

L^AT_EX

Functions

To define:

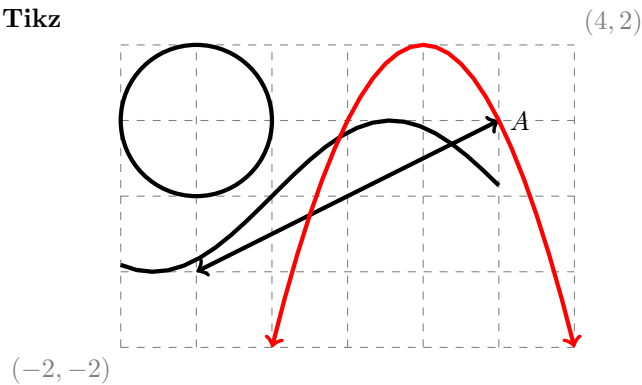
```
\newcommand{\commandName}[numArgs]{  
    function definition here  
    use #1 to reference the first argument, #2 to reference the second, etc  
}
```

To use:

```
\commandName{arg1}{arg2}...
```

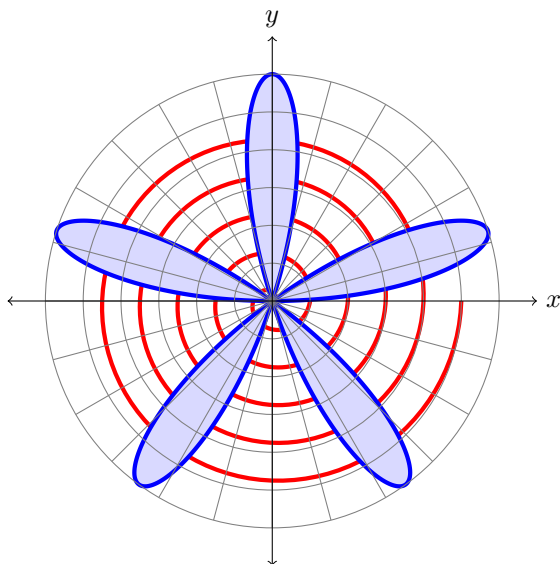
This will output the contents of the function's definition

Tikz



This plot was produced by the following:

```
\begin{tikzpicture}  
    \draw[dashed, gray] (-2,-2)node[below left]{ $(-2,-2)$ } grid (4,2)node[above right]{ $(4,2)$ };  
    \draw[ultra thick, <->] (-1,-1)--(3,1)node[right]{ $A$ };  
    \draw[ultra thick] (-1,1) circle (1);  
    \draw[ultra thick, domain=-2:3] plot (\x, {sin(\x r)});  
    \draw[ultra thick, domain=0:4, red, <->] plot (\x, {-(pow(\x,2)-4*\x+2)});  
\end{tikzpicture}
```



```
\begin{tikzpicture}[scale=.5]  
    \draw[ultra thick, red, domain=0:1800, samples=500] plot(\x: {\x / 360});  
    \draw[ultra thick, blue, domain=0:180, samples=500, fill=blue!15] plot (\x: {6*sin(5*\x)});  
    \foreach \x in {1, 2, ..., 6}  
        \draw[gray] (0,0) circle (\x);  
\end{tikzpicture}
```

```

\foreach \a in {15, 30, ..., 345}
  \draw[gray] (0:0) -- (\a:6);
\draw[<->] (-7,0)--(7,0) node[right]{$x$};
\draw[<->] (0,-7)--(0,7) node[above]{$y$};
\end{tikzpicture}

```

Links

`\href{target}{text}` to do a normal hyperlink
`\hyperlink{targetName}{text}` to link to other locations in the document; the target name should be unique; use it in `\hypertarget{targetName}{text}`
`\footnote{footnote text}` to insert a footnote; this will generate the correct number where the command is and link it to the text in the footer

Miscellaneous

`\includegraphics[scale=1]{filename.png}` to do an image
`\begin{tabular}[p|p|p]` where `p` is either `l`, `r`, or `c` (alignment of the column)
 and `|` indicates whether or not there's a vertical line
 - use `&` to separate columns in a line and `\\` to separate lines
 - use `\hline` to draw a horizontal line
`\begin{array}[ppp]` works similarly
 - must be in math mode (wrap the array in `$`)
 - I don't think you can have column separators?
`\begin{enumerate}` makes a numbered list; `\begin{itemize}` just gives you bullet points
 - use options with `enumerate` to get custom numbering (roman numerals, alphabet, etc.)
 - ex. `\begin{enumerate}[(a)]` to get (a), (b), (c) and so forth
`\textit{}` is italics, `\textbf{}` is bold
`\hrule` makes a horizontal line across the page
`\hfill` adds as much horizontal whitespace as needed to make the line's contents take up the whole page
`\frac{top}{bottom}` makes a fraction, `\dfrac{top}{bottom}` gives it more vertical space
`\newpage` and `\pagebreak` both create new pages (I Think new page spaces the previous page nicely, page break breaks it off as is)