α-$\mathbf{T_EX}$

LaTeX Meets Wolfram

α-$\mathbf{T_EX}$is a LaTeX package which incorporates the typesetting ease on control of LaTeX with the power of the Wolfram Language. Some examples are seen below.

```
\usepackage{alphatex}
```

Graphics

```
\graphic{Plot[ Tan[x], {x, 0, 2*Pi}]}{tan}

\begin{figure}[h!]
\centering
\includegraphics[width=0.6\textwidth]{tan.png}
\caption{Plot of $\tan(x)$ generated with the Wolfram API}
\end{figure}
```

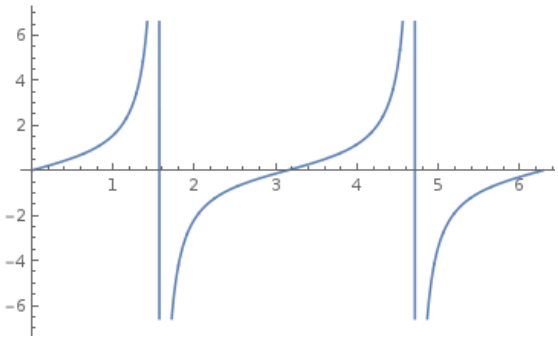

Figure 1: Plot of $\tan(x)$ generated with the Wolfram API

```
\graphic{ListPlot[ {1,2,2.5,2.9,3} ,PlotStyle->Red,Axes->False,Frame->True]}{plot}

\begin{figure}[h!]
\centering
\includegraphics[width=0.6\textwidth]{plot.png}
\caption{Some points plotted with the Wolfram API}
\end{figure}
```

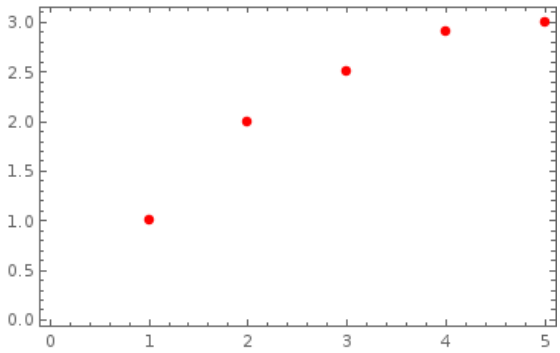

Figure 2: Some points plotted with the Wolfram API

Calculations

```
3\times4\sin\left(\frac{\pi}{4}\right)=$\calc{3*4 Sin[Pi/4]}$
```

$3 \times 4 \sin\left(\frac{\pi}{4}\right) = 6\sqrt{2}$

```
\int_{10}^{30} e^{x} dx=$\calc{Integrate [Exp[x], {x,10,35}]//N}$
```

$\int_{10}^{30} e^{x} dx = 1.58601 \times 10^{15}$

```
$\frac{d}{dx}x^2\log(x)=\calc{D[x^2 Log[x], x]}$
```

$\frac{d}{dx} x^2 \log(x) = x + 2x \log(x)$

Wolfram Alpha

```
The biggest city in china is $\WolframAlpha{ biggest city in china }$.
```

The biggest city in china is Shanghai.

```
The integral of $\sin(x)$ is $\WolframAlphaMath{ integrate sinx }$.
```

The integral of $\sin(x)$ is $-\cos(x)$.