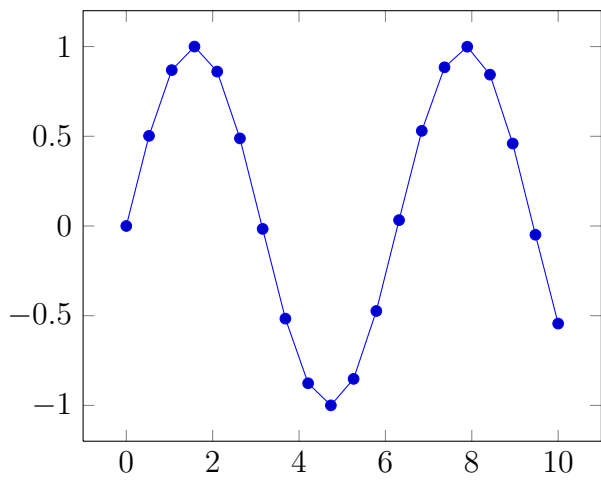


WARNING: This file is merely a copy-pasted version of the latex tests. It suffices to check whether the context version compiles and does roughly what is expected. The reference test is, however, only available for latex!

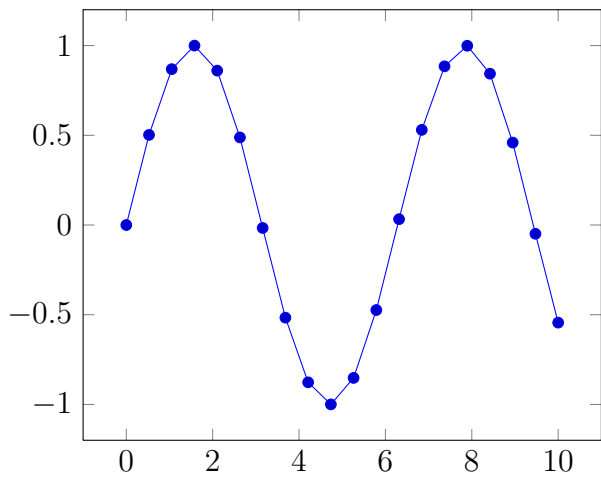
# 1 pgfplotstest.file.tex

## 1.1 ‘plot file’ test

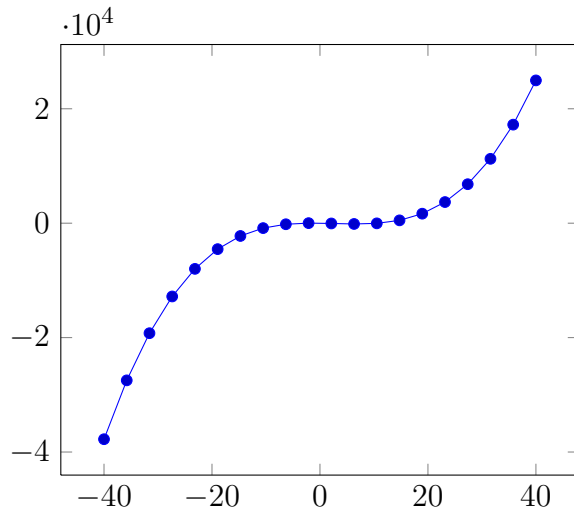
### 1.1.1 A file in gnuplot format ‘num num i’



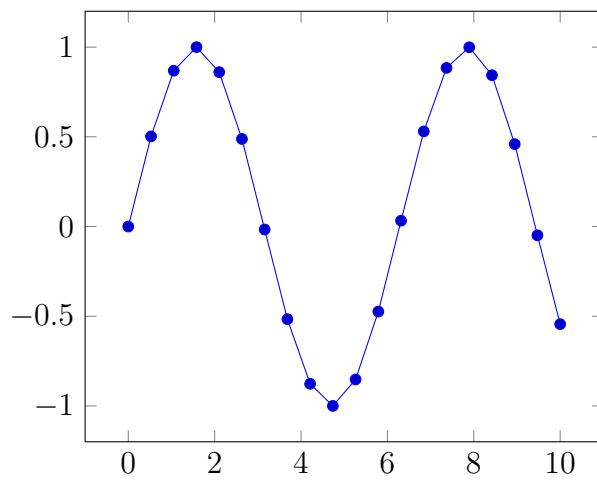
#### 1.1.1.1 Same file loaded with ‘plot table’



### 1.1.2 A file which differs slightly from gnuplot format

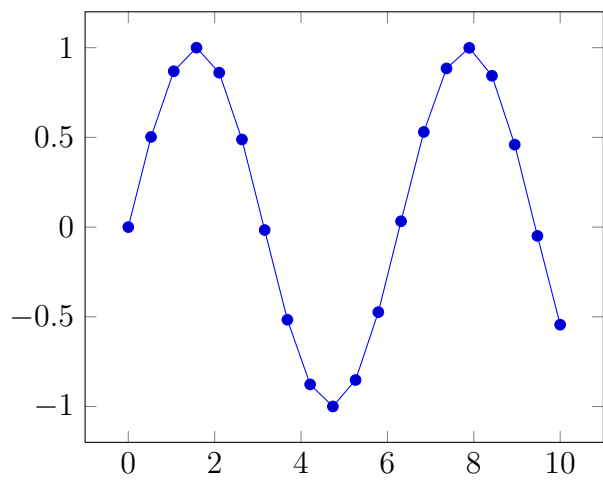


### 1.1.3 A file which starts with newlines

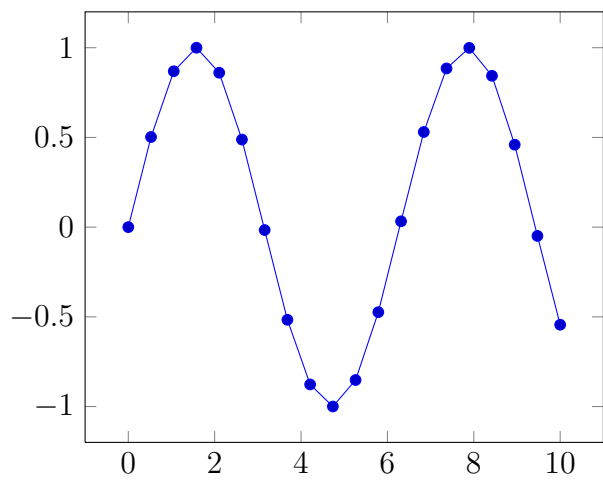


#### 1.1.3.1 Same file loaded with 'plot table'

The first data point should have been identified as column name.

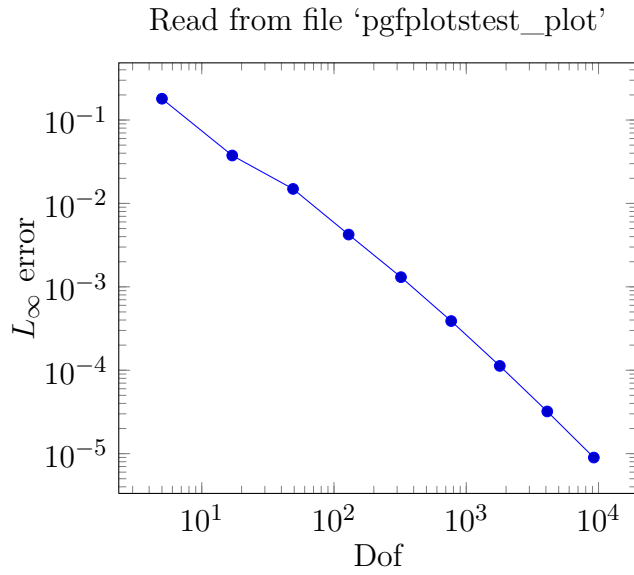


### 1.1.3.2 testing space gobbling in 'plot file' command

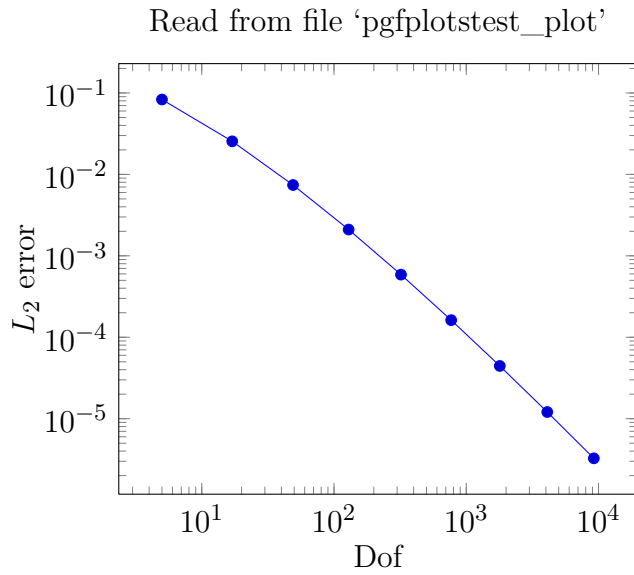


## 1.2 ‘plot table’ test

### 1.2.1 Plot by column ‘dof’ versus column ‘Lmax’

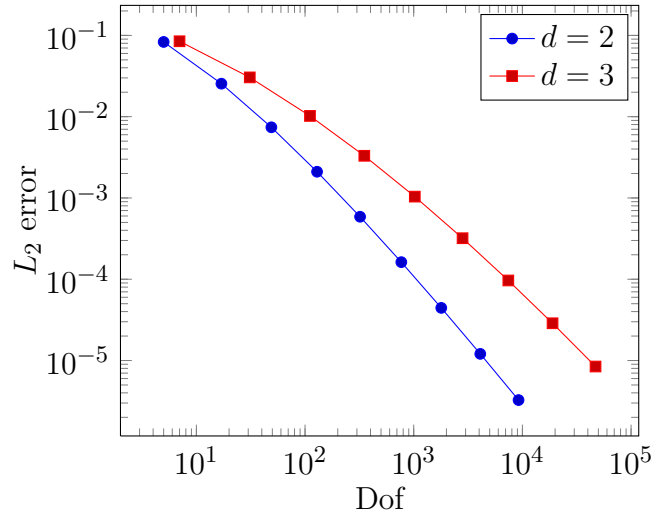


### 1.2.2 Plot by column 2 versus column 3



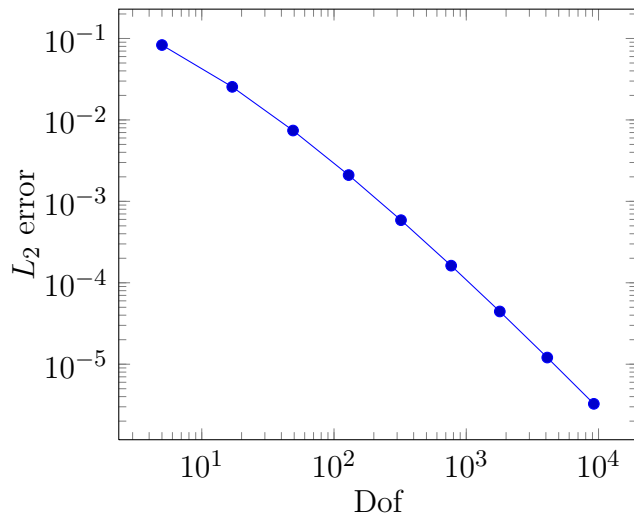
### 1.2.3 Plot by preloaded tables

Read from file ‘pgfplotstest\_plot’ and ‘pgfplotstest\_plot3’



### 1.2.4 a table which has no column names

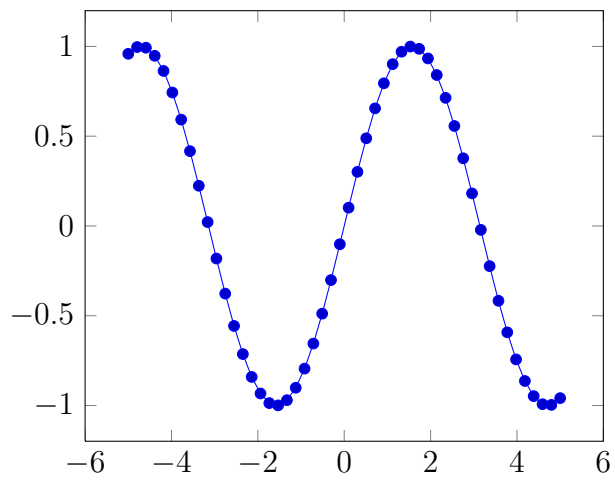
Read from file ‘pgfplotstest\_plotnocolnames’



