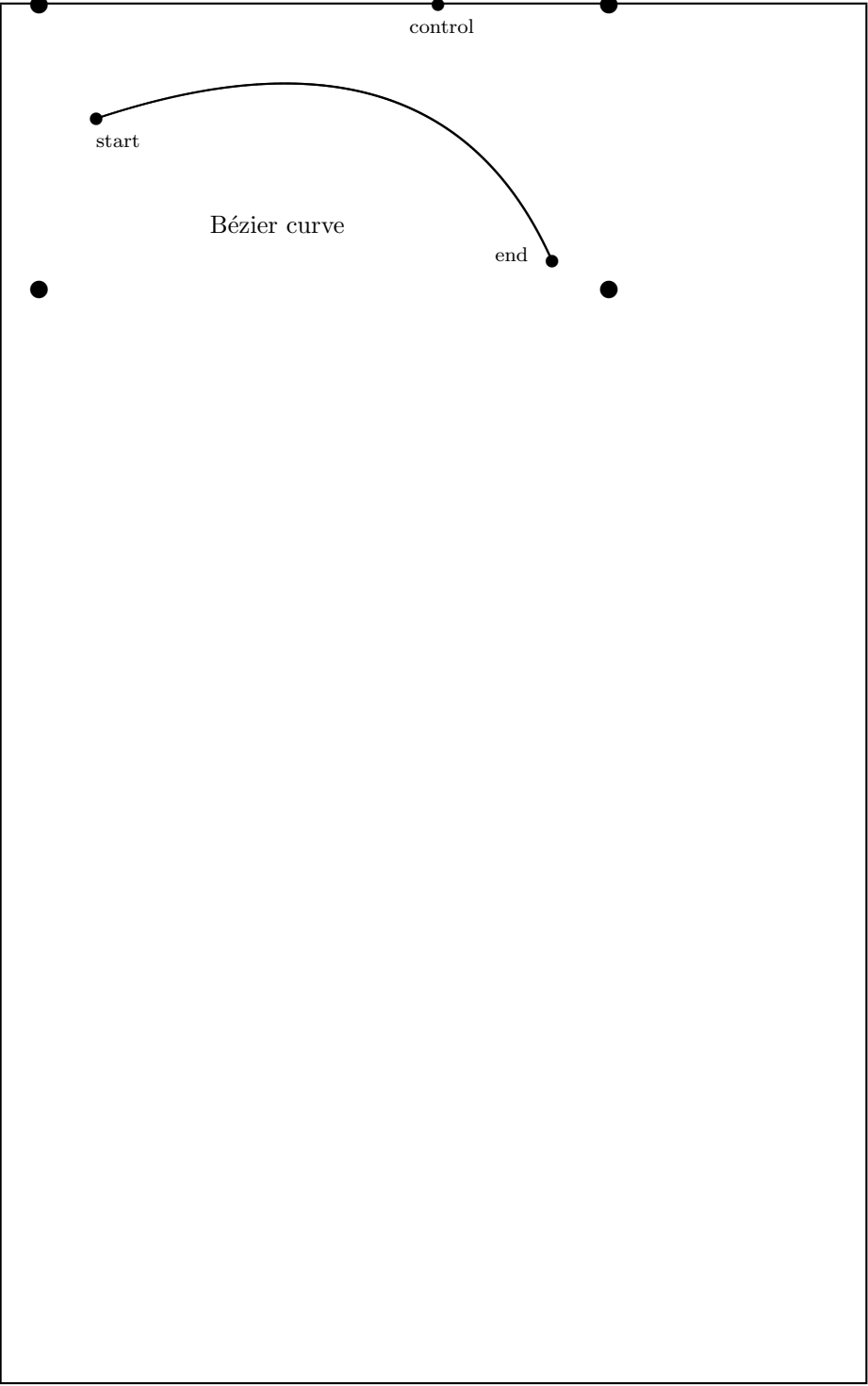
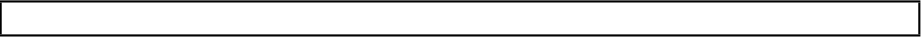
Above is the the picture in first paragraph (no indent), below is picture in next paragraph (with indent).



