

Beamer Slides using Pandoc and Markdown

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Introduction

Why Markup Language?

- ▶ Separate “content” with “style”.

Why Pandoc and Beamer?

- ▶ For professional presentation.
- ▶ Tikz diagrams.



A simple example intro.md

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...

Introduction

Why Markup Language?

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Why Beamer?

- For professional presentation.
- Tikz diagrams.



A simple header beamer.yaml

```
---
fontsize: 10pt
classoption:
  - serif,onlymath
institute: Fudan University
date: \today
header-includes:
  - \usetheme{default}
  - \usepackage[footnotesize]{subfigure}
  - \usepackage{tikz,pgf,pgfplots}
  - \usetikzlibrary{arrows}
  - \definecolor{qqqqff}{rgb}{0.,0.,1.}
  - \newcommand{\columnbegin}{\begin{columns}}
  - \newcommand{\columnsend}{\end{columns}}
  - \newcommand{\col}[1]{\column{#1}}
  - \pgfdeclareimage[height=0.5cm]{fudan-logo}{fudan-logo.jpg}
  - \logo{\pgfuseimage{fudan-logo}}
...
```



Render Mathematical Equations using LaTeX

Consider the following problem:

```
$$\begin{array}{ll} \text{\texttt{\text{minimize}}} & f_0(x), \\ \text{\texttt{\text{subject to}}} & F(x) \text{\texttt{\text{succ}eq}} 0, \end{array}$$
```

- $F(x)$: a matrix-valued function
- $A \text{\texttt{\text{succ}eq}} 0$ denotes A is positive semidefinite.

Consider the following problem:

$$\begin{array}{ll} \text{minimize} & f_0(x), \\ \text{subject to} & F(x) \succeq 0, \end{array}$$

- $F(x)$: a matrix-valued function
- $A \succeq 0$ denotes A is positive semidefinite.



How to make a two-column slide

```
\columnsbegin
```

```
\col{0.5\textwidth}
```

Left-hand side

```
\col{0.5\textwidth}
```

Right-hand side

```
\columnsend
```



Render Diagrams using Tikz

```
\begin{figure}[hp]
\centering
\input{pole2polar.tikz}
\caption{Example of constructing
the polar of a point}
\end{figure}
```



Figure 1: Example of constructing the polar of a point



Render Diagrams using Tikz

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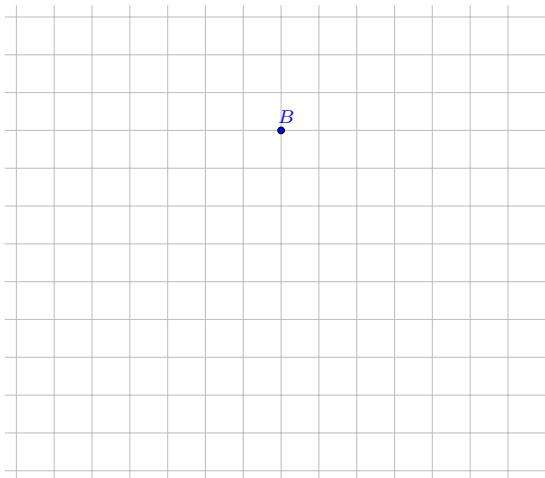


Figure 1: Example of constructing the polar of a point



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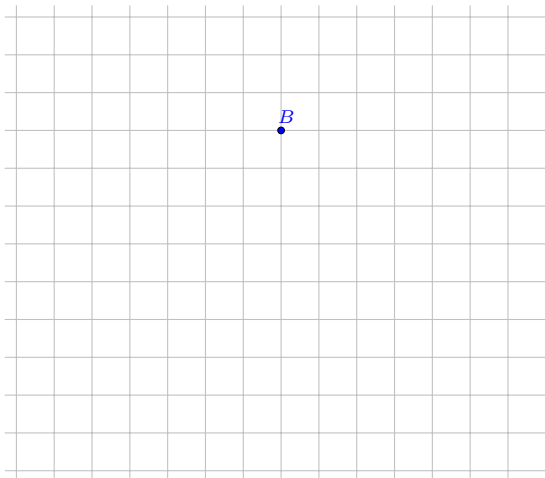


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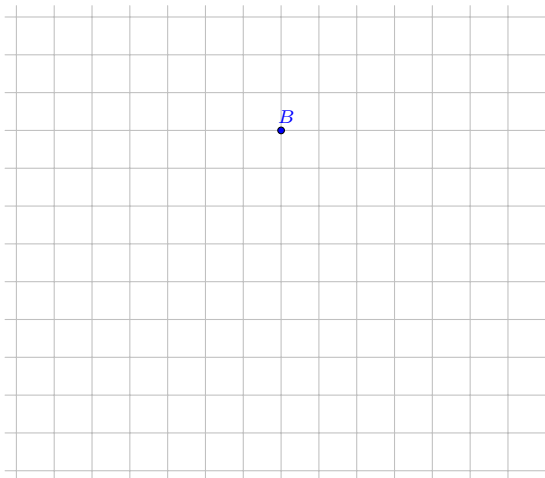


