

# Learning LaTeX - Day8

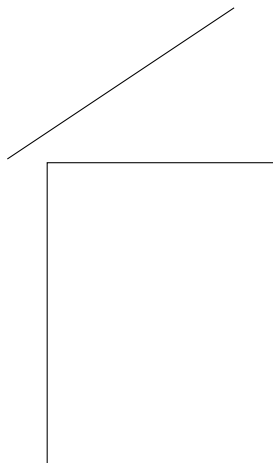
YL-TING

August 1, 2021

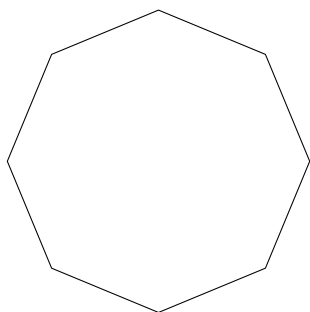
## Tikz

There is a red dot ● in the middle of this sentence.

## Basic Lines in Tikz



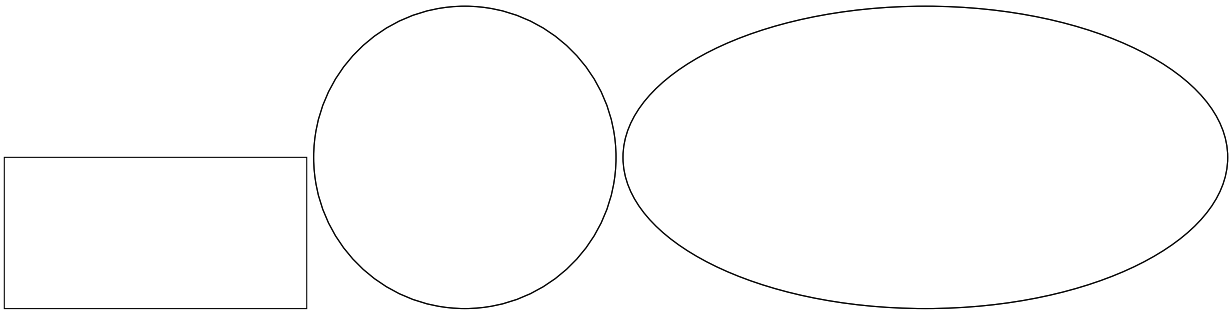
## Polar Coordinates



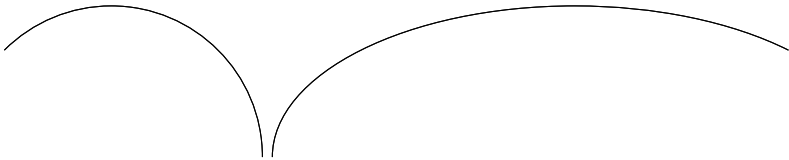
## Relative Coordinates



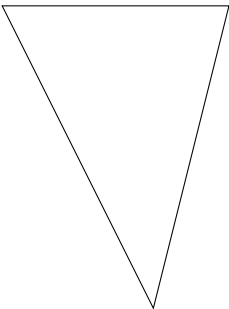
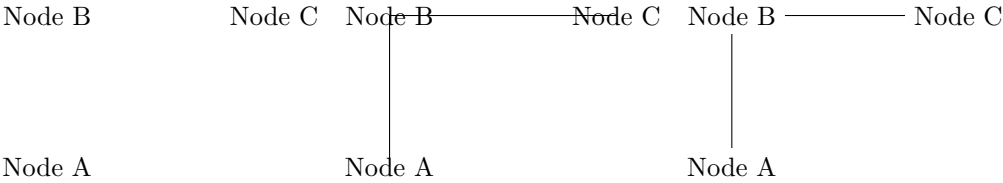
Shapes