## 2 pgfplotstest.function.tex

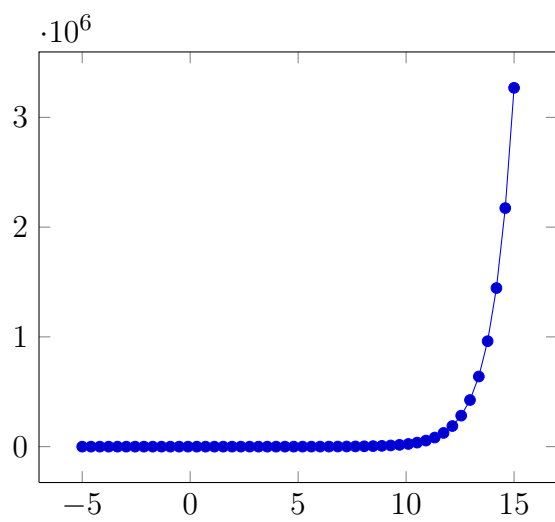
### 2.1 ‘plot function’ test

#### 2.1.1 $\sin(x)$

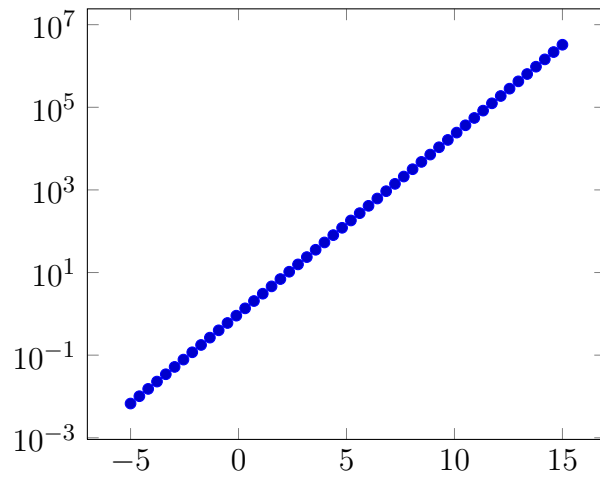


#### 2.1.2 $\exp(x)$

##### 2.1.2.1 linear



## 2.1.2.2 semilogy

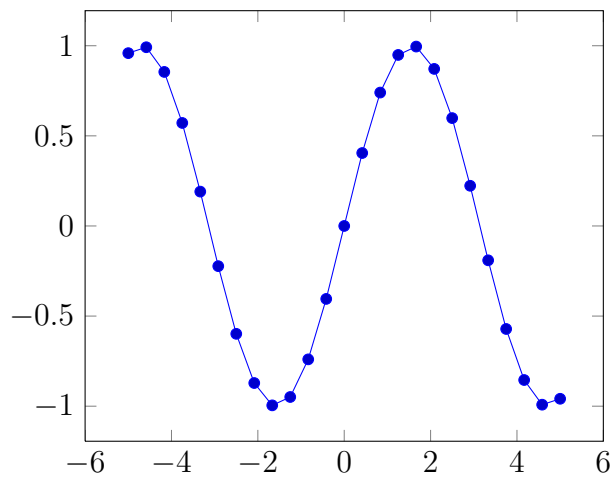




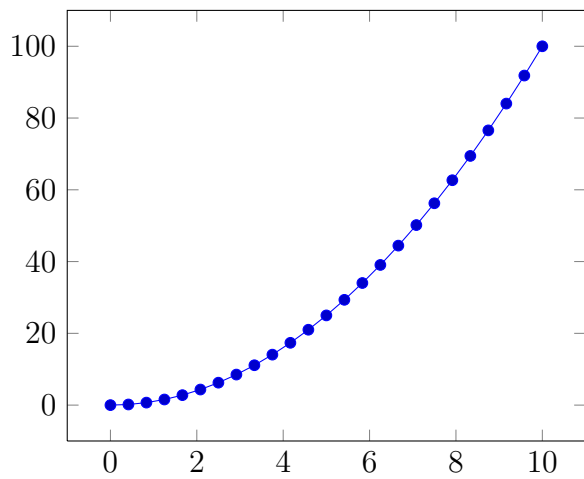
### 3 pgfplotstest.expr.tex

#### 3.1 ‘plot expression’ test

##### 3.1.1 $\sin(x)$



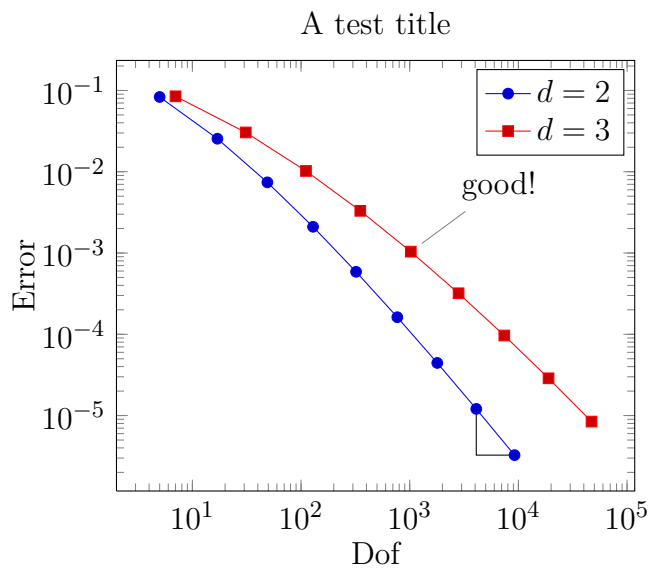
##### 3.1.2 $x^2$



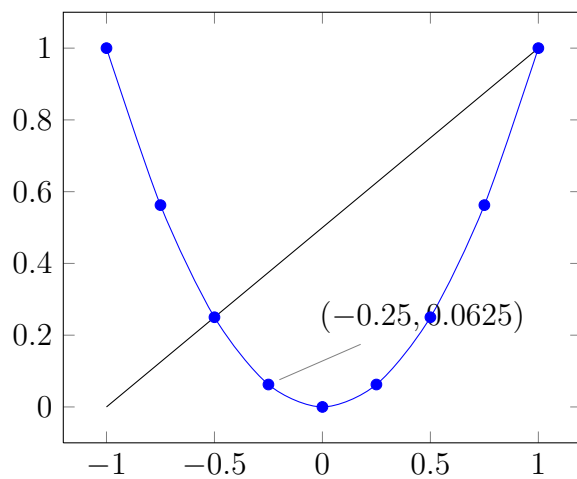
## 4 pgfplotstest.axispath.tex

### 4.1 Testing path commands inside of axis

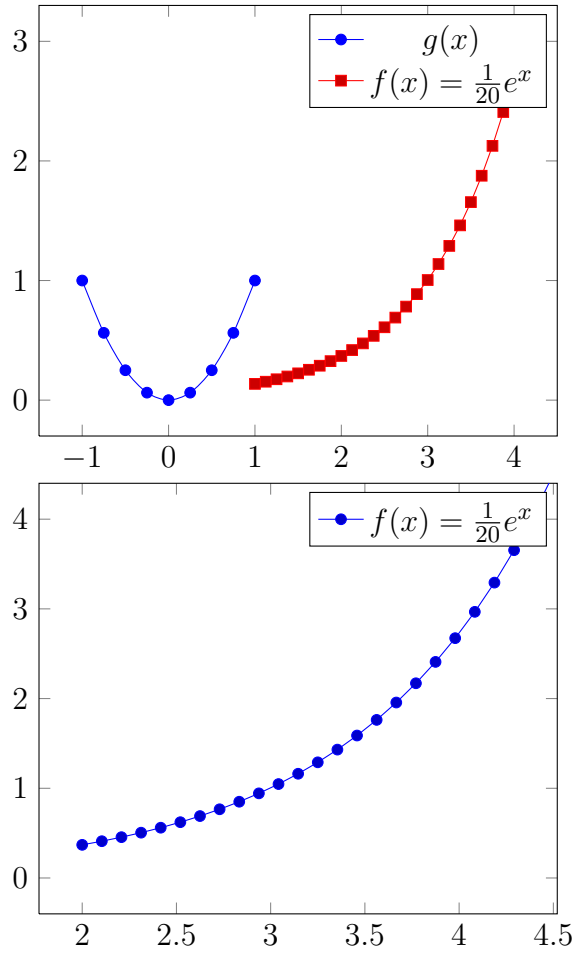
#### 4.1.1 log plot



#### 4.1.2 Linear plot



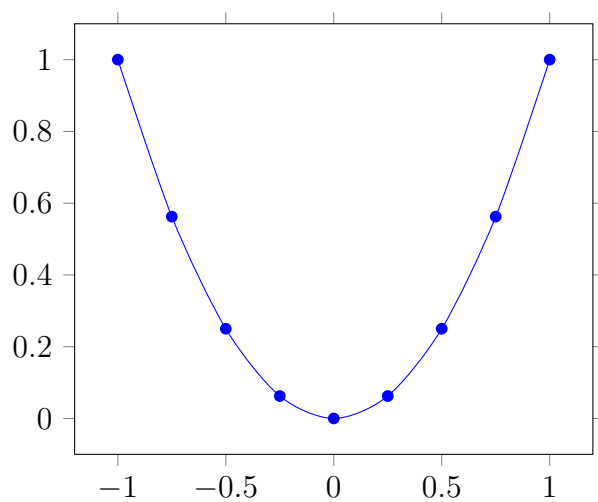
## 4.2 Checking plot expression



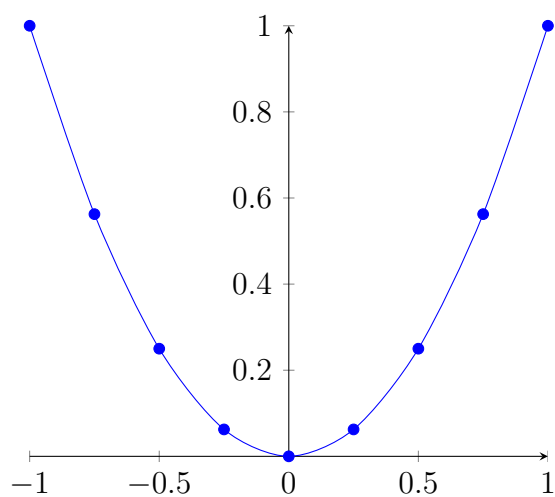
## 5 pgfplotstest.axislines.tex

### 5.1 Axislines placement

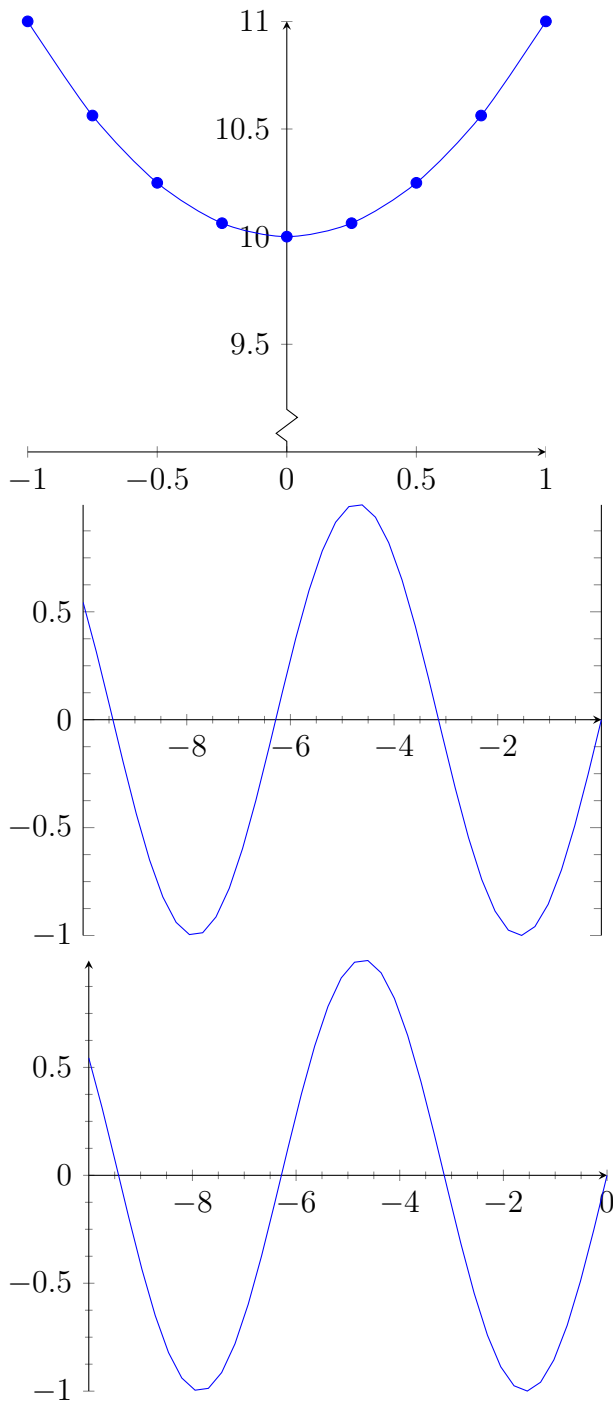
#### 5.1.1 tick align=outside

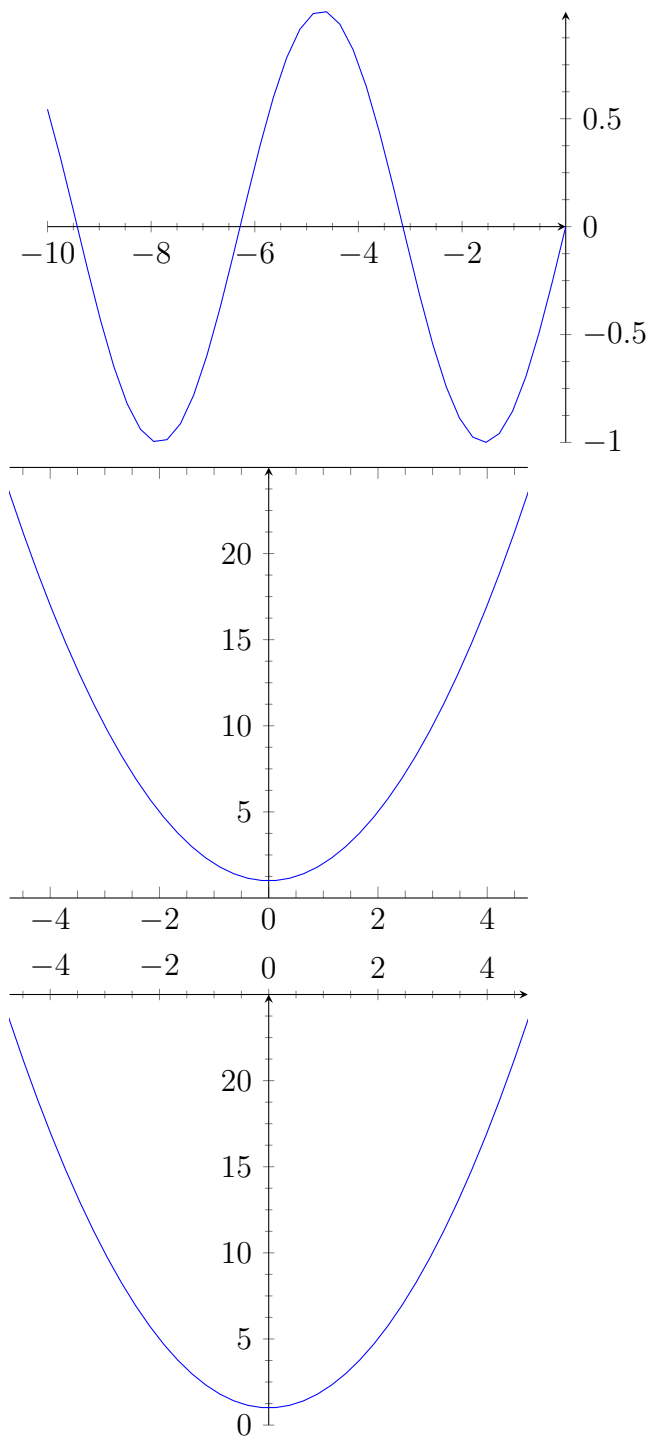


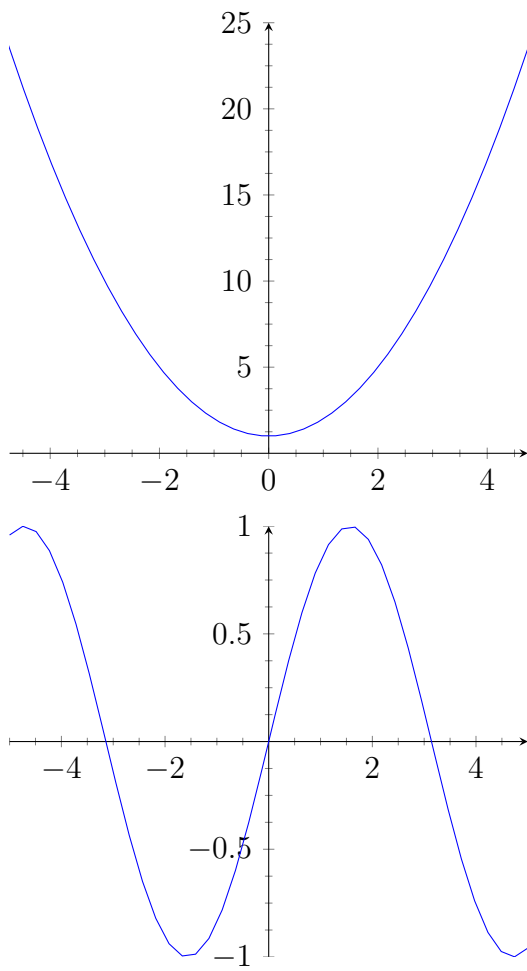
#### 5.1.2 axis y line/ axis x line



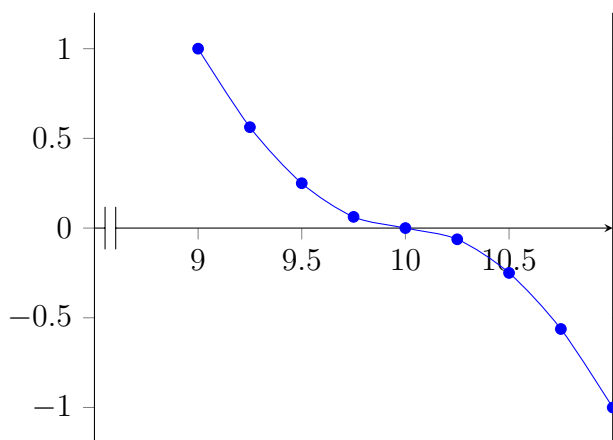
## 5.1.3 axis [xy] line/ tick align/ y discontin