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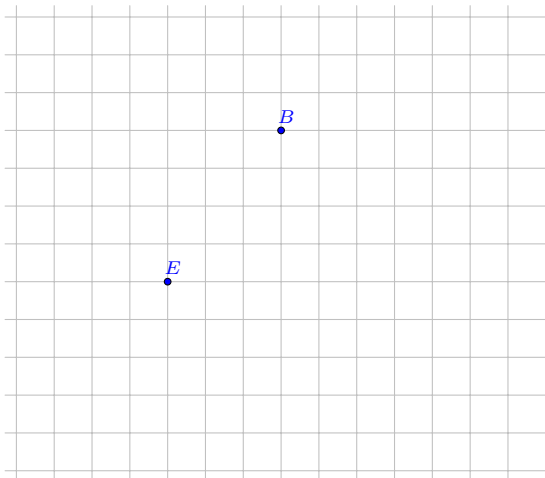


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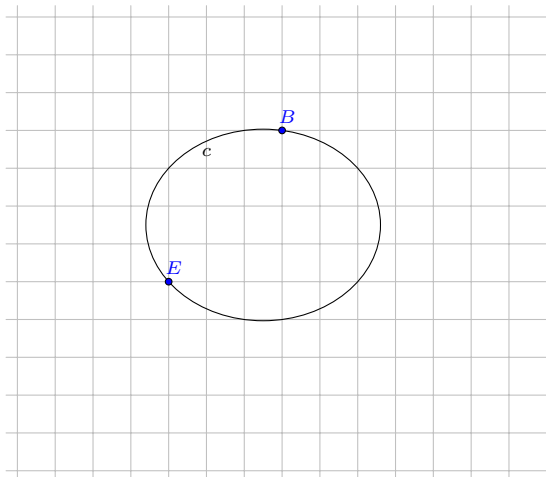


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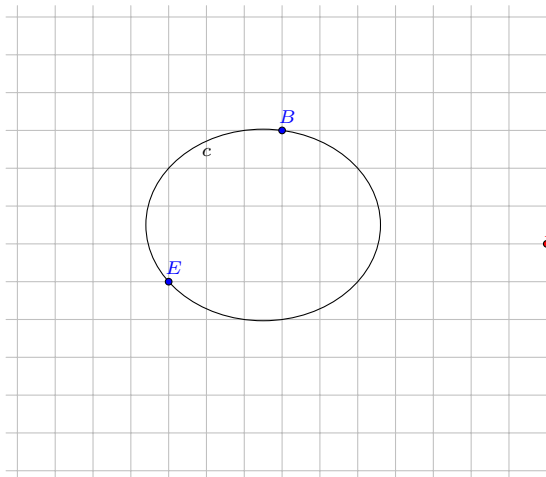


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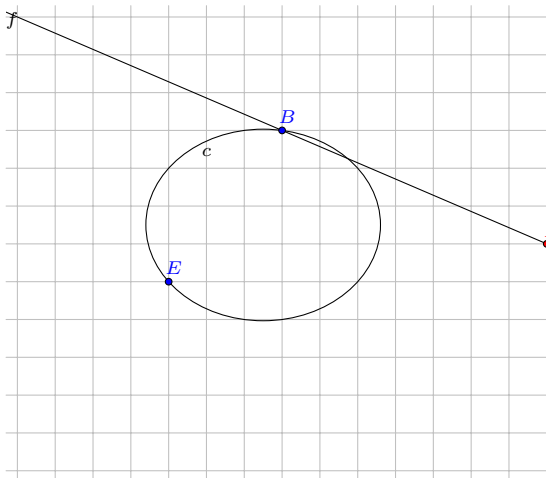


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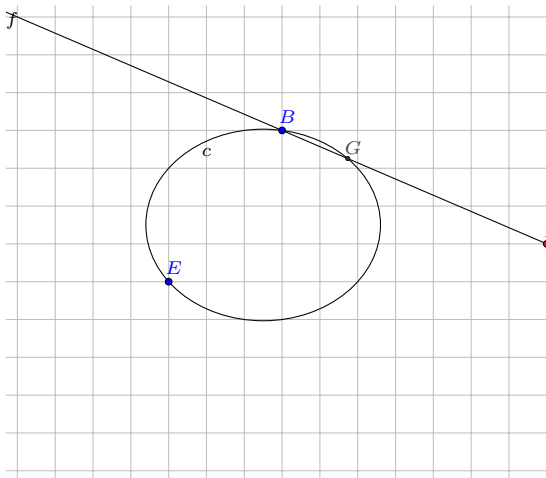