Drawing Circular and Elliptical Arcs



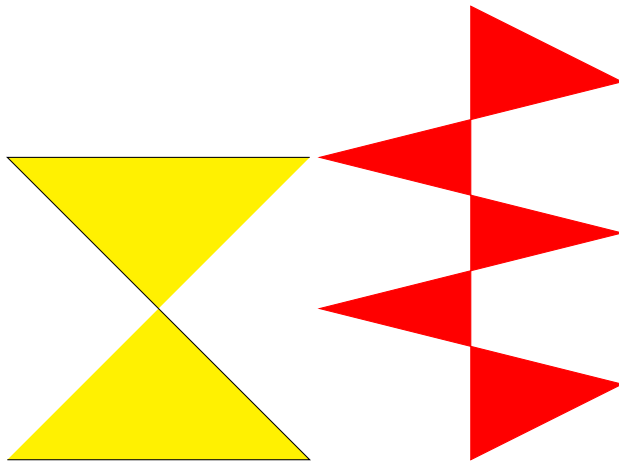
Nodes



Node Positioning

<div>node[above left] node[anchor=south east]</div> <div>Node</div>	<div>node[above] node[anchor=south]</div> <div>Node</div>	<div>node[above right] node[anchor=south west]</div> <div>Node</div>
<div>node[left] node[anchor=east]</div> <div>Node</div>	<div>node[anchor=center]</div> <div>Node</div>	<div>node[right] node[anchor=west]</div> <div>Node</div>
<div>node[below left] node[anchor=north east]</div> <div>Node</div>	<div>node[below] node[anchor=north]</div> <div>Node</div>	<div>node[below right] node[anchor=north west]</div> <div>Node</div>