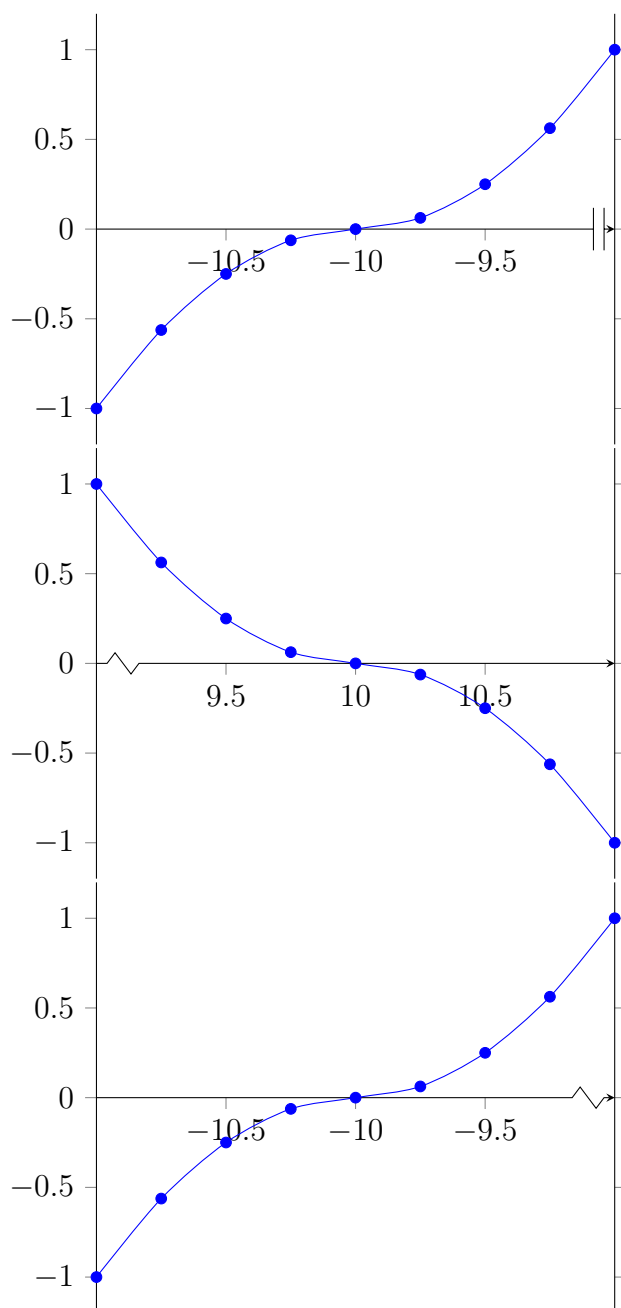




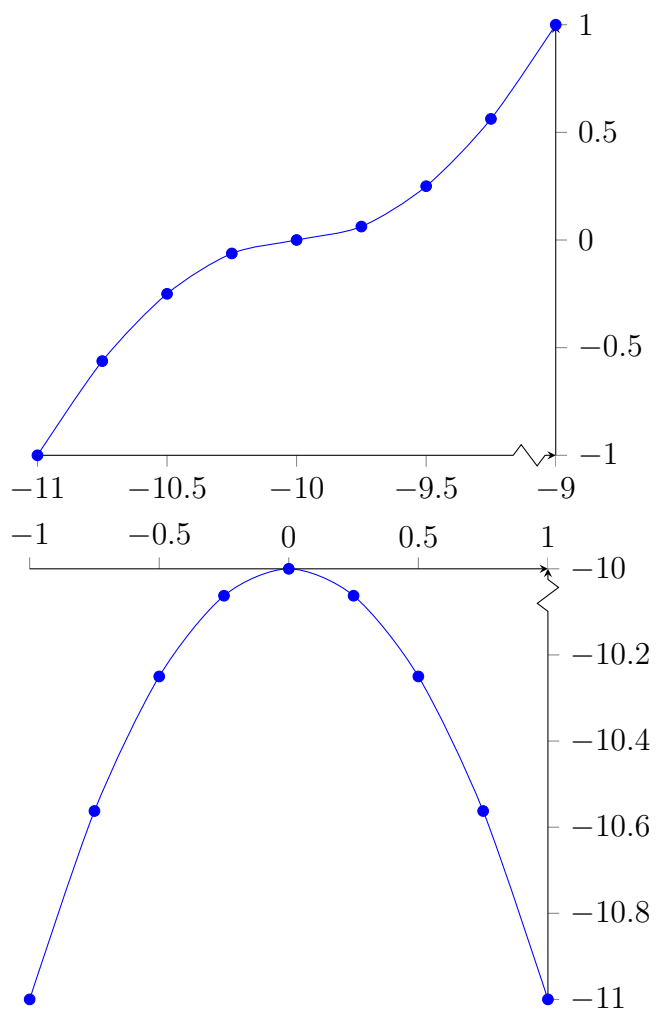


#### 5.1.4 axis [xy] line/ tick align/ x discont

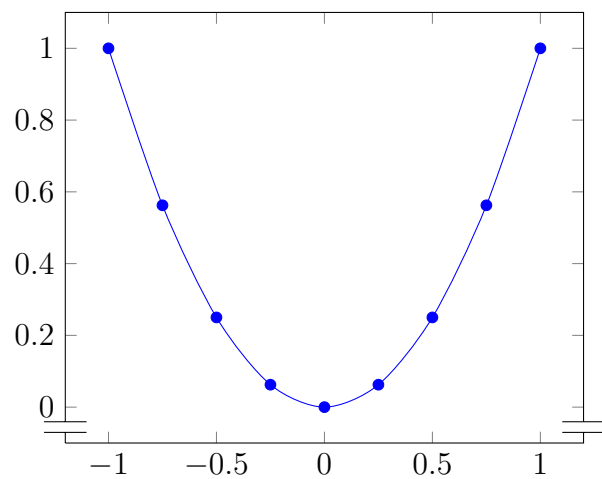






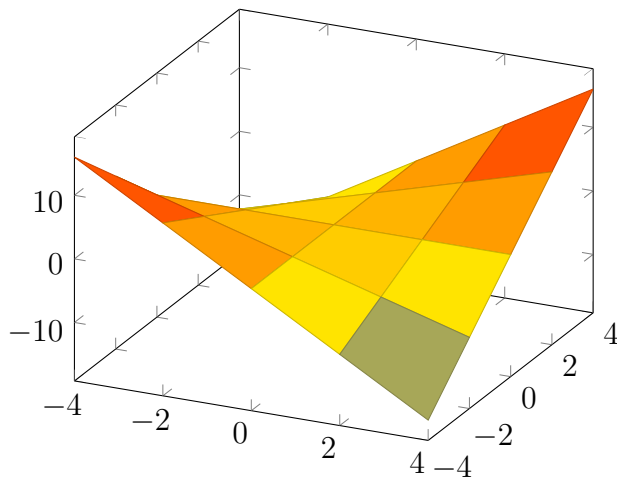


## 5.1.5 axis y discontinuity

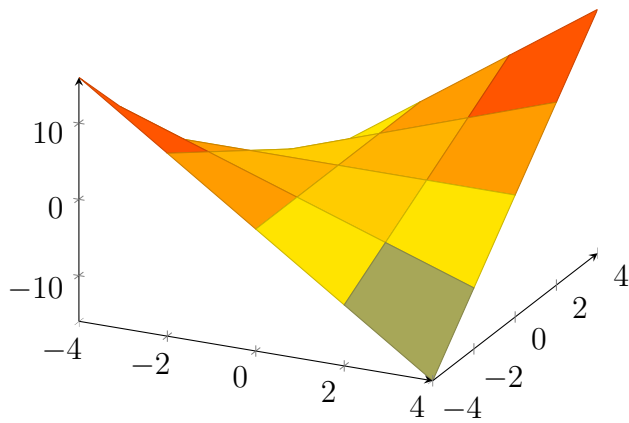


## 6 pgfplotstest.axislines.3d.tex

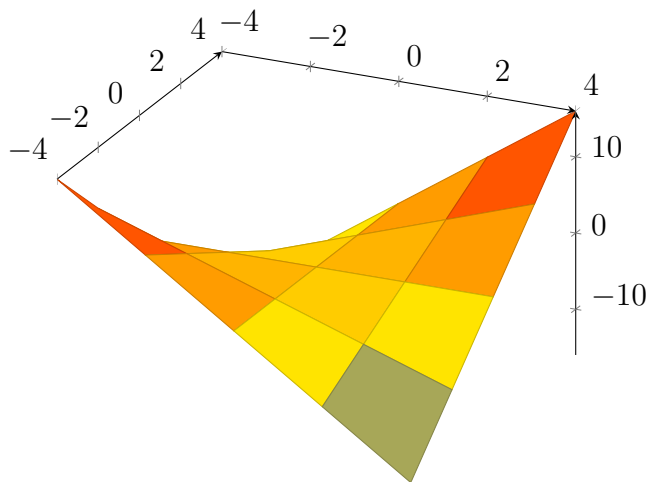
### 6.1 Boxed



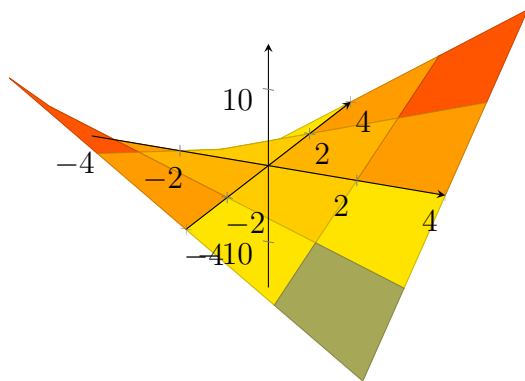
### 6.2 axis lines=left



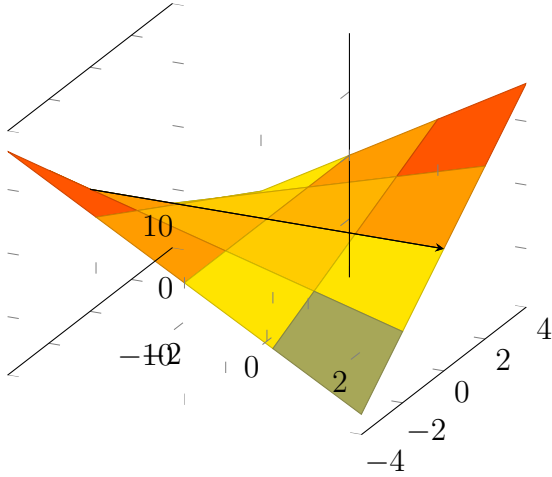
## 6.3 axis lines=right



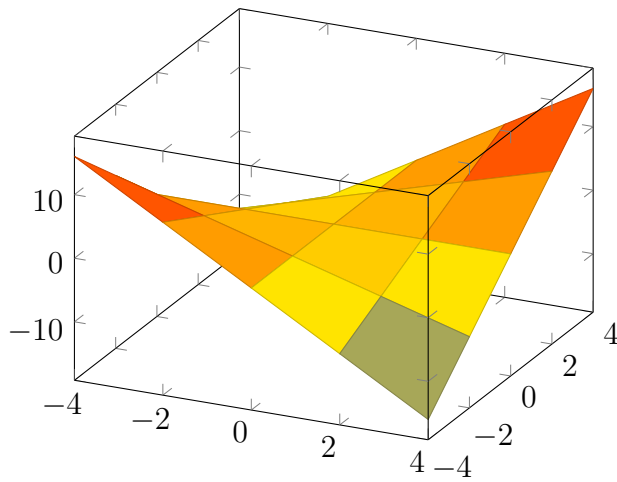
## 6.4 axis lines=middle,axis on top



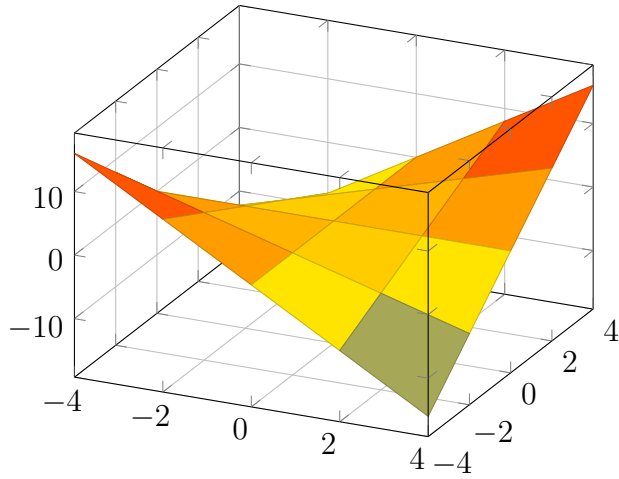
### 6.5 Only axis x line=middle



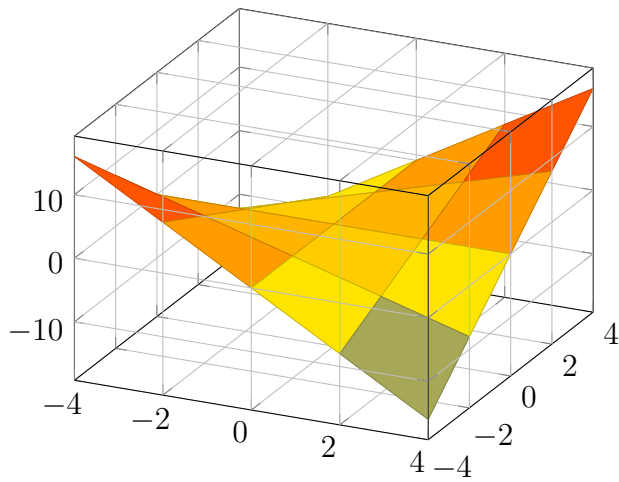
### 6.6 3d box=complete



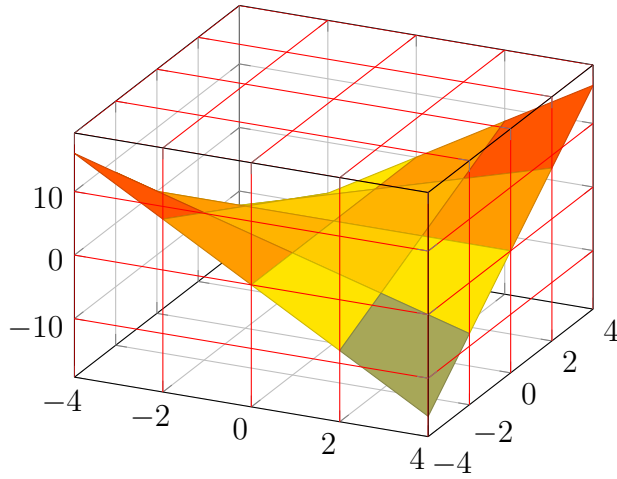
### 6.6.1 grid lines



### 6.6.2 grid lines und completeSTAR

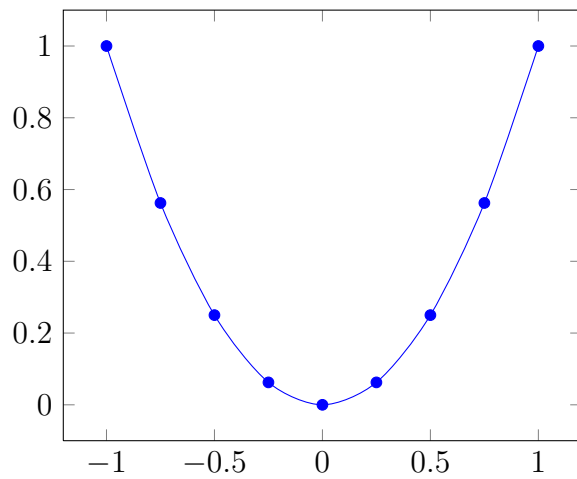


### 6.6.3 grid lines und completeSTAR und styles



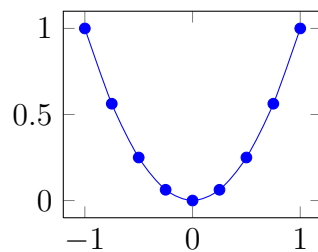
## 7 pgfplotstest.scaling.tex

### 7.1 Standard placement normal plot

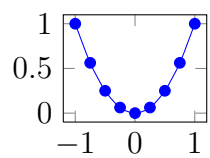


### 7.2 Scaling tests

#### 7.2.1 width=5cm



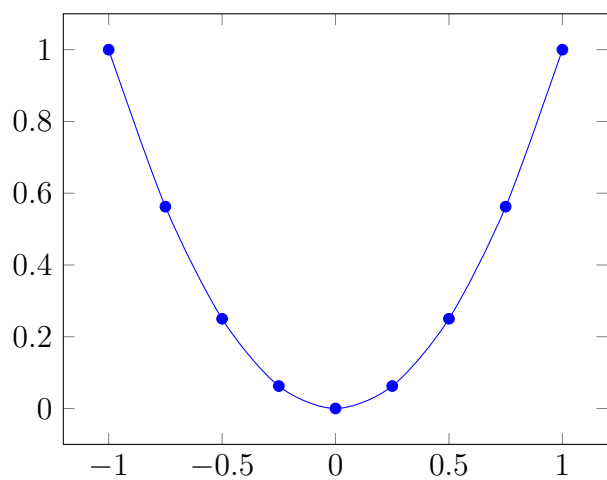
#### 7.2.2 height=3cm



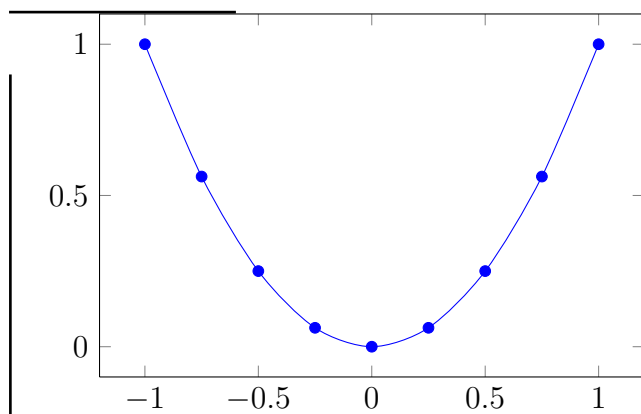
#### 7.2.3 x=3cm

---

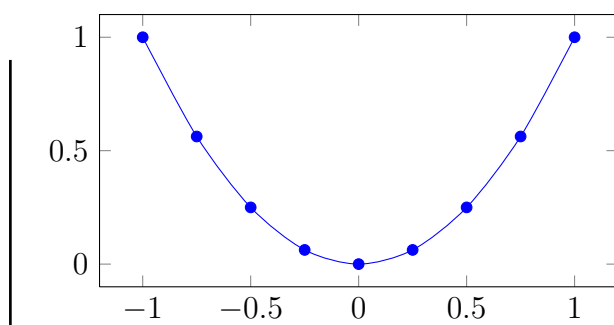




7.2.4  $x=3\text{cm}$ ,  $y=4\text{cm}$



7.2.5  $y=3\text{cm}$



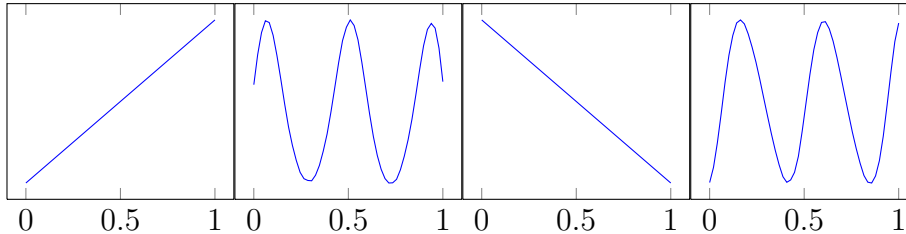
### 7.2.6 Scale vs. Datascale trafo

All should have the same size; especially the same height. This tests the data scale transformation and rounding inaccuracies during the computation of  $x$  and  $y$  unit vectors,

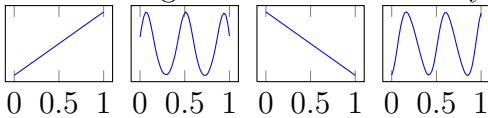
$$x = \frac{W}{T(\bar{x}) - T(\underline{x})}.$$

The larger  $x$ , the higher the scaling accuracy. Large  $x$  means small  $T(\bar{x}) - T(\underline{x})$  (relative to width  $W$ ). But this implies low accuracy for the input data! And nobody wants inaccurate plots.

The datascale transformation  $T$  is set up such that  $O(W) = O(x)$ , but I am not sure if I need to adjust some parameters. Some parameters lead to inaccurate  $x$  and  $y$  vectors, such that axis sizes are not the same although  $W$  and  $H$  (width and height) are the same.

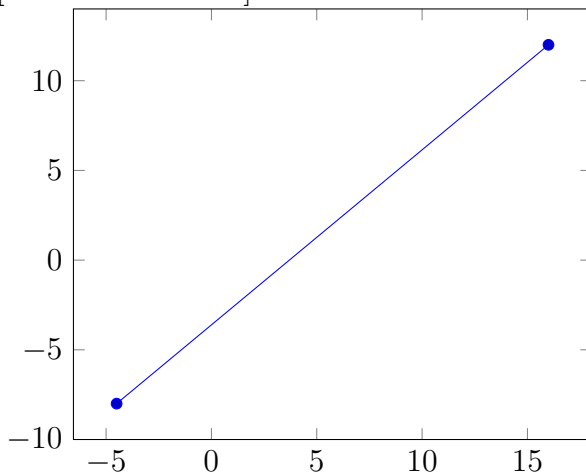


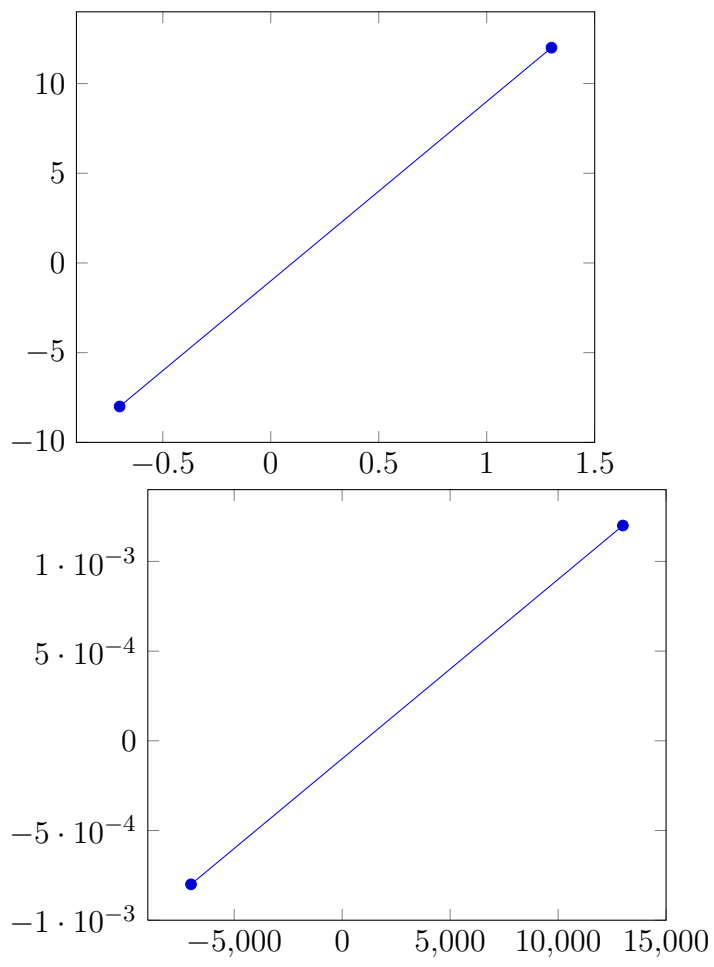
once more again without ‘scale only axis’:



### 7.2.7 Testing numeric artefacts around tick position ‘0’

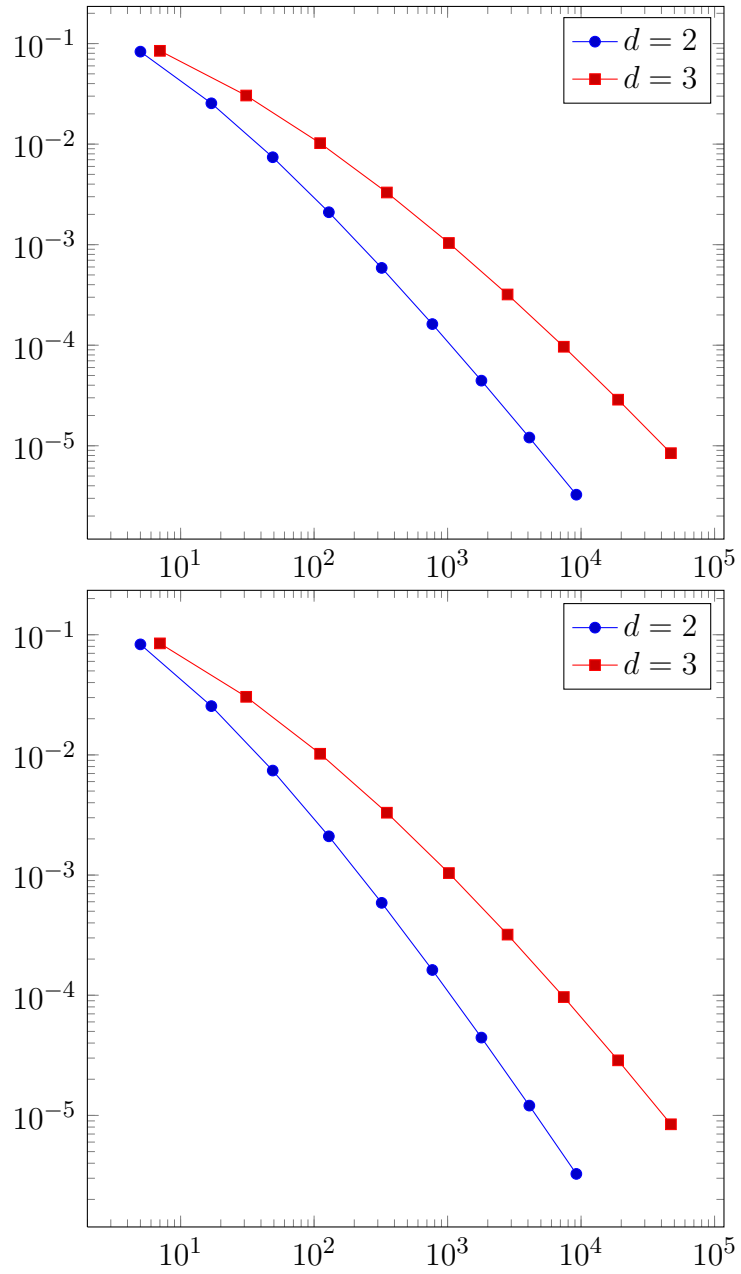
[scaled ticks=false] in this subsection

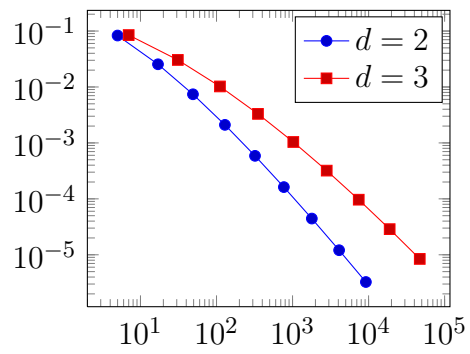




### 7.3 Scaling log plots

---



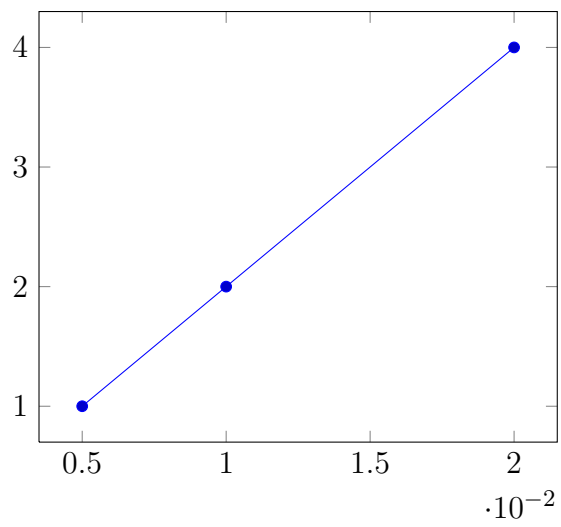


## 7.4 Scaletest

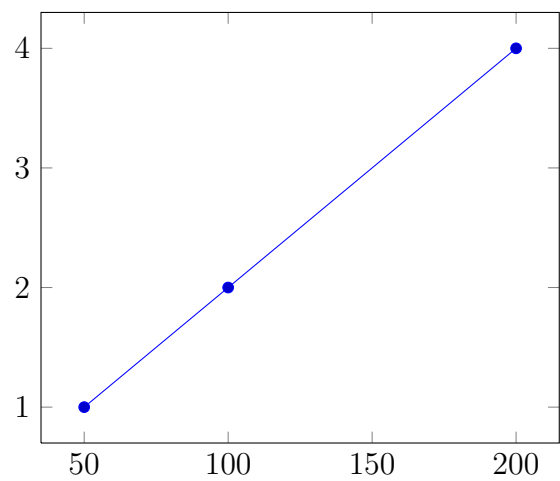


## 7.5 Scaling test for very small or very large x values

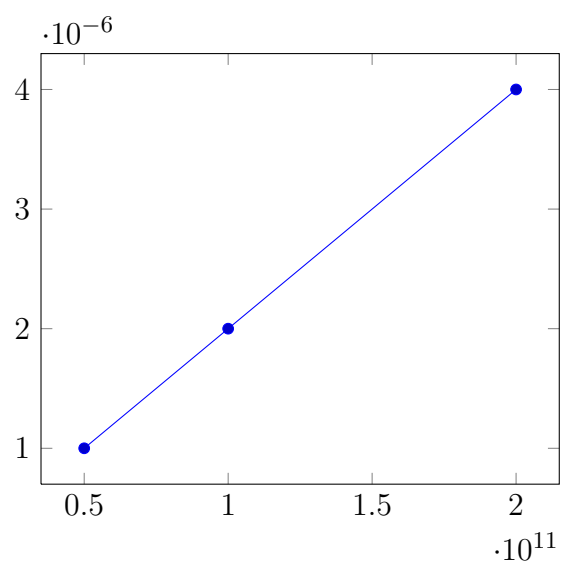
### 7.5.1 $1e-2$



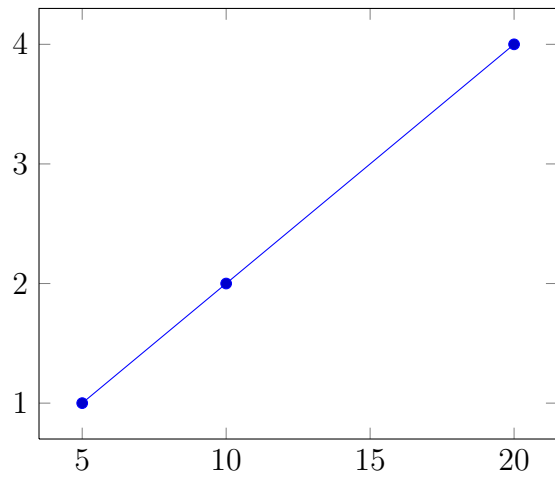
7.5.2  $1e+2$



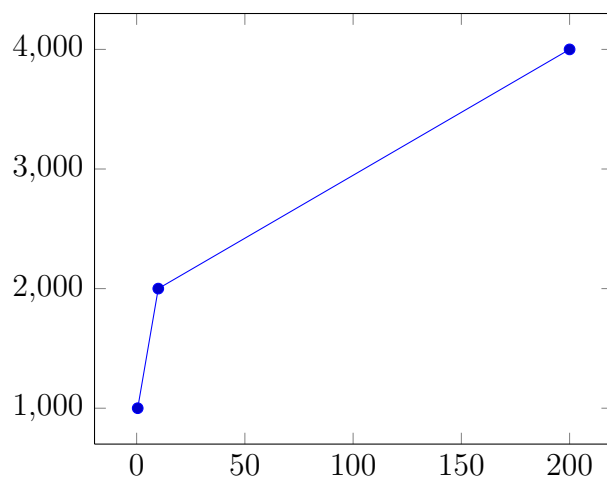
7.5.3  $x=1e+11$ ;  $y=1e-6$

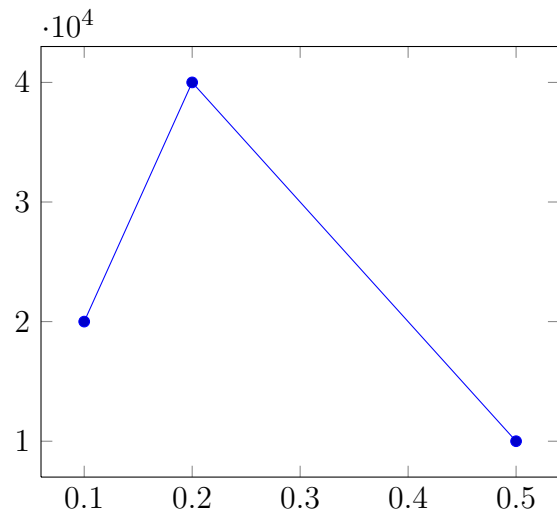
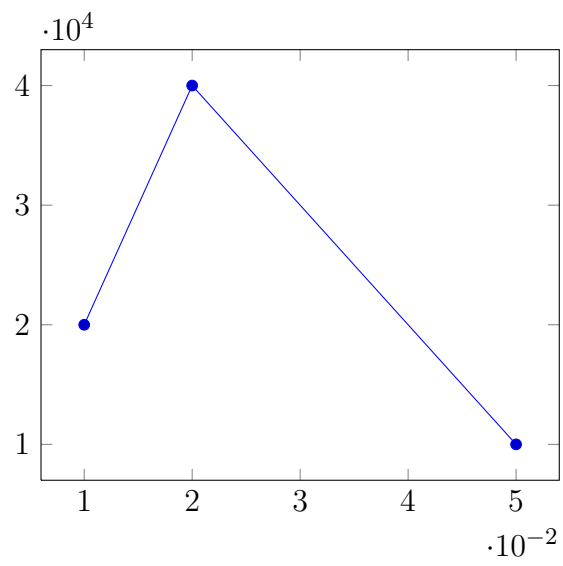