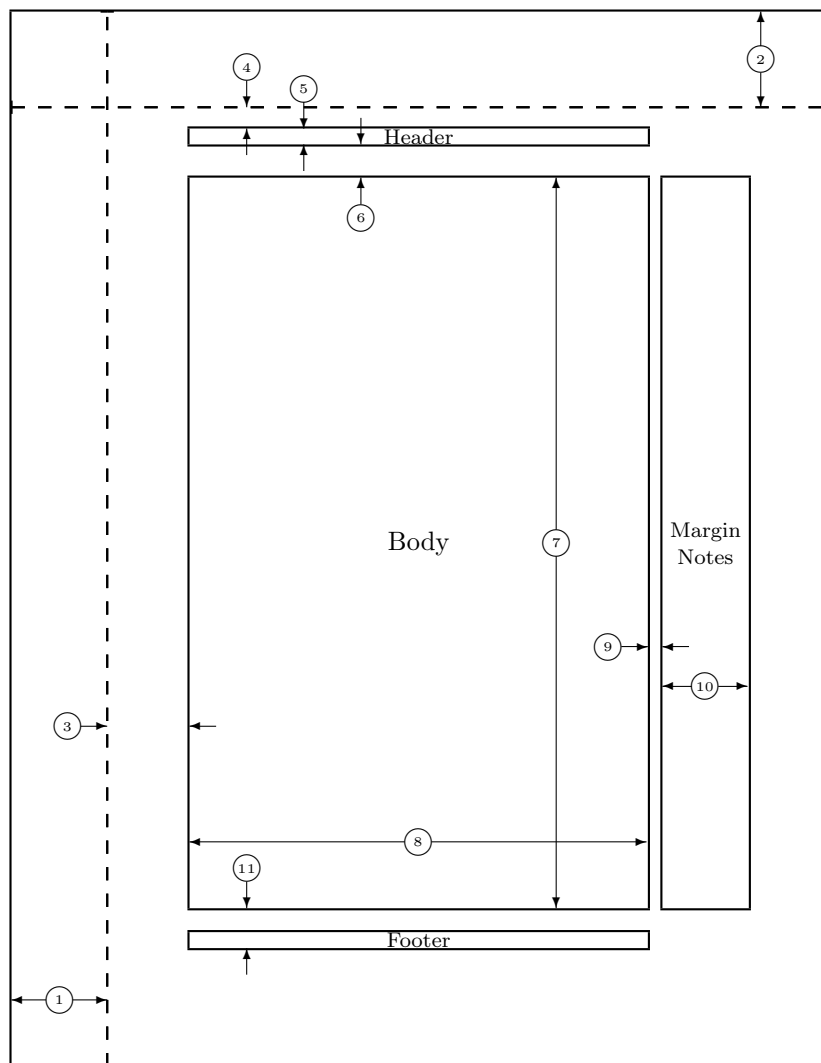
Some text to demonstrate different effect of `\noindent` on text (here) and on picture (above and below). Compare the four corner dots for pictures above and below.



Regular paragraph (without `\noindent`).



The current page layout picture below is generated by calling command `\layout*` from `\usepackage{layout}`.¹



- | | |
|-------------------------|----------------------------------|
| 1 one inch + \hoffset | 2 one inch + \voffset |
| 3 \oddsidemargin = 62pt | 4 \topmargin = 16pt |
| 5 \headheight = 12pt | 6 \headsep = 25pt |
| 7 \textheight = 550pt | 8 \textwidth = 345pt |
| 9 \marginparsep = 11pt | 10 \marginparwidth = 65pt |
| 11 \footskip = 30pt | \marginparpush = 5pt (not shown) |
| \hoffset = 0pt | \voffset = 0pt |
| \paperwidth = 614pt | \paperheight = 794pt |

¹An example footnote.