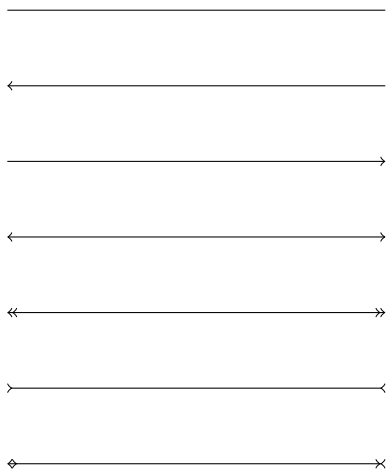
## Filling Shapes



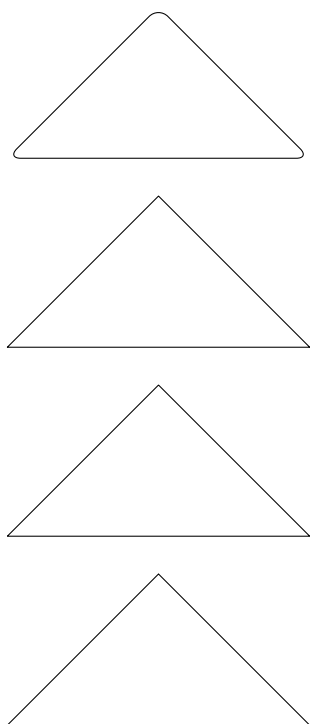
## Line Styles in TikZ



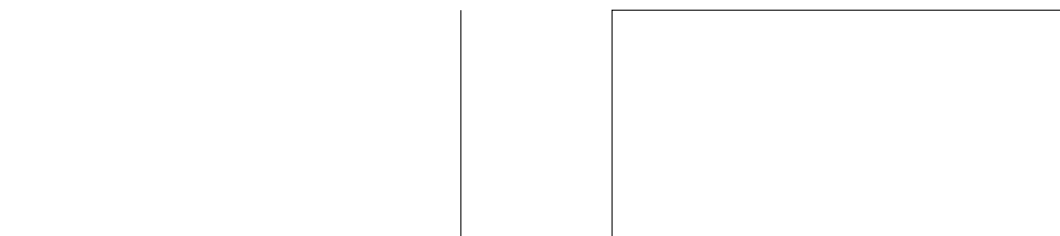
## Arrow Tips in TikZ



## Adjust the Corners



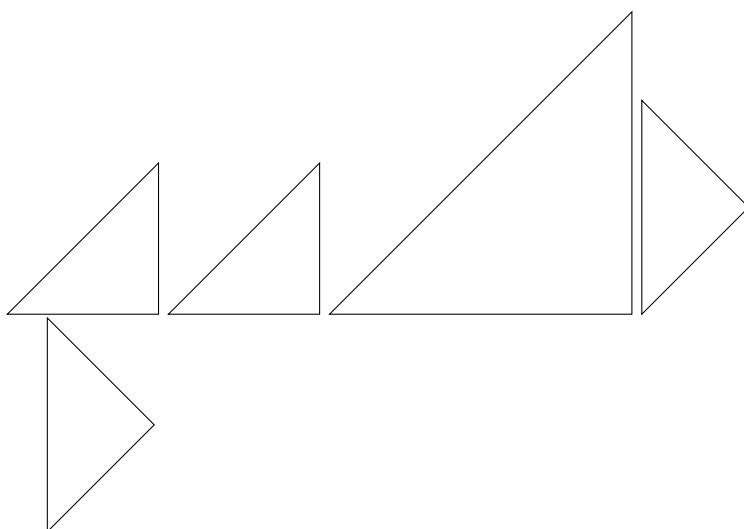
### Orthogonal Pathways

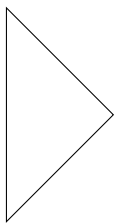


### Alternate Paths Between Points



### Transformations





## Node Border

Node

Node

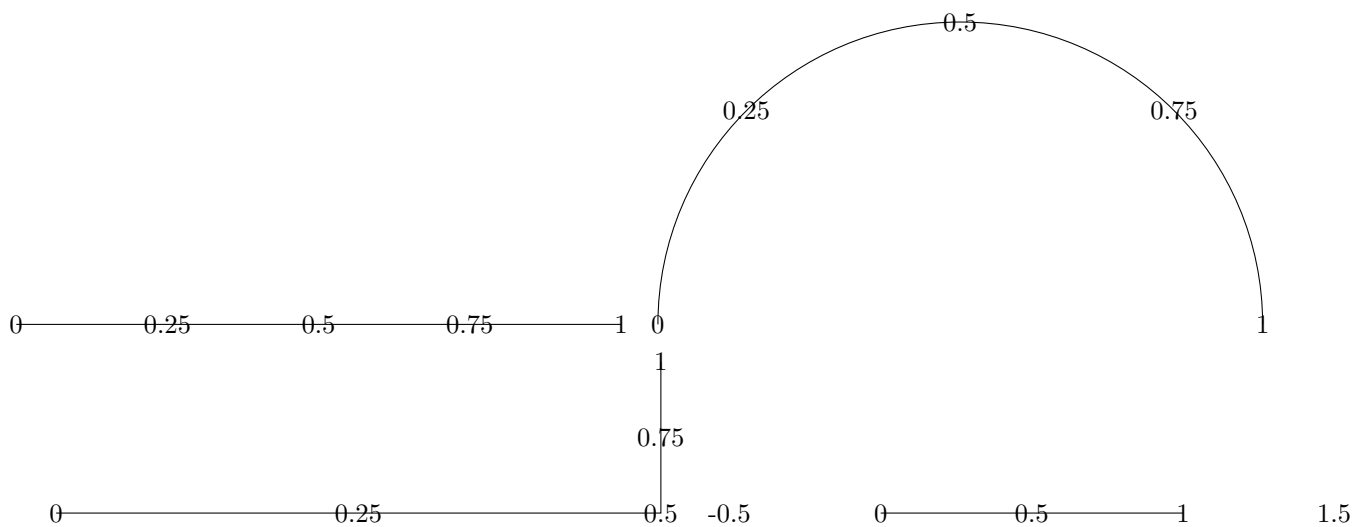
Node

Node

Node

Node

## Node Placement





## Math in Nodes

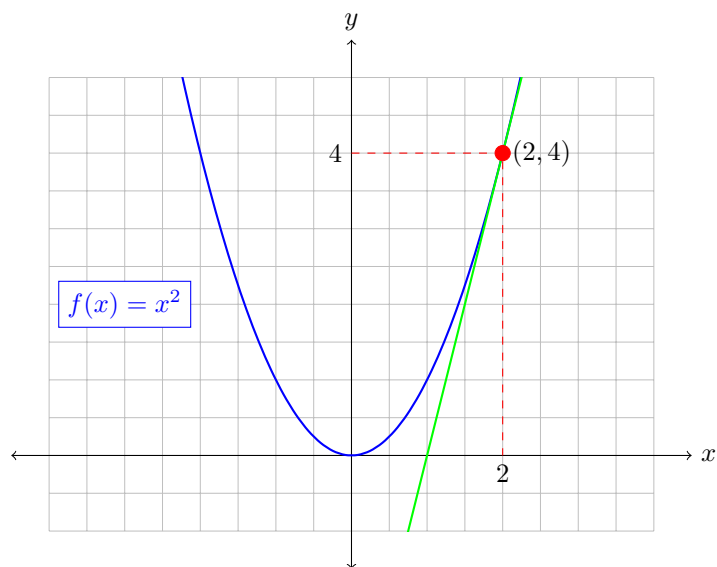
$$\sum_{n=1}^{\infty} \frac{1}{n^2} = \frac{\pi^2}{6}$$