7.5.4 1e+1



7.5.5 1e+3

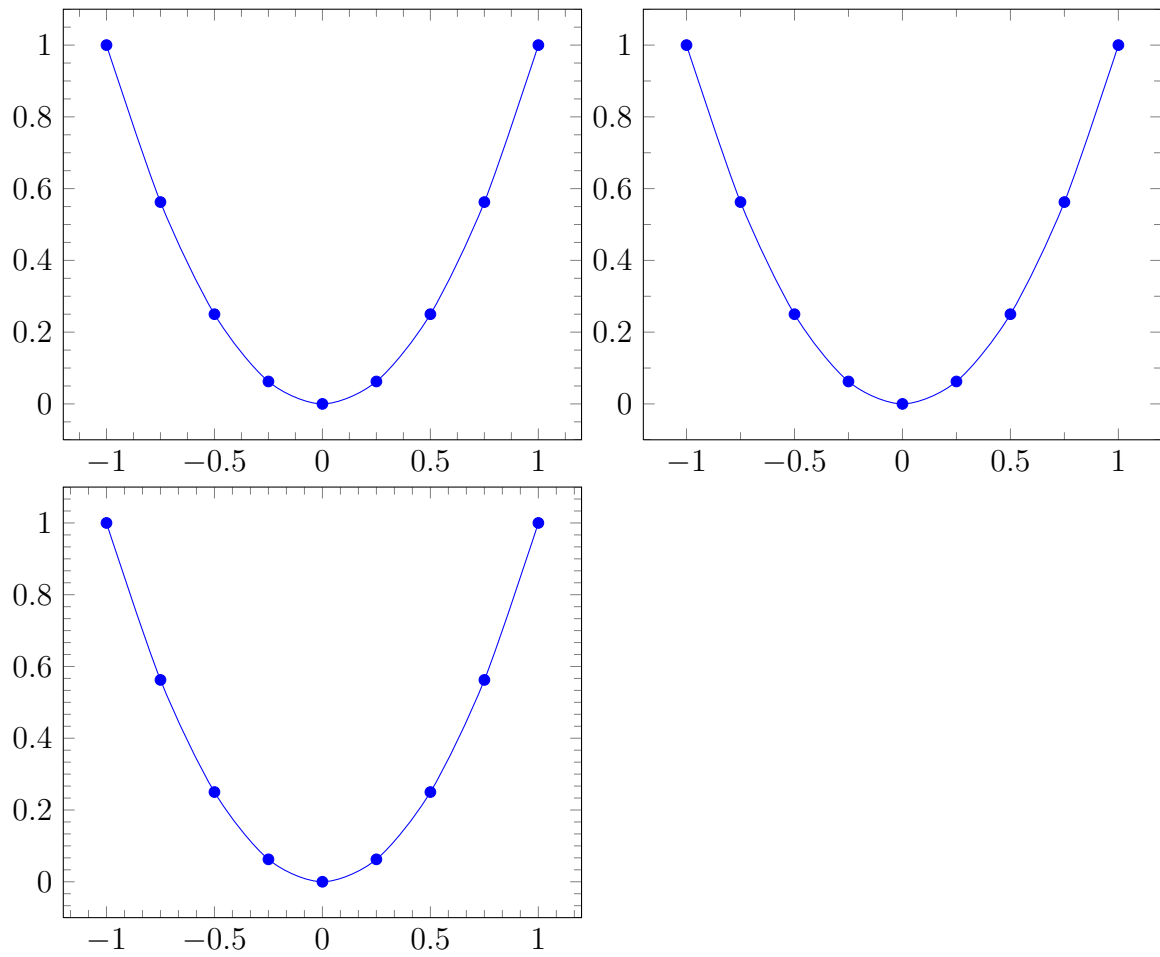


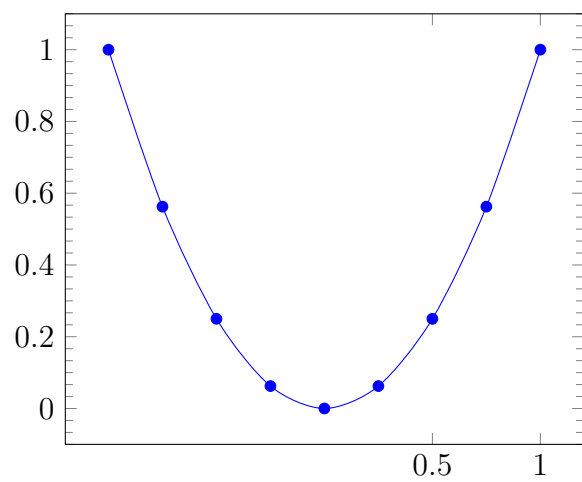
7.5.6  $1e+4$ 7.5.7  $1e-2, 1e+4$ 



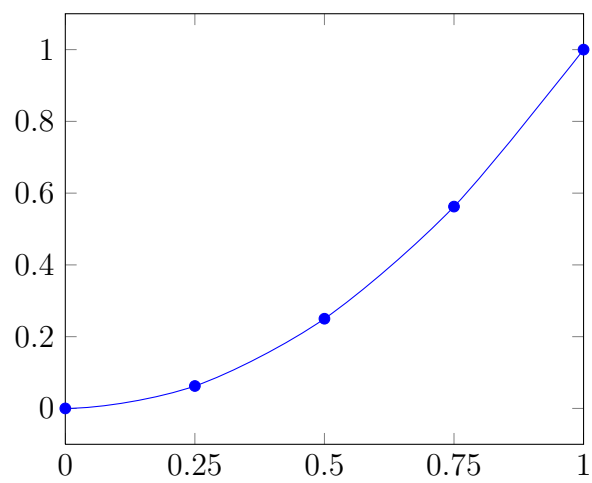
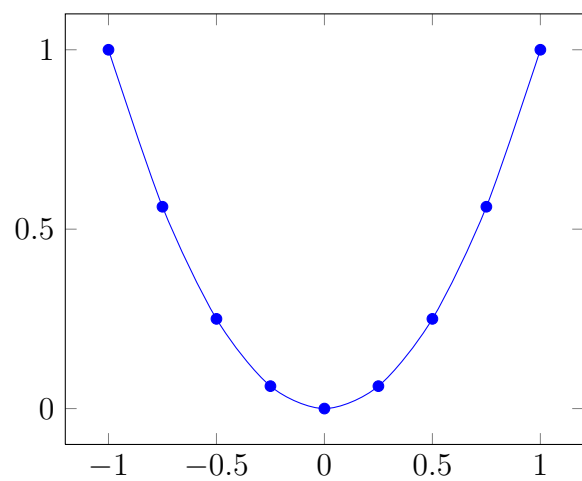
## 8 pgfplotstest.ticks.tex

### 8.1 Minor ticks

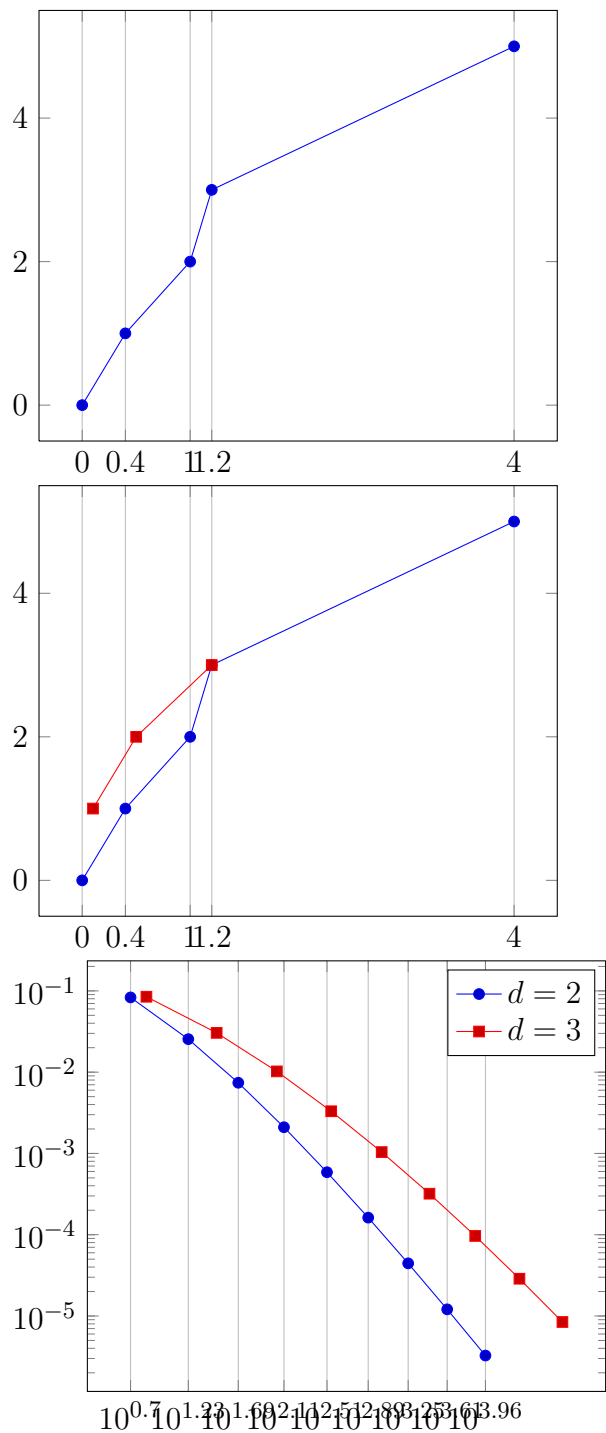




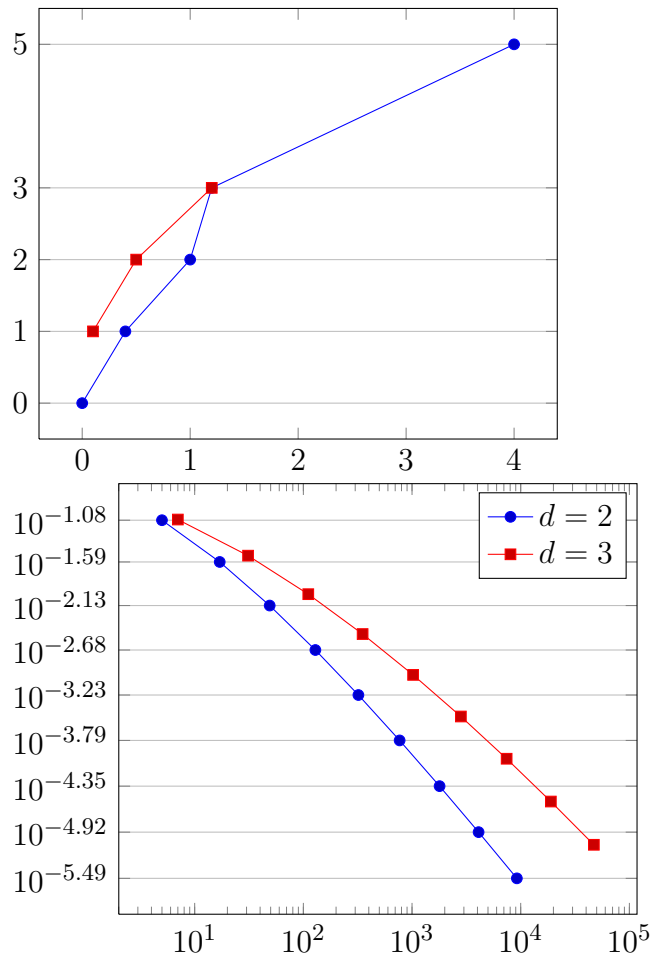
## 8.2 Tick placement



## 8.2.1 xtick=data

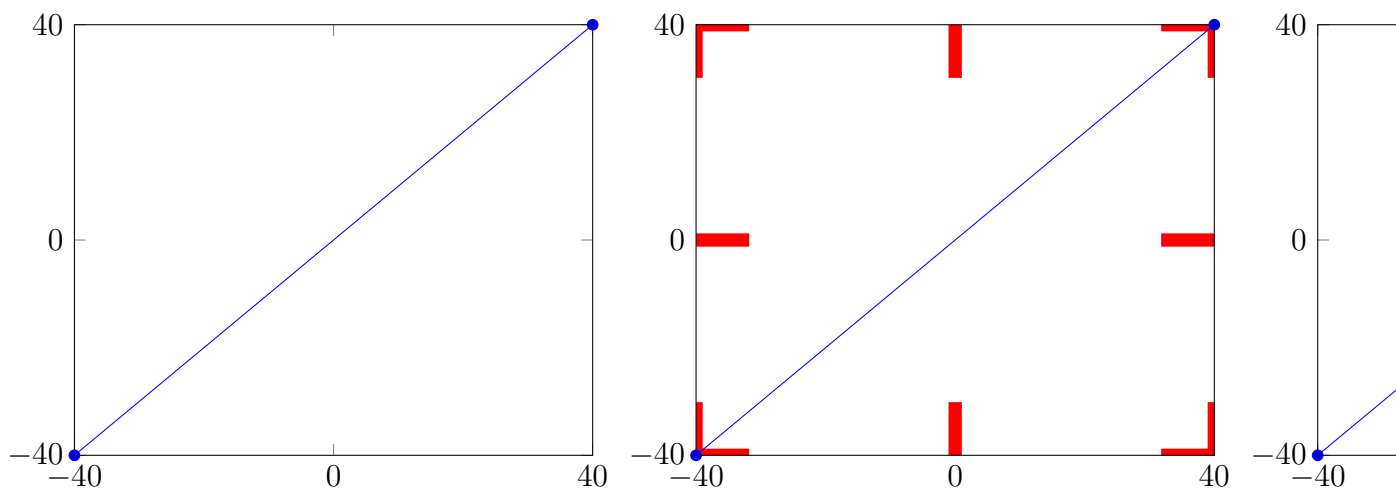


## 8.2.1.1 ytick=data

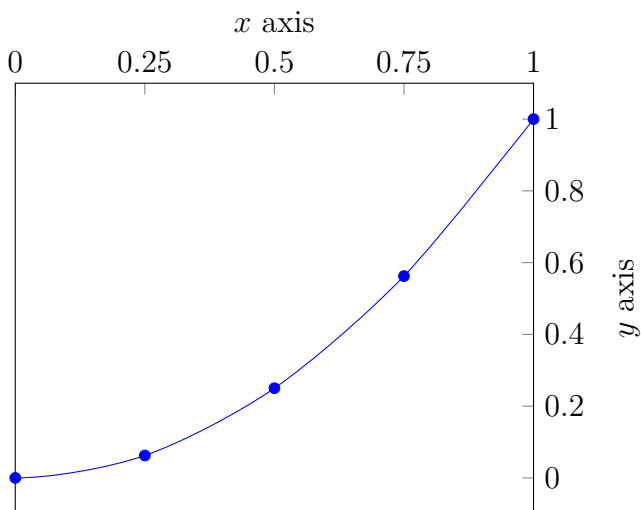


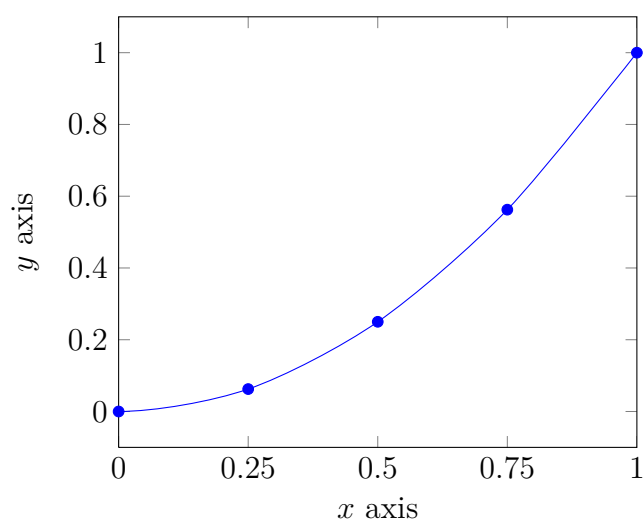
## 8.2.2 ticks on axis rectangle

First plot: default tick style; second plot: red, third: 'help lines'



