

# CTIC – $\text{\LaTeX}$ Ti**k**Z BÁSICO

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## Parte IX

# Ti<sup>k</sup>Z básico

## 1 Ti<sup>k</sup>Z básico

```
\usepackage{tikz}
```

```
\tikzset{opciones}
```

```
\usetikzlibrary{...}
```

### 1.1 Entornos, ámbitos

```
\begin{tikzpicture}[opciones]  
...  
\end{tikzpicture}
```

```
\tikz[opciones]{..}
```

### 1.2 Sintaxis para los caminos

```
\path ____;
```

```
\path ____ ( , ) ( , ) ____;
```

```
\path ____ ( , ) -- ( , ) ____;  
\path ____ ( , ) -- cycle;
```

```
\path ____ ( , ) -| ( , ) ____;  
\path ____ ( , ) -| cycle;
```

```
\path ____ ( , )|-( , )____;  
\path ____ ( , )| -cycle;
```

```
\path ( , )____ rectangle ( , ) ____;
```

- rounded corners

```
\path ( , ) circle[opciones] ____;
```

Entre las opciones tenemos:

- x radius=...
- y radius=...
- radius=...
- rotate=...

```
\path ( , ) grid[opciones] ( , );
```

Algunas opciones son:

- step=
- xstep=
- ystep=
- help lines

```
\path ( , ) to[opciones] ( , );
```

Entre las opciones tenemos:

- out=
- in=

### 1.3 Acciones sobre caminos

```
\draw ≡ \path[draw]
```

```
\fill ≡ \path[fill]
```

```
\filldraw ≡ \path[fill,draw]
```

```
\useasboundingbox ≡ \path[use as bounding box]
```

```
color=  
draw=color
```

```
line width=  
ultra thin  
very thin  
thin  
semithick  
thick  
very thick  
ultra thick
```

```
solid  
dotted  
densely dotted  
loosely dotted  
dashed  
densely dashed  
loosely dashed
```

```
double=color_medio  
double distance=  
fill=color
```

## 1.4 Flechas

```
arrows=comienzo-final
```

```
\usetikzlibrary{arrows.meta}
```

```
length=  
width=  
scale=  
scale length=  
scale width=  
color=  
fill=
```

```
Arc Barb[]  
Bar[]  
Bracket[]  
Hooks[]  
Parenthesis[]  
Straight Barb[]  
Tee Barb[]  
  
Classical TikZ Rightarrow[]  
Computer Modern Rightarrow[]  
Implies[]  
To[]  
  
Circle[]  
Diamond[]  
Ellipse[]  
Kite[]  
Latex[]
```

```

Latex[round]
Rectangle[]
Square[]
Stealth[]
Stealth[round]
Triangle[]
Turned Square[]

Circle[open]
Diamond[open]
Ellipse[open]
Kite[open]
Latex[open]
Latex[round,open]
Rectangle[open]
Square[open]
Stealth[open]
Stealth[round,open]
Triangle[open]
Turned Square[open]

```

## 1.5 Nodos

```
\path ( , ) node [opciones](nombre)at( , ){contenido}
```

Una de las opciones es:

- shape= (rectangle o circle)

```
\node at ( , ){____} ≡ \path ( , )node{____}
```

```

inner sep=
inner xsep=

```

```

inner ysep=
outer sep=
outer xsep=
outer ysep=

minimum height=
minimum width=
minimum size=

shape aspect=
text=
color
node font=
font=
text width=
align= left, flush left, right, flush right,
        center, flush center, justify
above=
below=
left=
right=
above left
above right
below left
below right
centered

```

## 1.6 Trazado de funciones

```
\path ( , ) plot[opciones locales] ( , ) ;
```

Opciones locales:

- variable=
- samples=
- domain=start:end
- smooth
- tension=
- smooth cycle

## 1.7 Transformaciones

```
shift={coordinate}  
xshift=dimensión  
yshift=dimensión  
scale=factor  
xscale=factor  
yscale=factor  
rotate=grados
```

## 1.8 Una llave grande

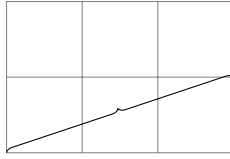
```
\usetikzlibrary{decorations.pathreplacing}
```

```
amplitude=  
aspect=
```

*Ejemplo 1.1.*

```
\begin{tikzpicture}  
\draw [help lines] grid (3,2);  
\draw [decoration=brace,decorate] (0,0) -- (3,1);  
\end{tikzpicture}
```





## 2 Bibliografía – Ti<sup>k</sup>Z Básico

### Bibliografía

- [1] The Comprehensive T<sub>E</sub>X Archive Network <https://www.ctan.org/tex-archive/graphics/pgf/base/doc>