Draw Pictures in LaTeX

With `tikz/pgf`

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Basic Example

- The pgf/tikz package allows you to draw pictures from within your LaTeX document.
- It enables you to create vector graphics without the need for external tools.
- The syntax of tikz involves programming the vector graphics using predefined macros.
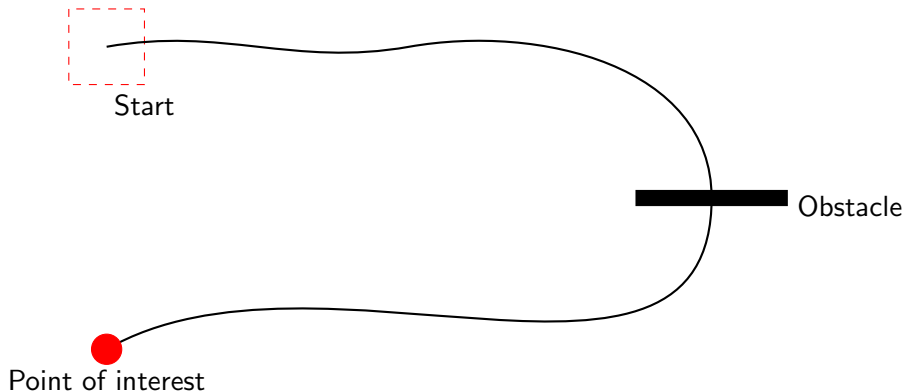
A Basic Example

Figure: Example graphic made with `tikz`.

The Syntax of `tikz`

- To draw elements with `tikz`, we use the `\draw` command.
- Options for color, line style, etc., can be specified in brackets.
- Coordinates are specified in Cartesian coordinates.
- Text is placed using `node` commands.
- Each command inside the `tikzpicture` environment should be terminated with a semicolon.

The Syntax of `tikz` (contd.)

- Lines can be drawn by specifying a path using the `\draw` command and the `to` command.
- Bending of lines can be achieved by setting the `in` and `out` angles.
- There are many more options available for customizing the graphics.
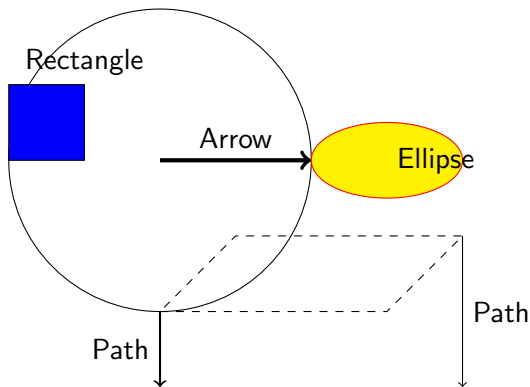- `tikz` integrates smoothly with the rest of your document.

Figure: Additional examples using `tikz`.