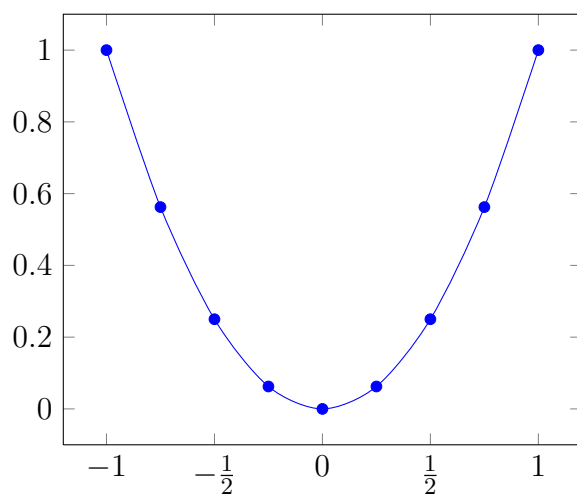
### 8.2.3 modified labels



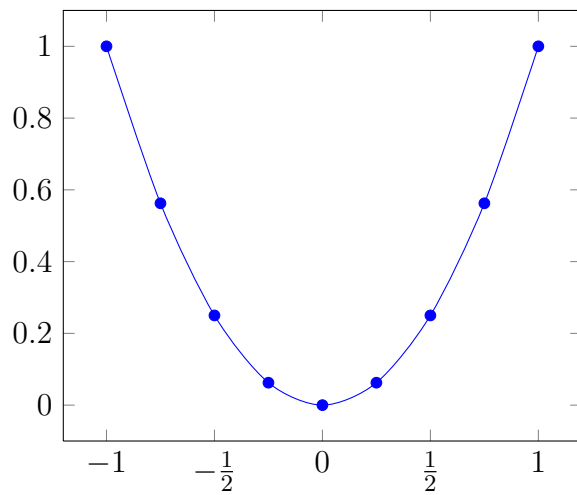


### 8.3 Tick label assignment tests

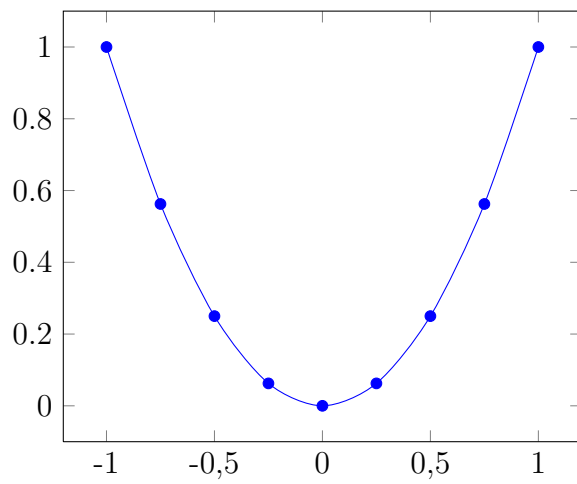
#### 8.3.1 Using xticklabel and xtick



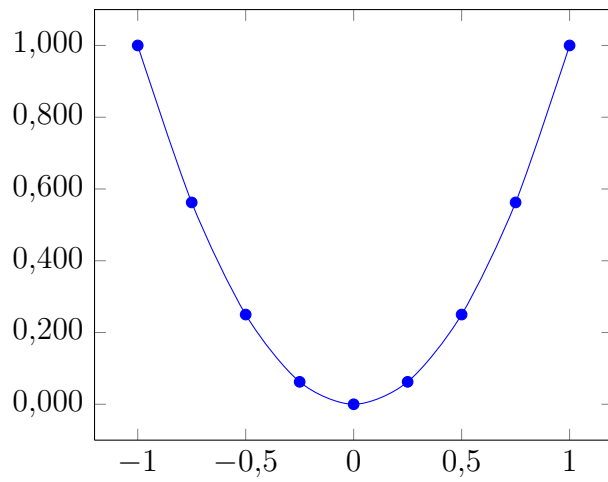
### 8.3.2 Using xticklabels



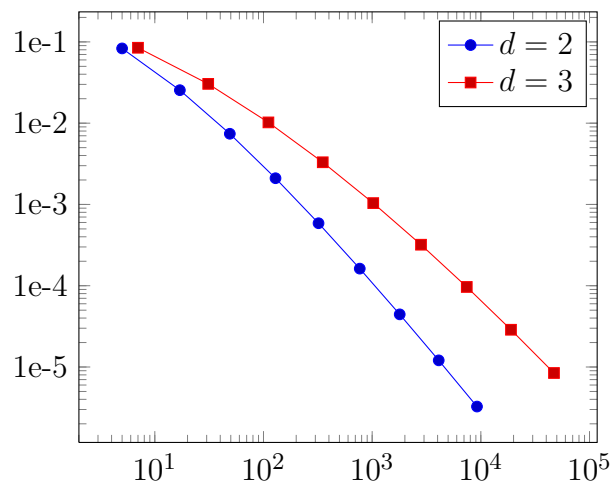
### 8.3.3 With xtick labels and commas by hand



### 8.3.4 Only with auto number formatting options; different for x and y



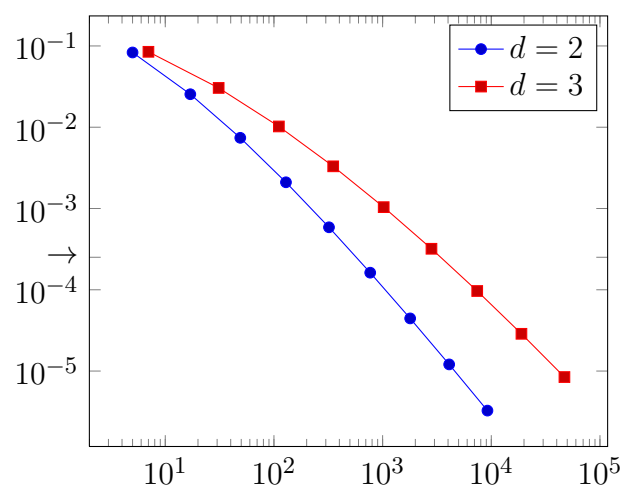
### 8.3.5 Using yticklabels in logplot



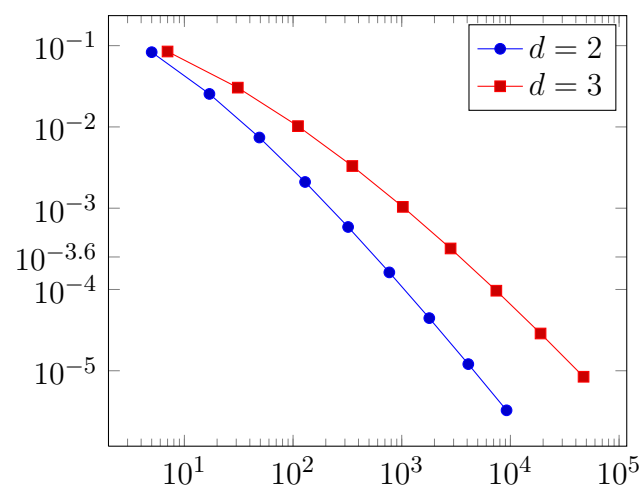


## 8.4 Tick/Tick-Label placement log plots

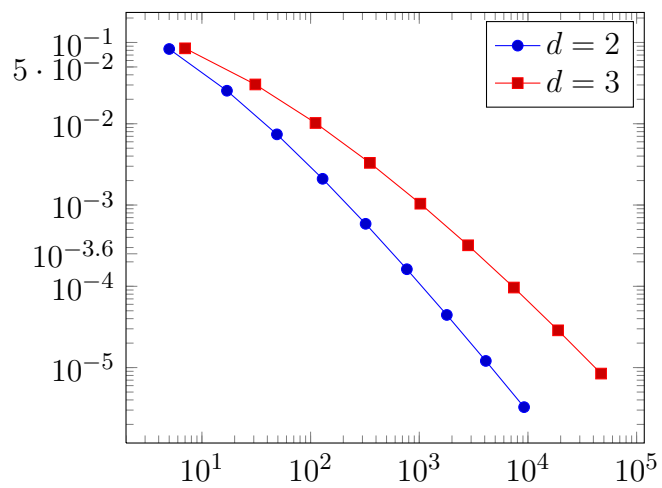
### 8.4.1 ytickten



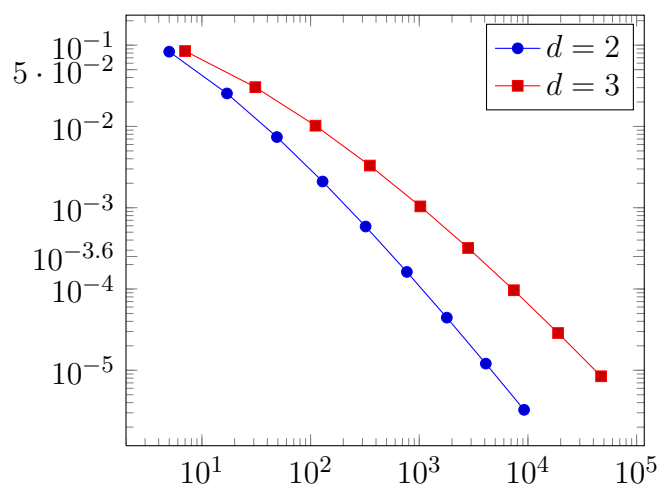
### 8.4.2 ytick



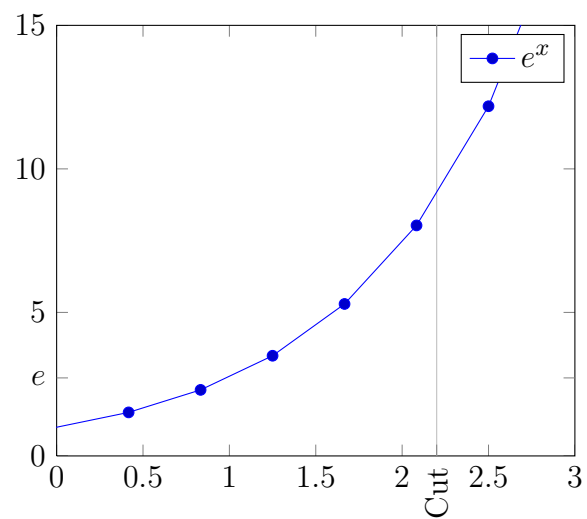
## 8.4.3 extra y ticks



## 8.4.4 extra y ticks and formatted label



## 8.4.5 extra x and y ticks, linear plot



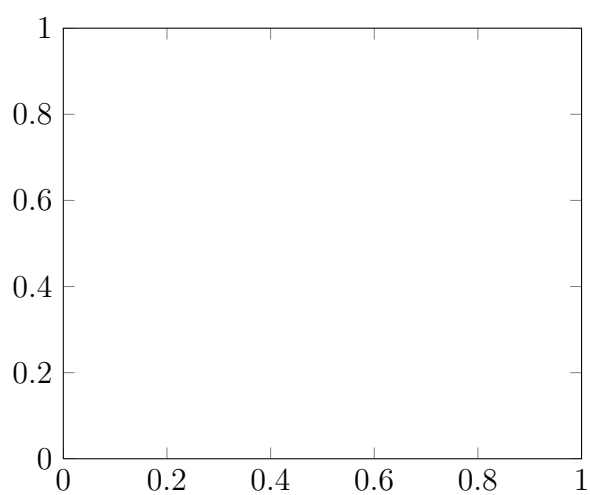
## 9 pgfplotstest.enlargelimits.tex

### 9.1 Limit computation

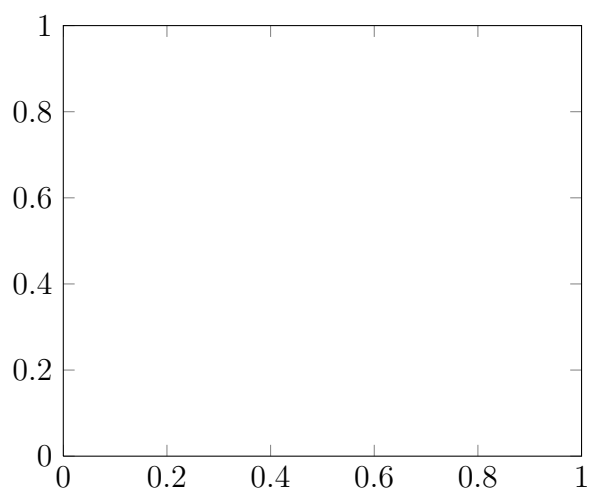
#### 9.1.1 User specified limits

[scaled ticks = false,enlargelimits=false] in this section

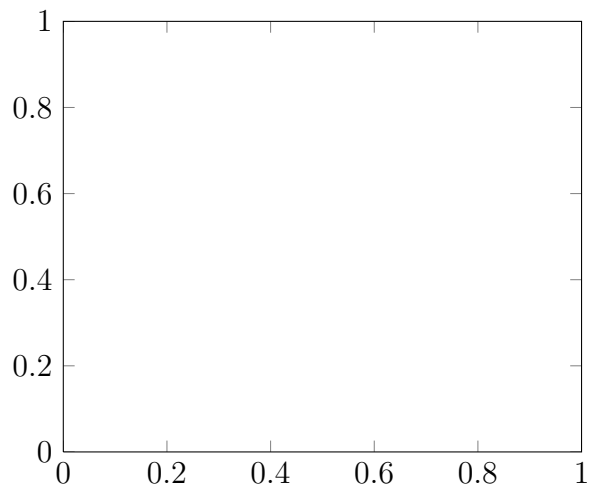
##### 9.1.1.1 linear plot, unconstraint



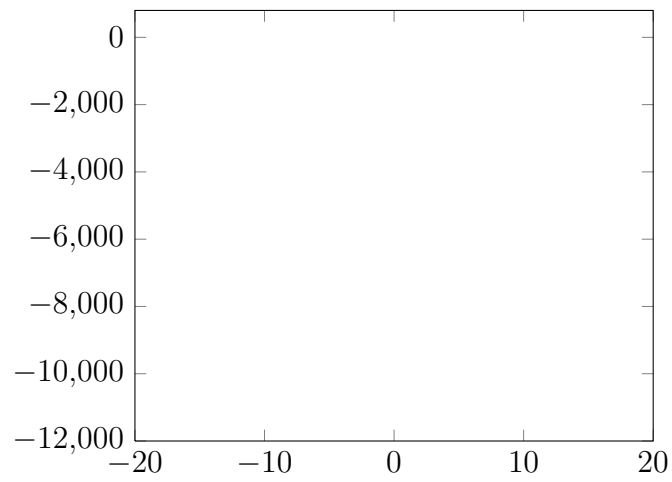
##### 9.1.1.2 linear plot, limited to $x \in [-20, 20]$



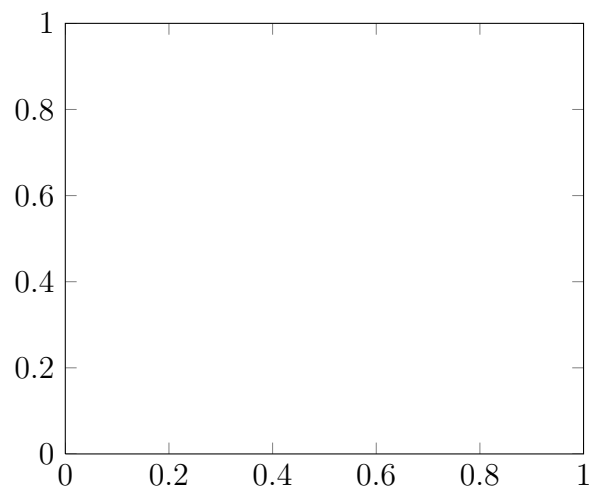
9.1.1.3 linear plot, limited to  $y \in [-12000, 800]$



9.1.1.4 linear plot, limited to  $x \in [-20, 20]$ ;  $y \in [-12000, 800]$



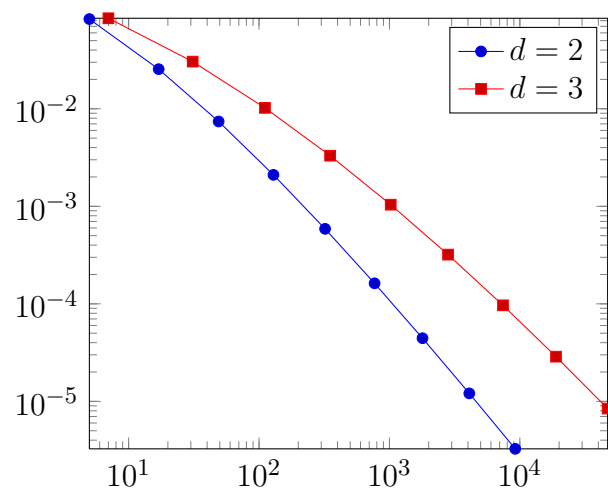
### 9.1.1.5 linear plot, limited to empty $x$ -range



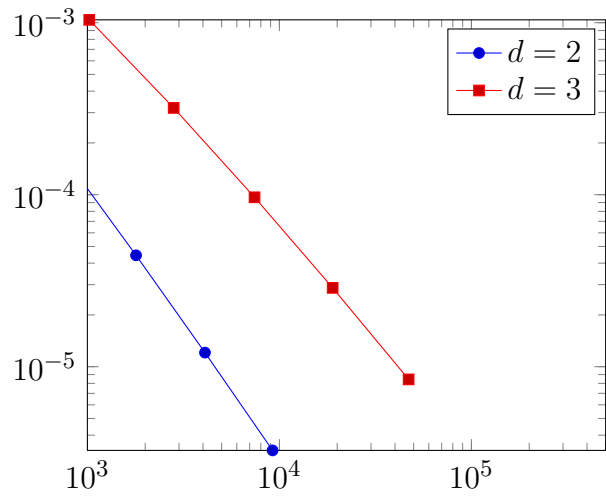
### 9.1.2 Log plots

Log-plots use the same code; they should work in the same way!