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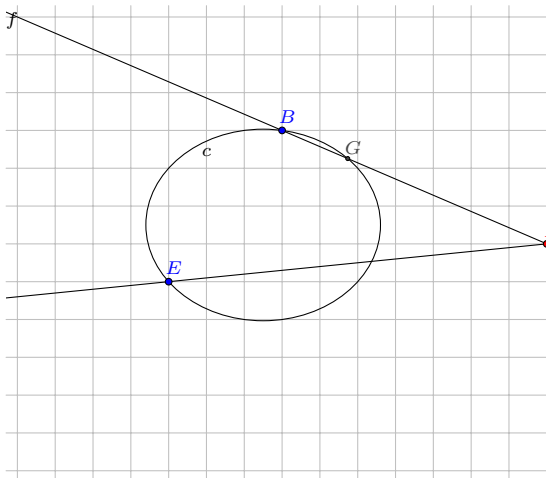


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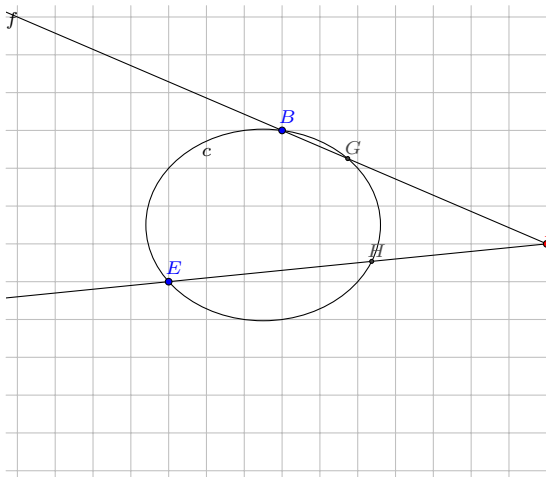


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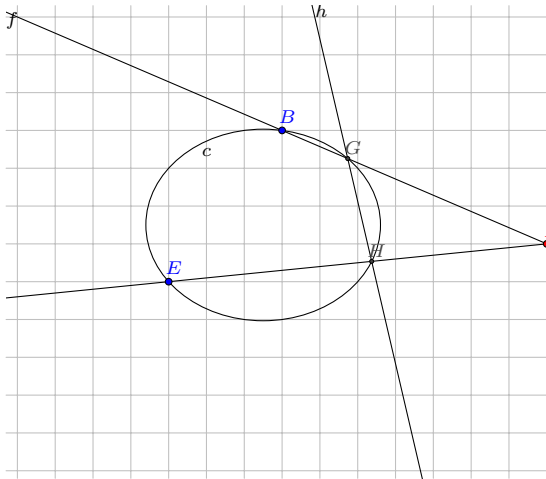


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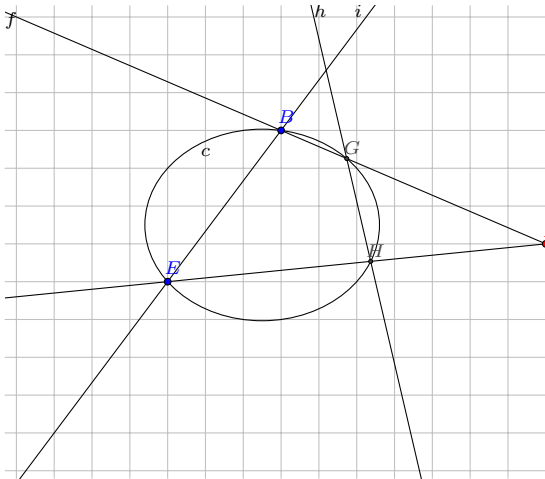


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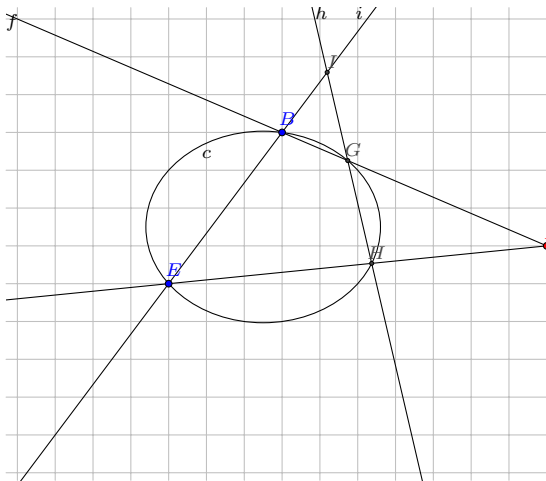