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## Setting the Nodes Text Width

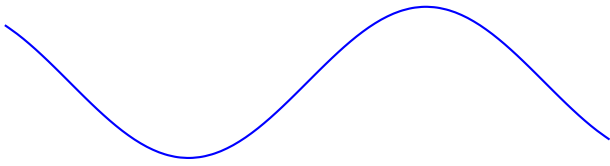
$$\sum_{n=1}^{\infty} \frac{1}{n^2} = \frac{\pi^2}{6}$$

## Drawing a Graph

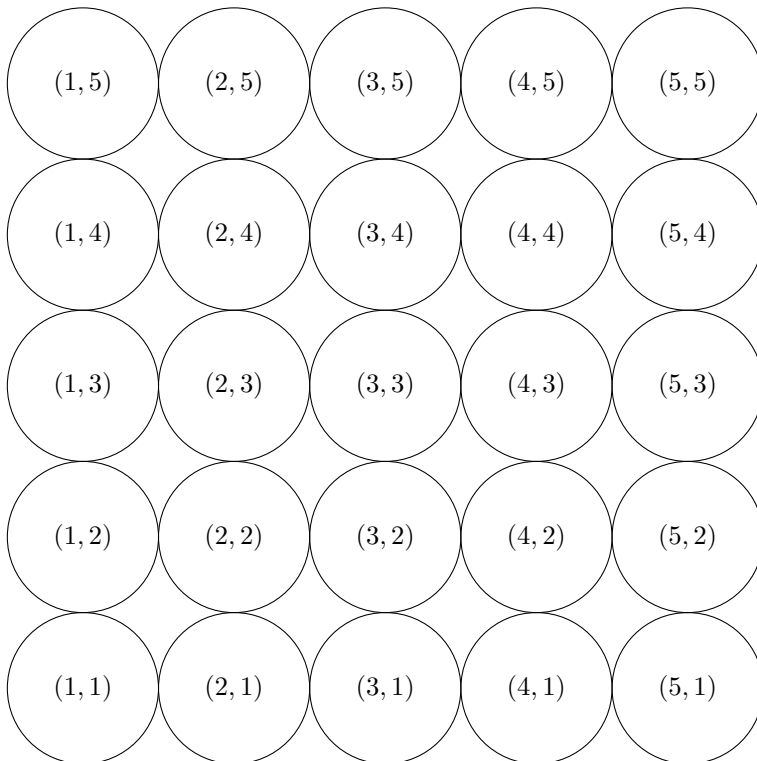


This annotation is clipped

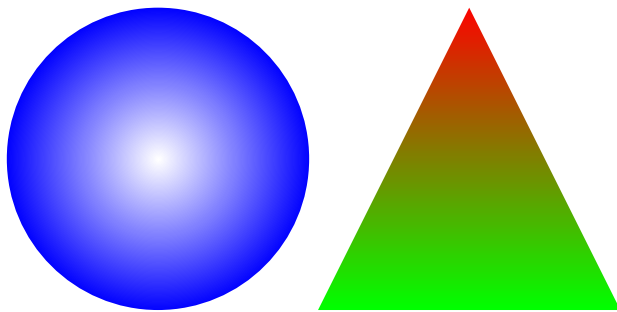
## More Graphs



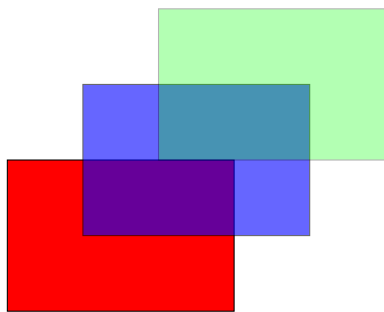
## For Loops



## Fancy Shading



## Opacity



## Going Further in TikZ

The TikZ manual is very large!

<http://www.texample.net/tikz/examples/>