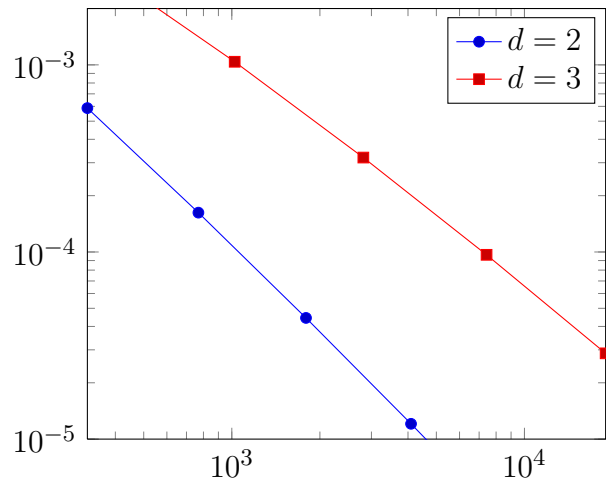
#### 9.1.2.1 log plot unconstrained



### 9.1.2.2 log plot limited to $x \in [10^3, 5 \cdot 10^5]$

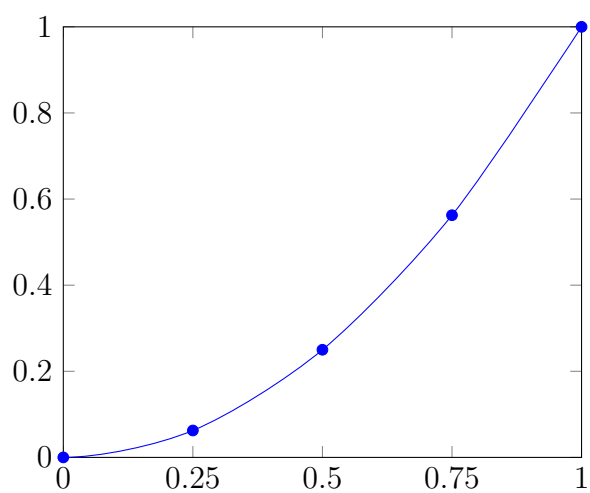


### 9.1.2.3 log plot limited to $y \in [10^{-5}, 2 \cdot 10^{-3}]$

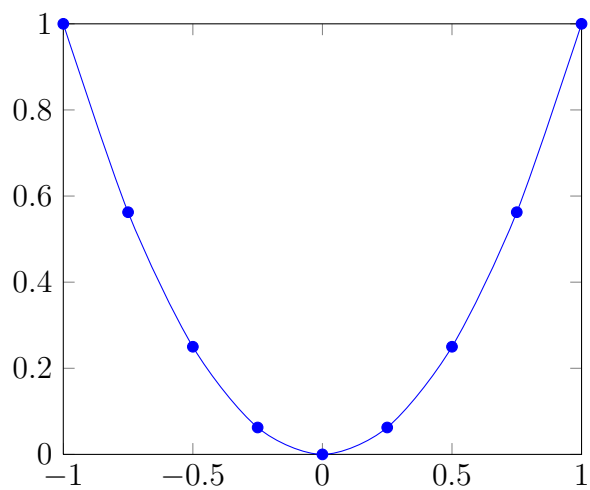


### 9.1.3 Enlargelimits tests

#### 9.1.3.1 enlargelimits=false, x limits provided

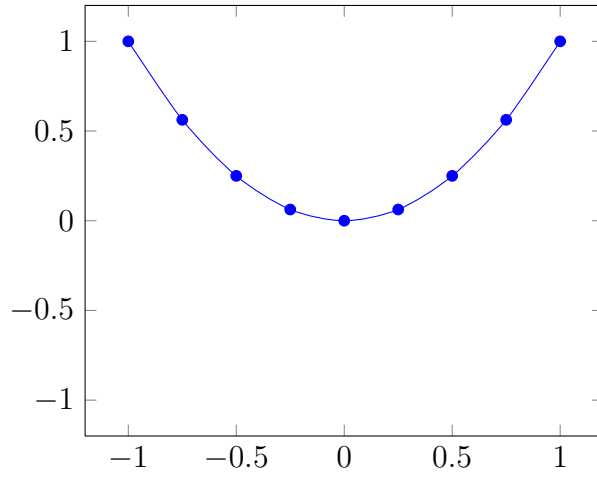


#### 9.1.3.2 enlargelimits=false, no limits provided

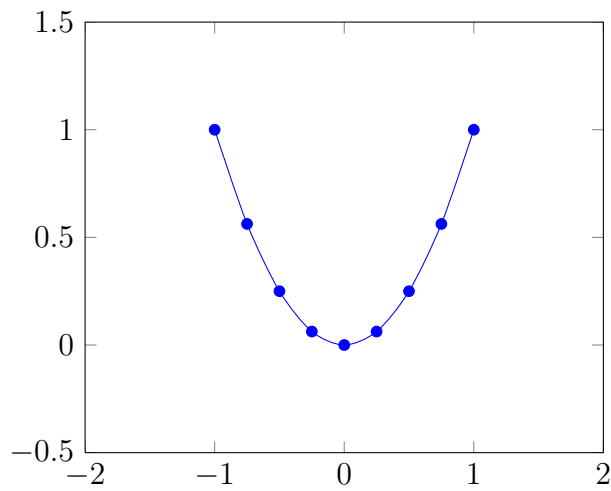




9.1.3.3 enlargelimits=true, all limits provided  $[-1, 1] \times [-1, 1]$



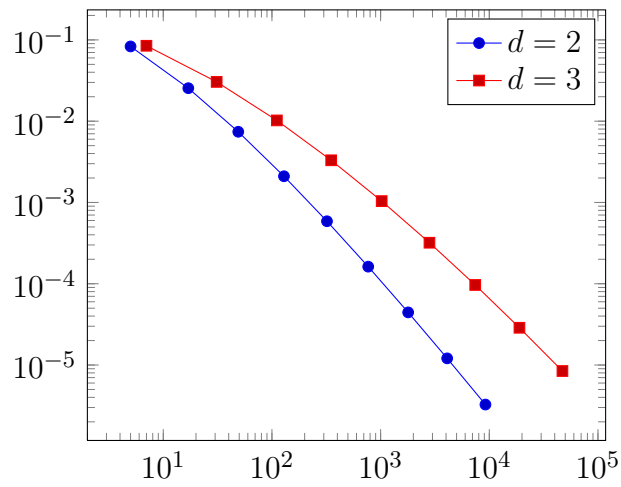
9.1.3.4 enlargelimits=0.5



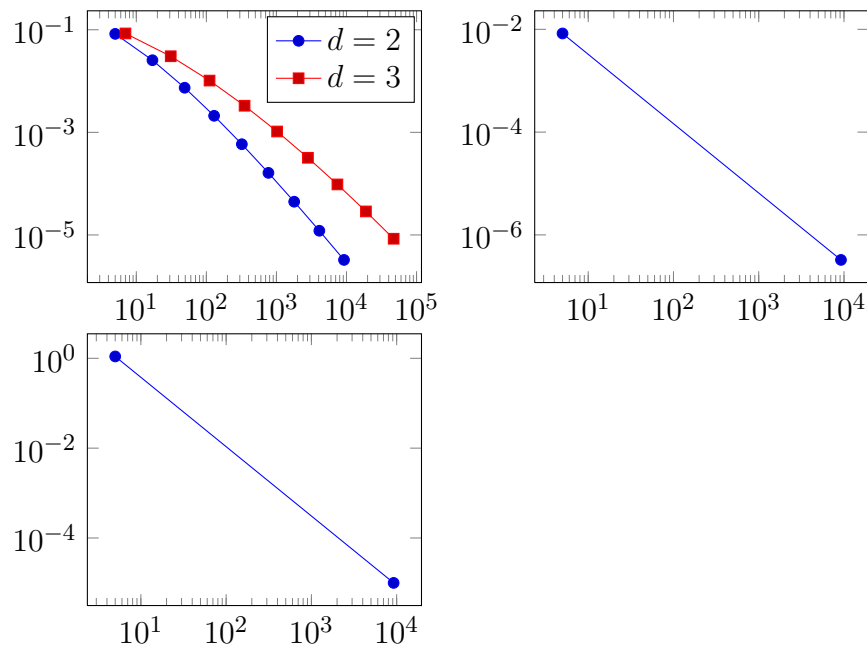
## 10 pgfplotstest.logplotenv.tex

### 10.1 Default options log plot

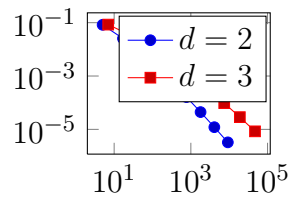
#### 10.1.1 Default size



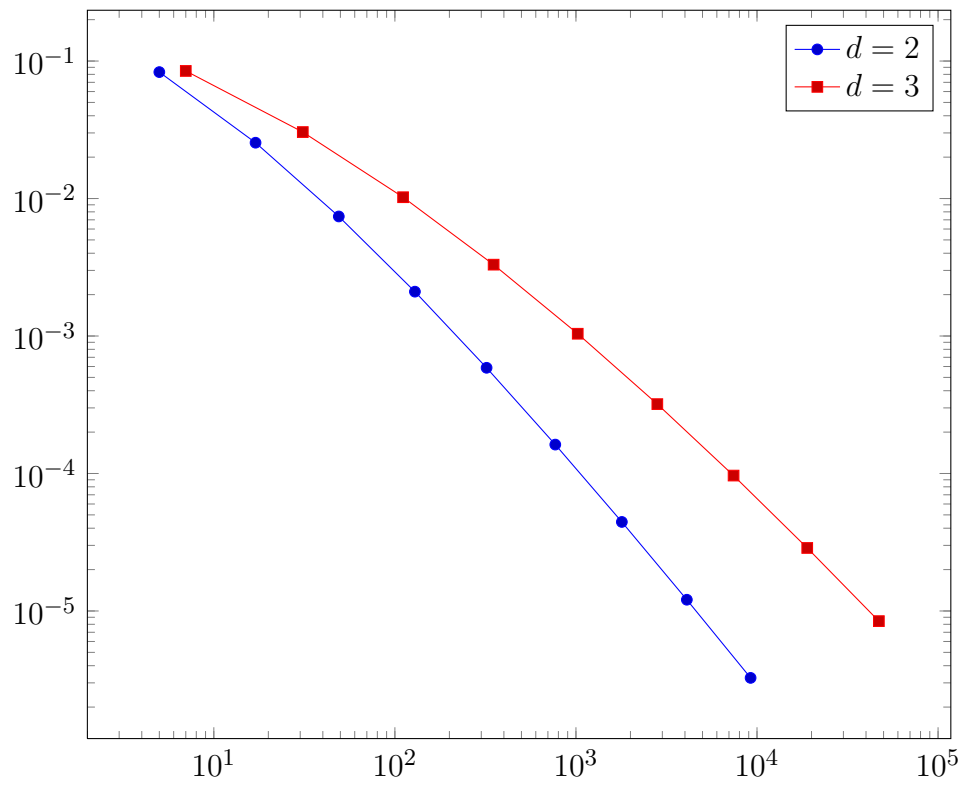
#### 10.1.2 Small size



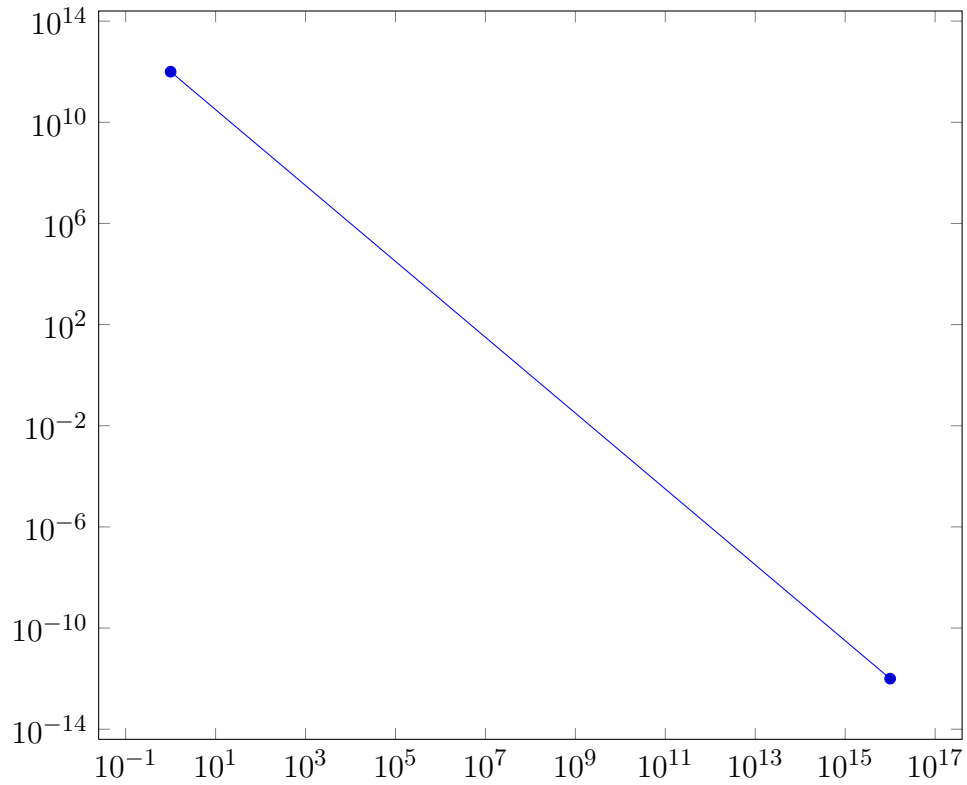
## 10.1.3 Very small size



## 10.1.4 Large size

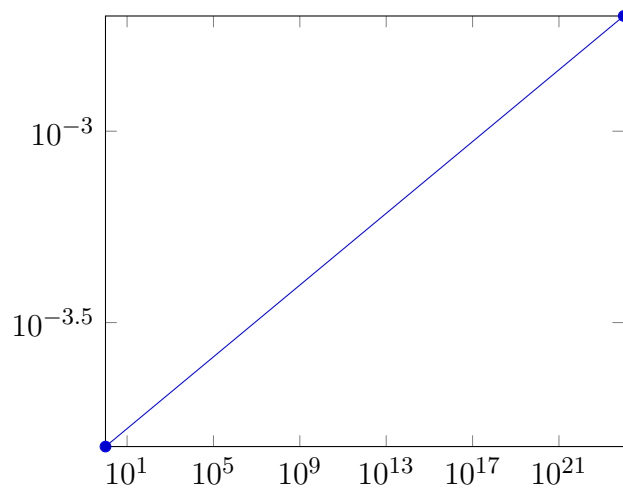


### 10.1.5 Large size; large range



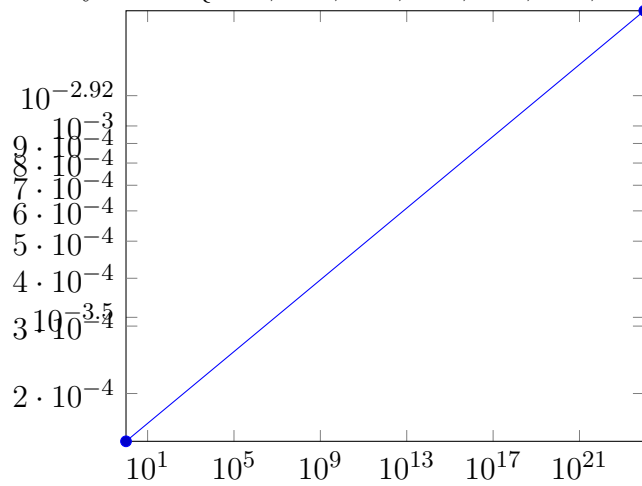
### 10.1.6 Extremely small y range for log plot

#### 10.1.6.1 Without extra ticks, enlargeticks=false

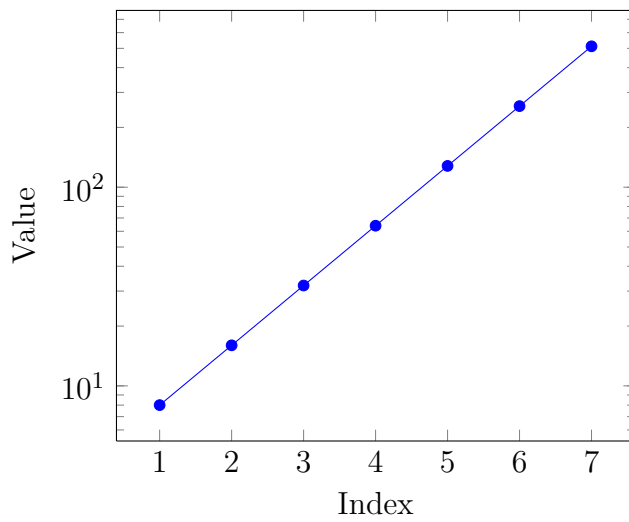


### 10.1.6.2 With extra ticks, enlargelimits=false

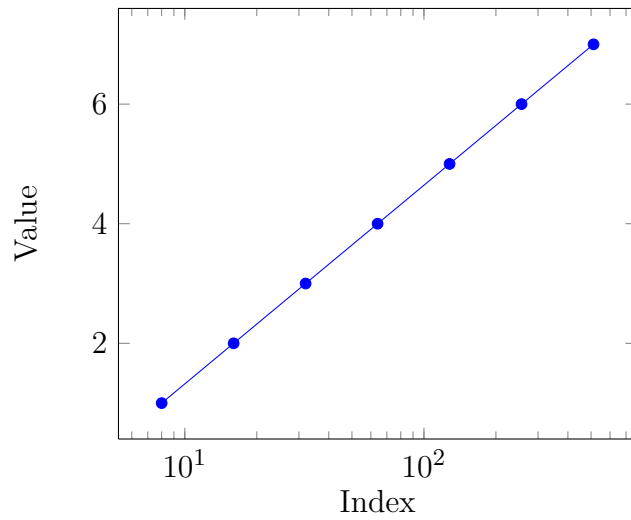
extra y ticks={2e-4,3e-4,4e-4,5e-4,6e-4,7e-4,8e-4,9e-4,1.2e-3}



### 10.2 Semilogy plot



### 10.3 Semilogx plot

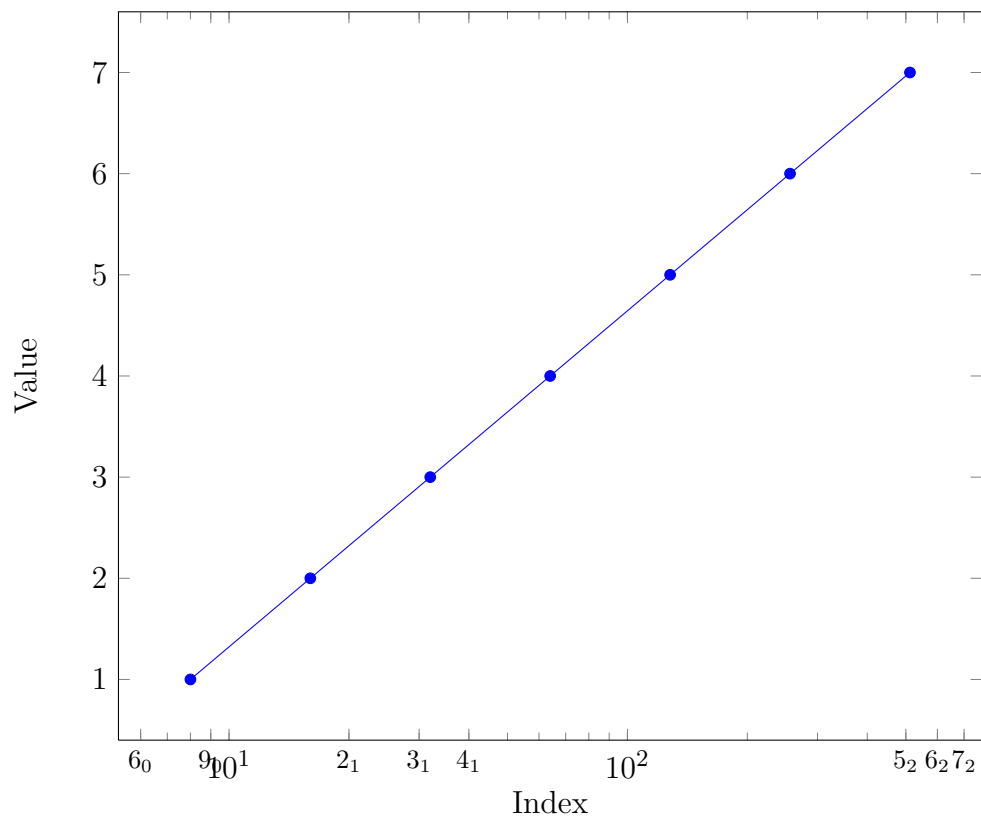


#### 10.3.1 Extra ticks

Options:

extra x ticks={6e0,9e0,2e1,3e1,4e1,5e2,6e2,7e2,8e2,9e2},

extra x tick style={/pgf/number format/sci subscript,font=footnotesize},



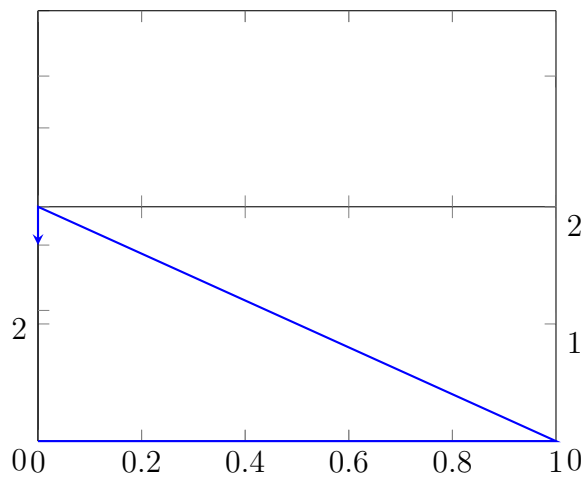
# 11 pgfplotstest.3d.tex

## 11.1 View

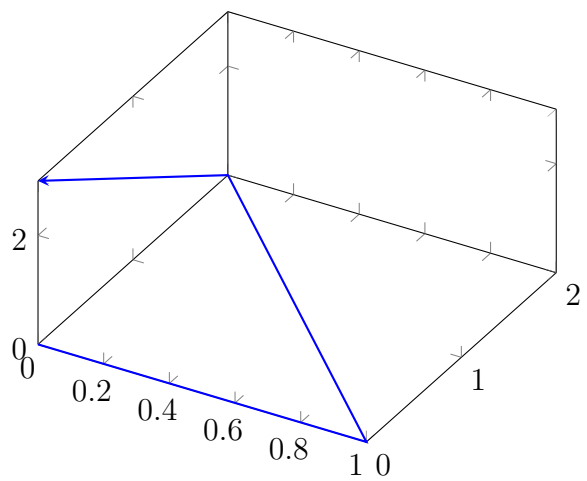
The following test plot has

### 11.1.1 Test von YAW

#### 11.1.1.1 fÄijr {0}{50}:

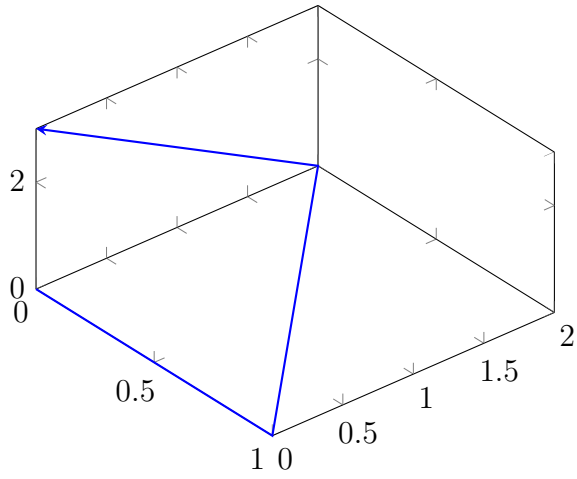


#### 11.1.1.2 fÄijr {30}{50}:

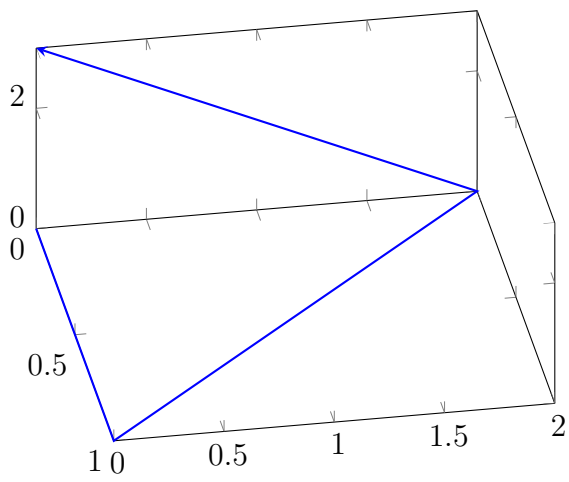




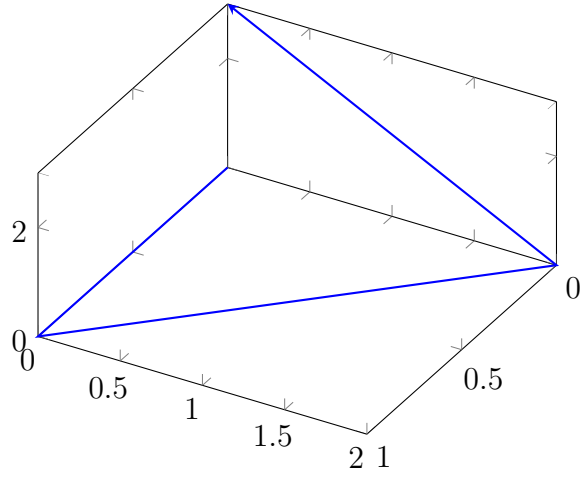
11.1.1.3  $\tilde{f}_{\text{Aijr}} \{50\}\{50\}$ :