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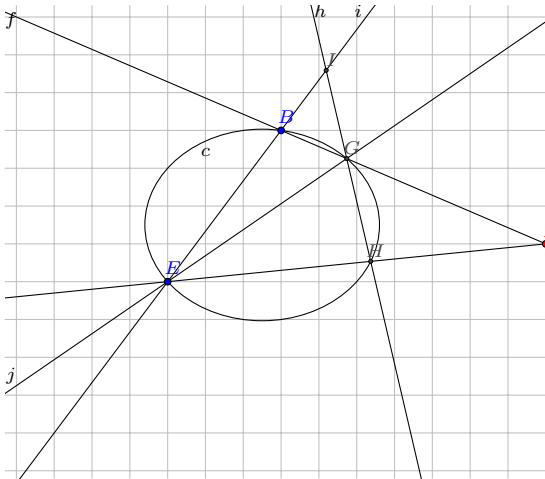


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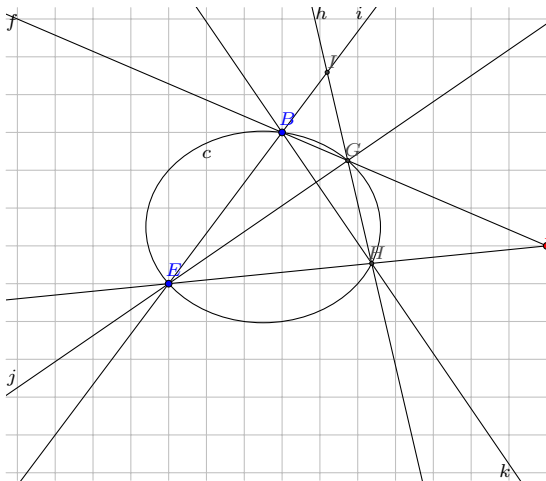


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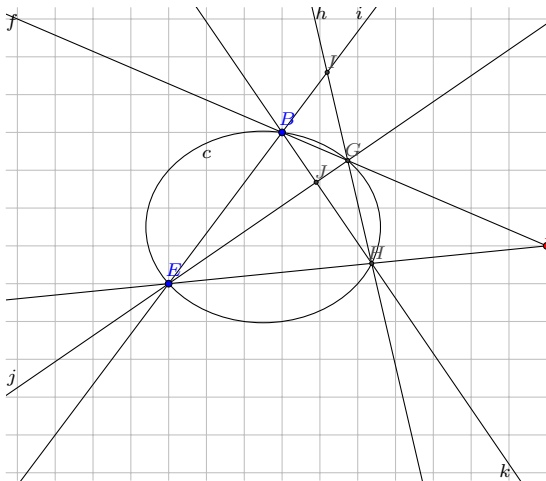


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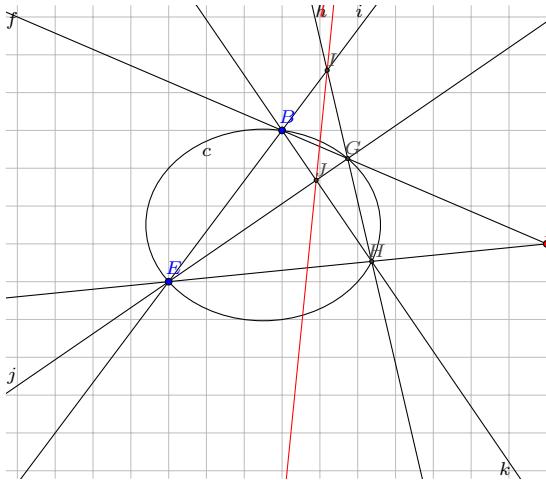


Figure 1: Example of constructing the polar of a point



Table

Costs	28nm	20nm
Fab Costs	3B	4B - 7B
Process R&D	1.2B	2.1B - 3B
Mask Costs	2M - 3M	5M - 8M
Design Costs	50M - 90M	120M - 500M

: Fab, process, mask, and design costs

Table 1: Fab, process, mask, and design costs

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Crossref



A sample crossref.yaml

```
---
cref: True
chapters: True
chaptersDept: 2
codeBlockCaptions: True
lofTitle: "## List of Figures"
lotTitle: "## List of Tables"
autoSectionLabels: True
figPrefix:
  - "Fig."
eqnPrefix:
  - "Eq."
tblPrefix:
  - "Table"
lstPrefix:
  - "Listing"
secPrefix:
  - "§"
...
```



References



Compile

```
pandoc -s -t beamer beamer.yaml intro.md -o intro.tex
```