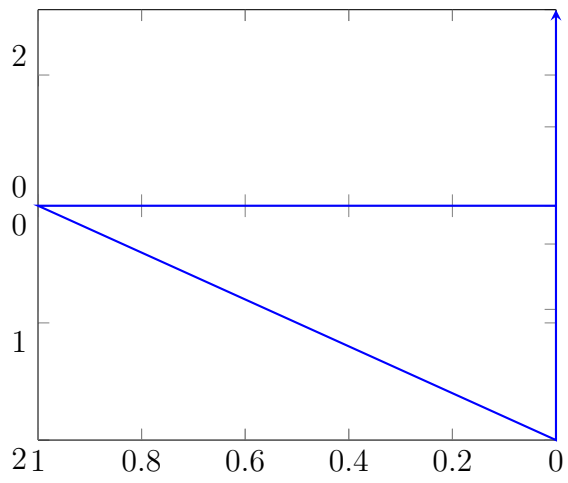
11.1.1.4  $\tilde{f}_{\text{Aijr}} \{80\}\{50\}$ :



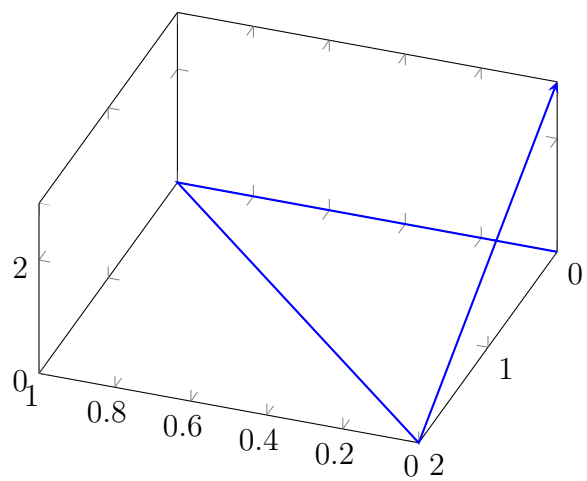
11.1.1.5  $\tilde{f}_{Aijr} \{120\}\{50\}$ :



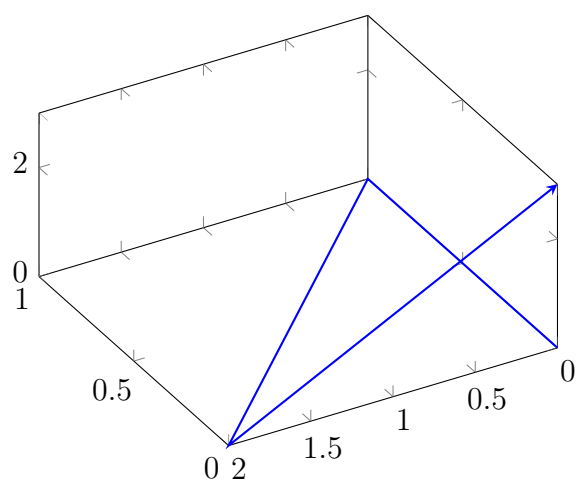
11.1.1.6  $\tilde{f}_{Aijr} \{180\}\{50\}$ :



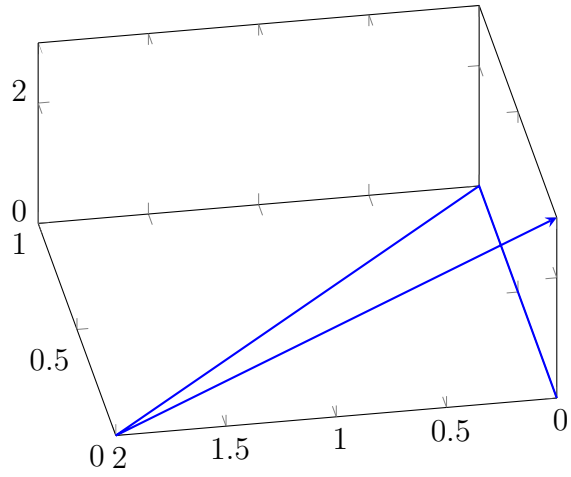
11.1.1.7  $f\tilde{A}_{ijr} \{200\}\{50\}$ :



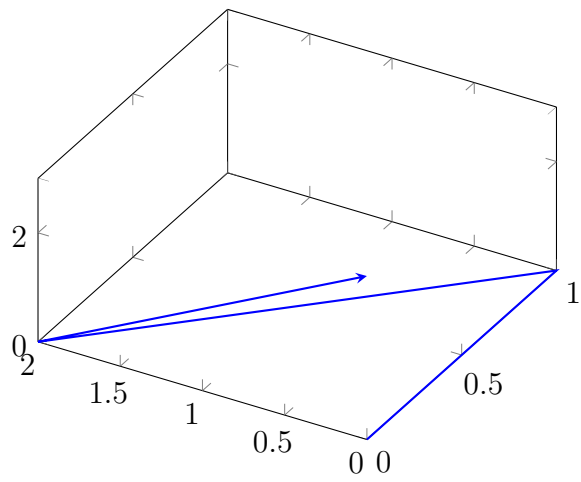
11.1.1.8  $f\tilde{A}_{ijr} \{240\}\{50\}$ :



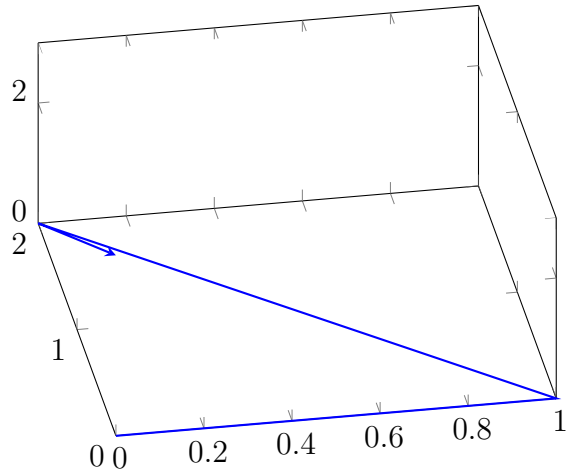
11.1.1.9  $f_{\tilde{A}ijr} \{260\}\{50\}$ :



11.1.1.10  $f_{\tilde{A}ijr} \{300\}\{50\}$ :

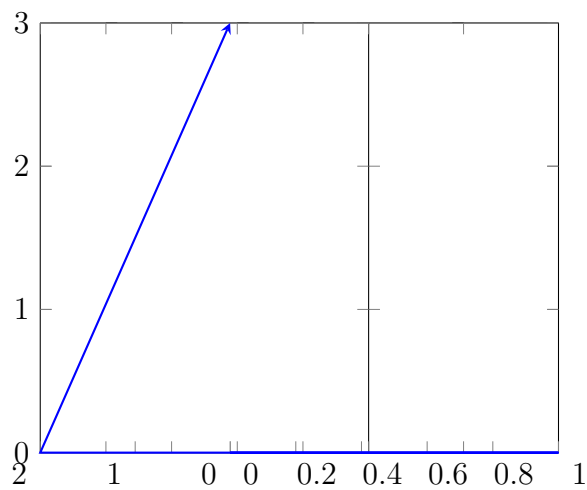


11.1.1.11  $\tilde{f}_{\text{Aijr}} \{350\}\{50\}$ :

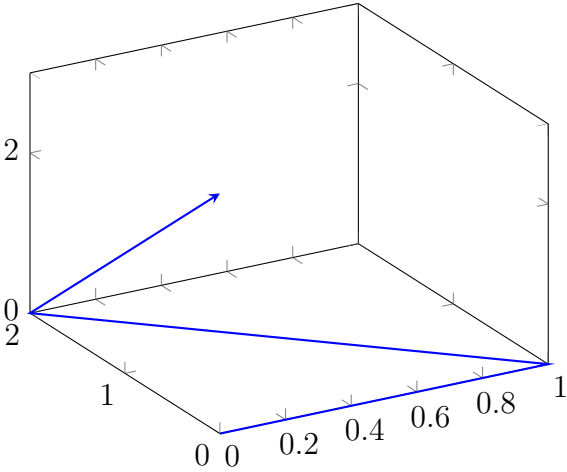


11.1.2 Test von PITCH

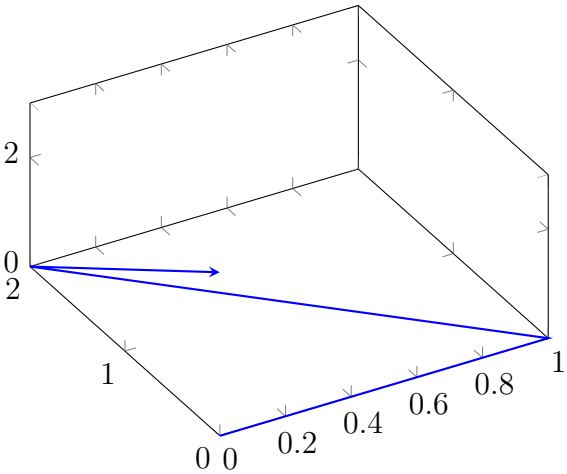
11.1.2.1  $\tilde{f}_{\text{Aijr}} \{-30\}\{0\}$ :



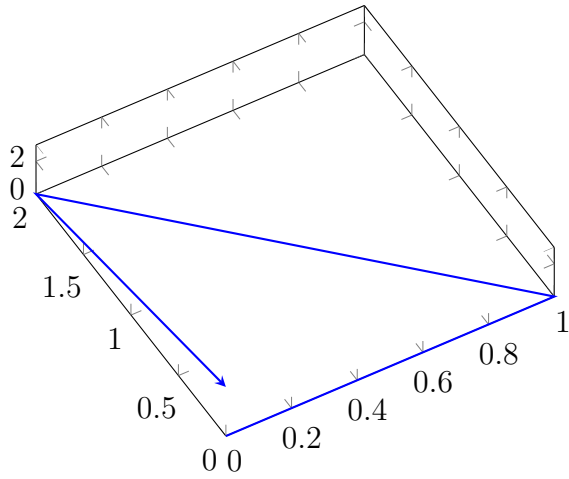
11.1.2.2  $f_{\tilde{A}ijr} \{-30\}\{30\}$ :



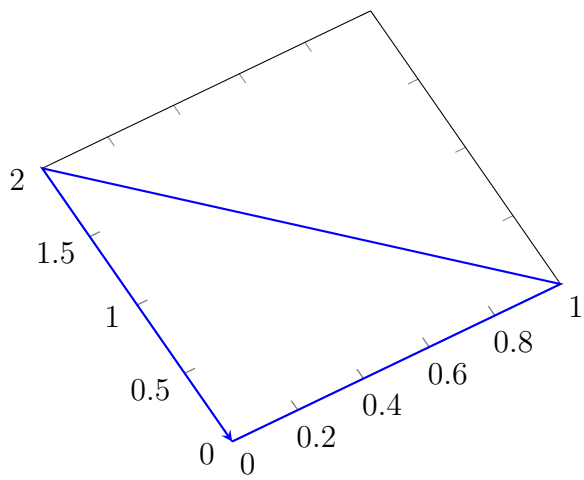
11.1.2.3  $f_{\tilde{A}ijr} \{-30\}\{50\}$ :



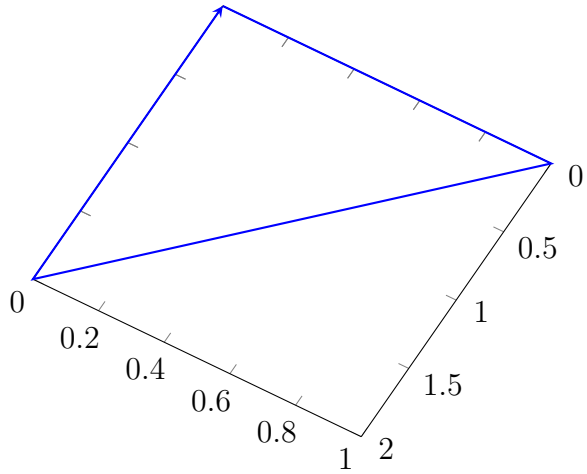
11.1.2.4  $\tilde{f}_{\text{Aijr}} \{-30\}\{80\}$ :



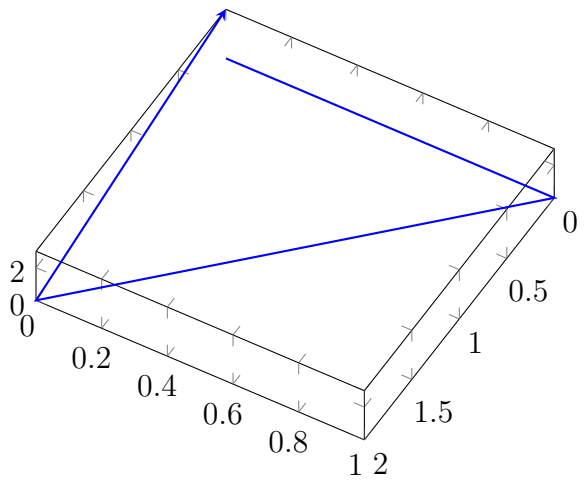
11.1.2.5  $\tilde{f}_{\text{Aijr}} \{-30\}\{90\}$ :



11.1.2.6  $f_{\tilde{A}ijr} \{-30\}\{-90\}$ :

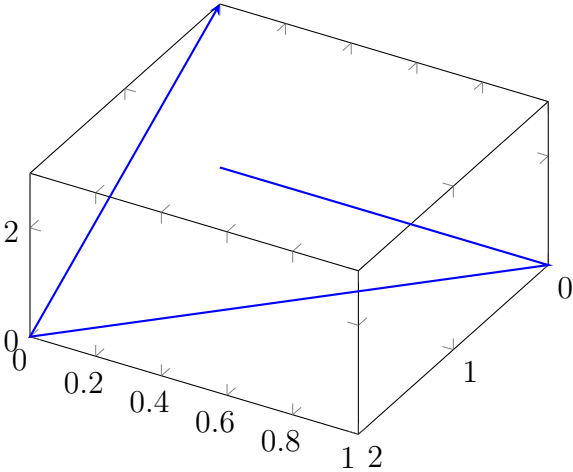


11.1.2.7  $f_{\tilde{A}ijr} \{-30\}\{-80\}$ :

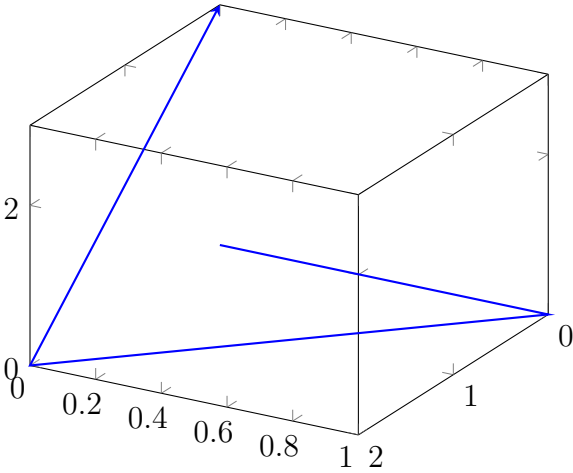




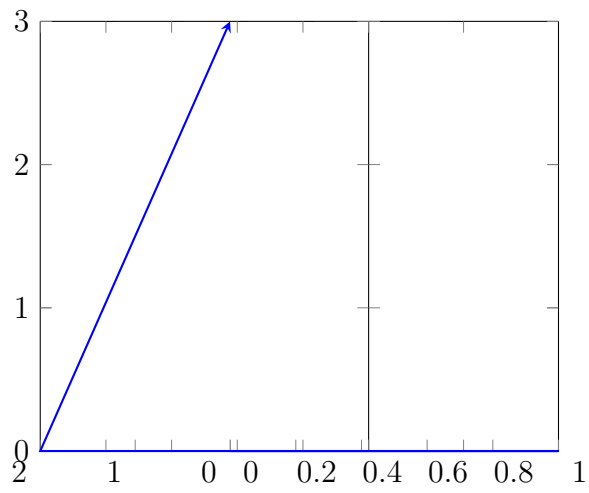
11.1.2.8 f $\tilde{A}$ <sub>ijr</sub> {-30}{-50}:



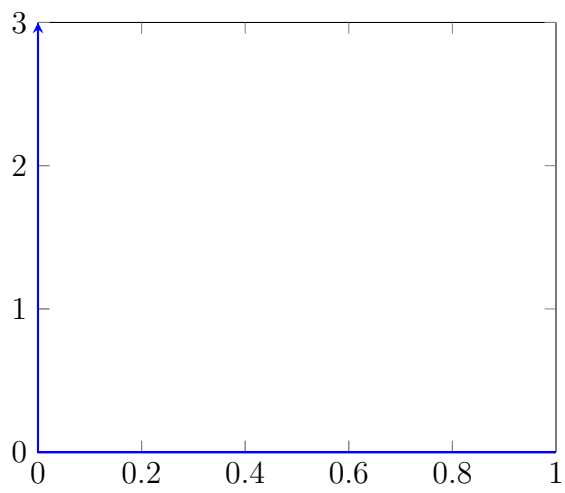
11.1.2.9 f $\tilde{A}$ <sub>ijr</sub> {-30}{-30}:



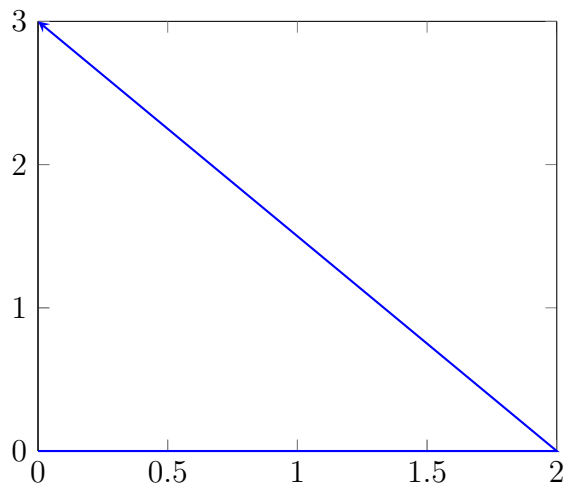
11.1.2.10  $f_{\tilde{A}ijr} \{-30\}\{0\}$ :



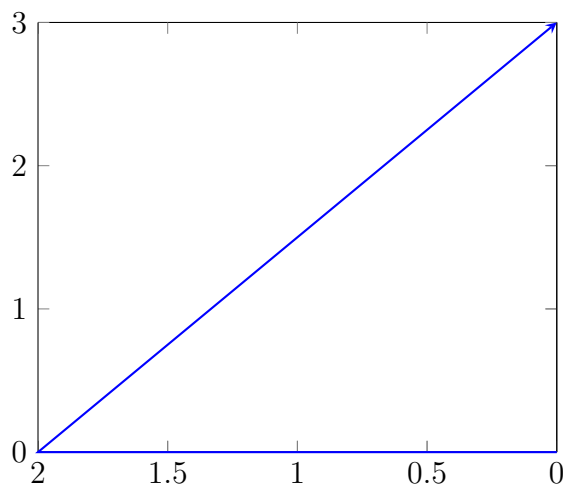
11.1.2.11 Special case view=0,0



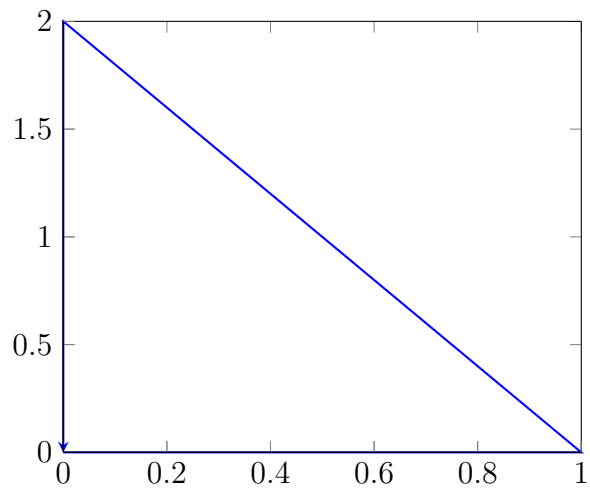
## 11.1.2.12 Special case view=90,0



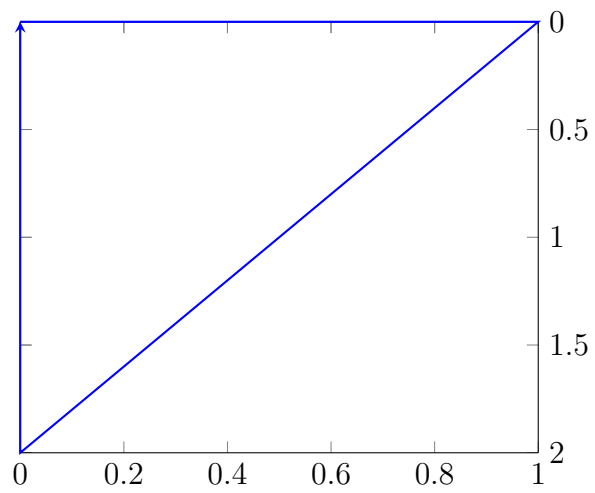
## 11.1.2.13 Special case view=-90,0



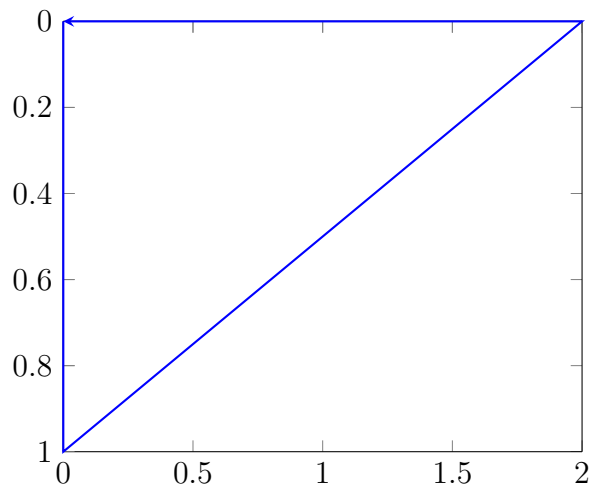
## 11.1.2.14 Special case view=0,90



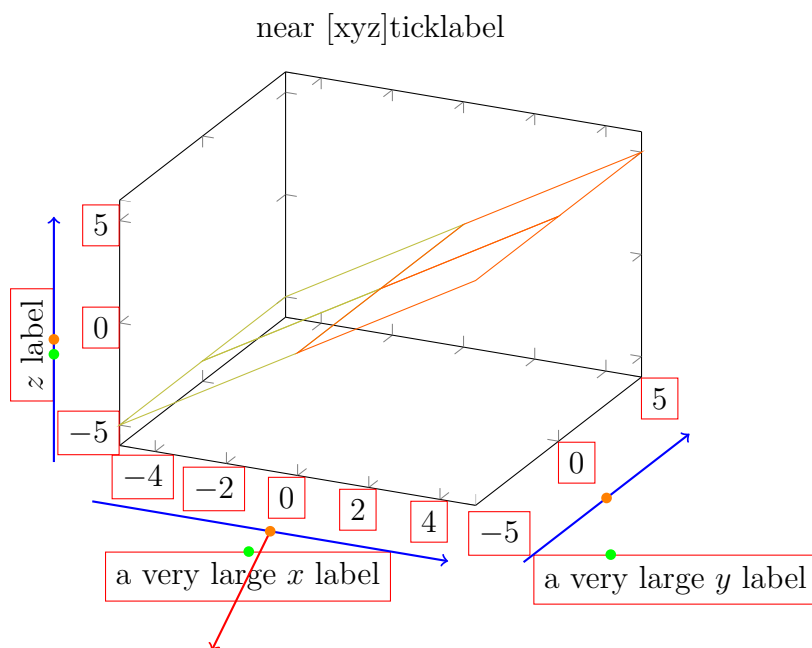
## 11.1.2.15 Special case view=0,-90

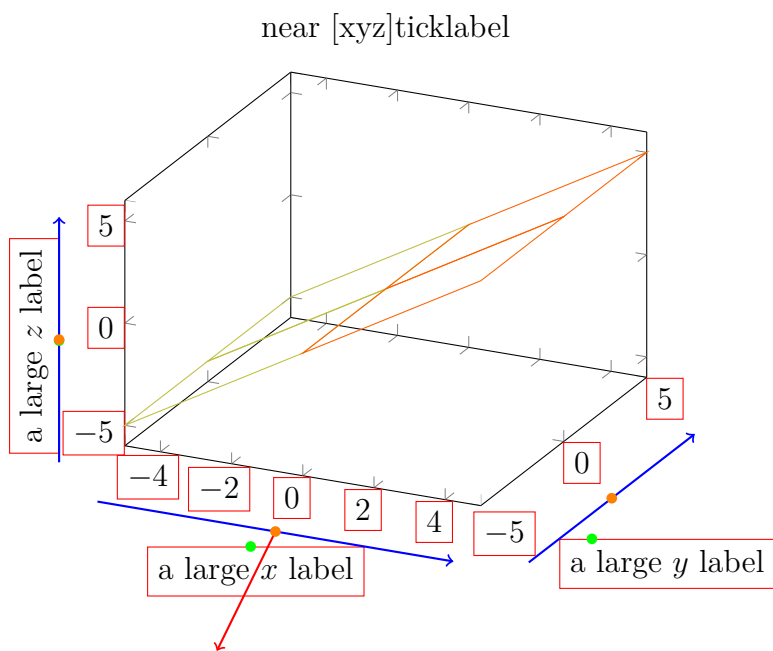
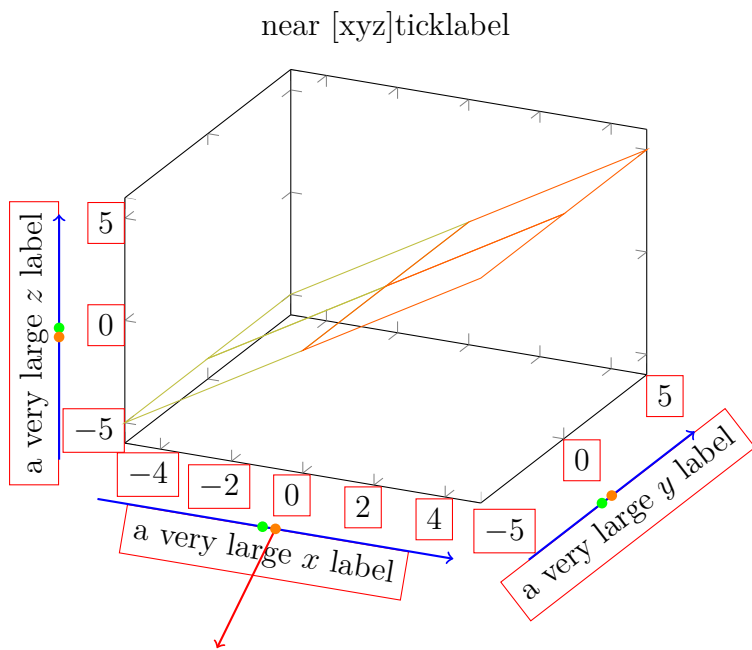


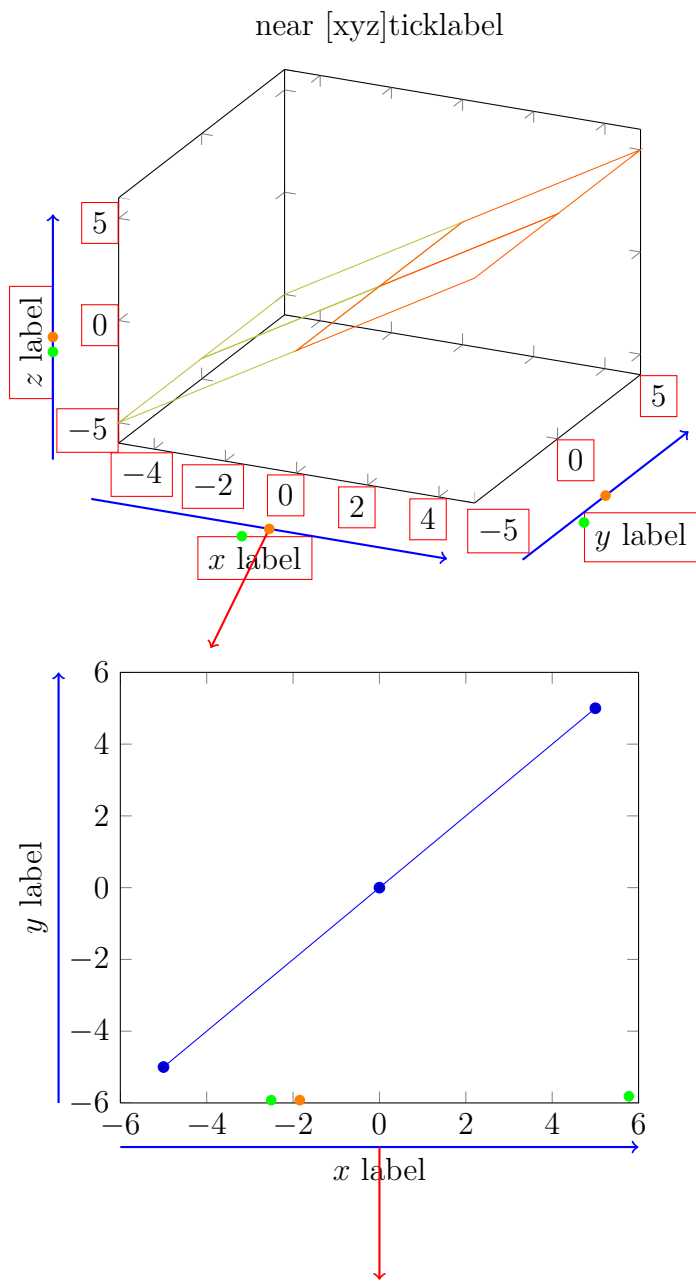
### 11.1.2.16 Special case view=90,90



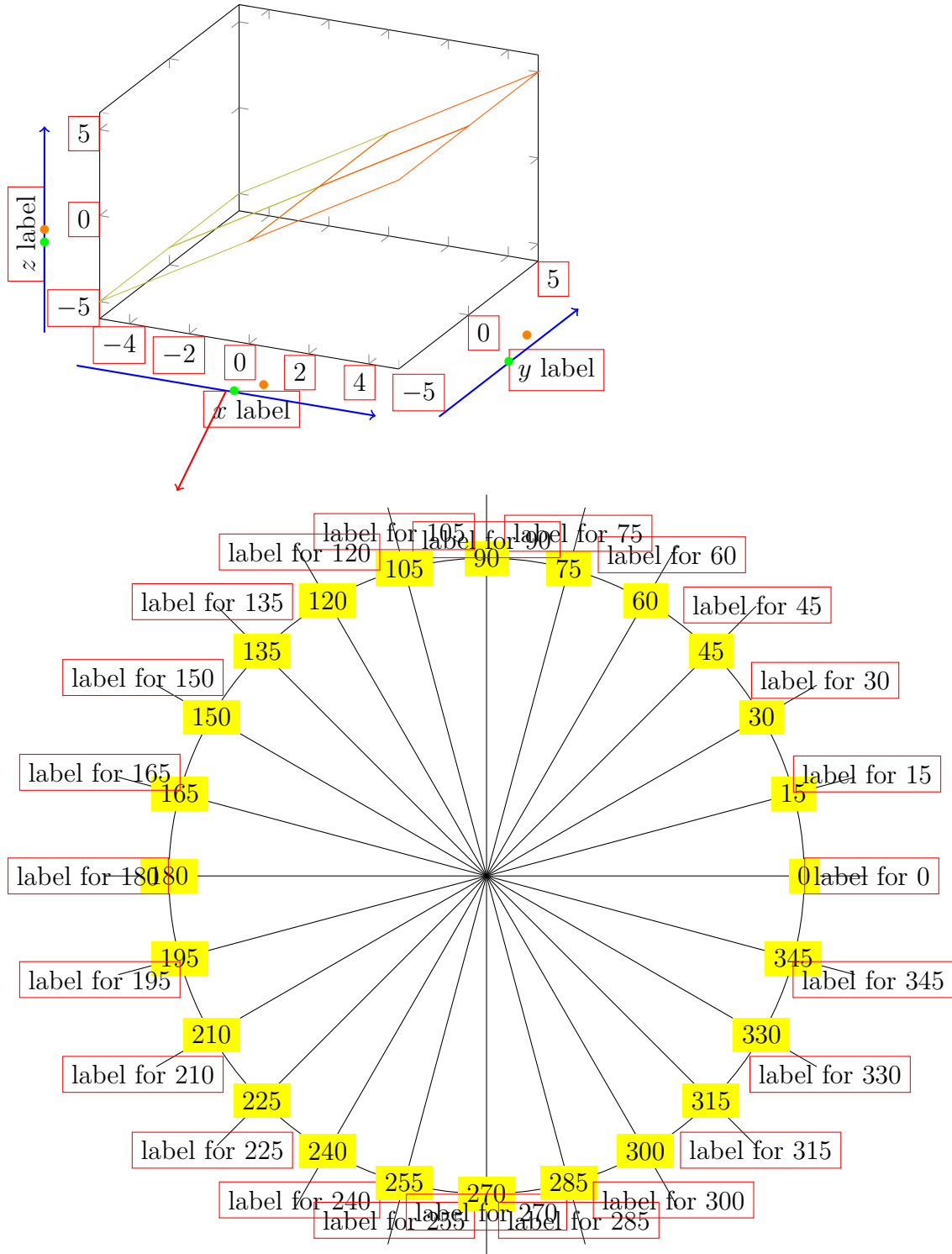
## 11.2 Tests and Debugging of near ticklabel anchors







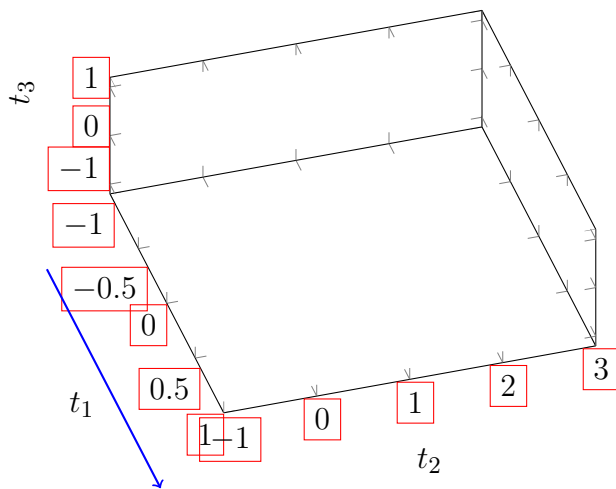
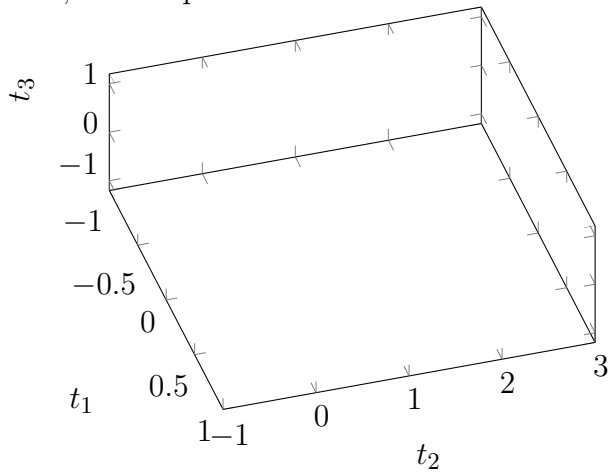
near [xyz]ticklabelSTAR



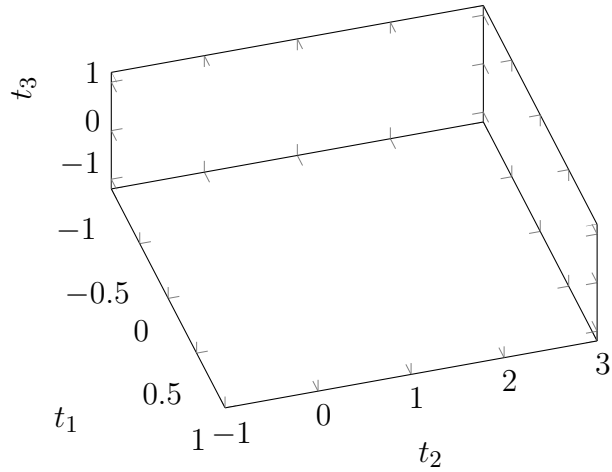


### 11.2.1 Placement of ticklabels

Here, a  $-0.5$  penetrated the axis in an earlier version, should be fixed now:

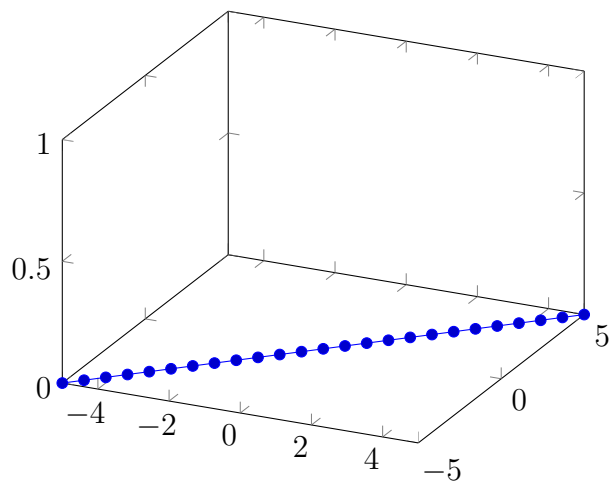


### 11.2.1.1 mit xticklabel shift=5pt

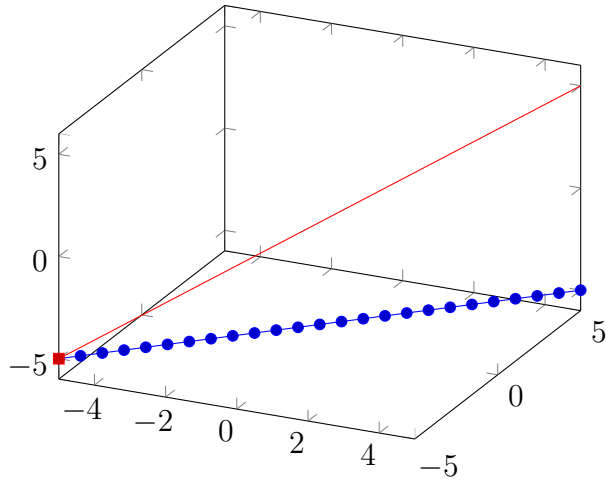


## 11.3 Sanity checking

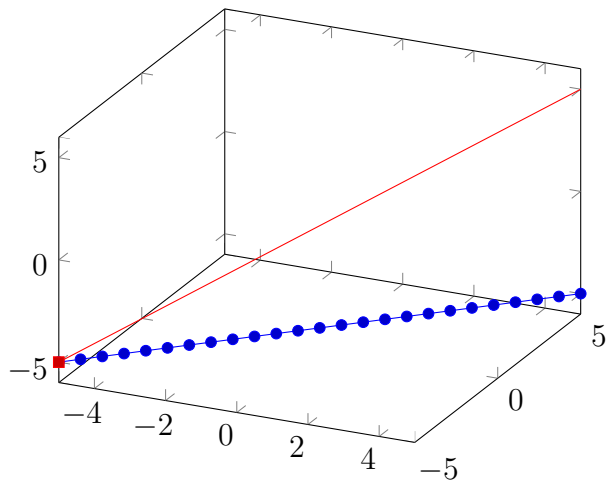
### 11.3.1 addplot in 3D axis



## 11.3.2 addplot and addplot3 in an axis



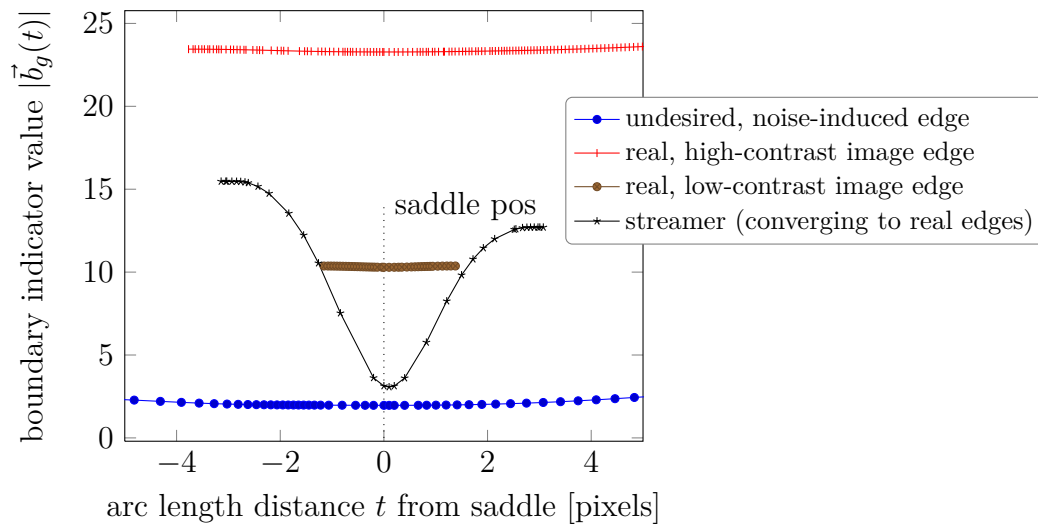
## 11.3.3 addplot and addplot3 in an axis



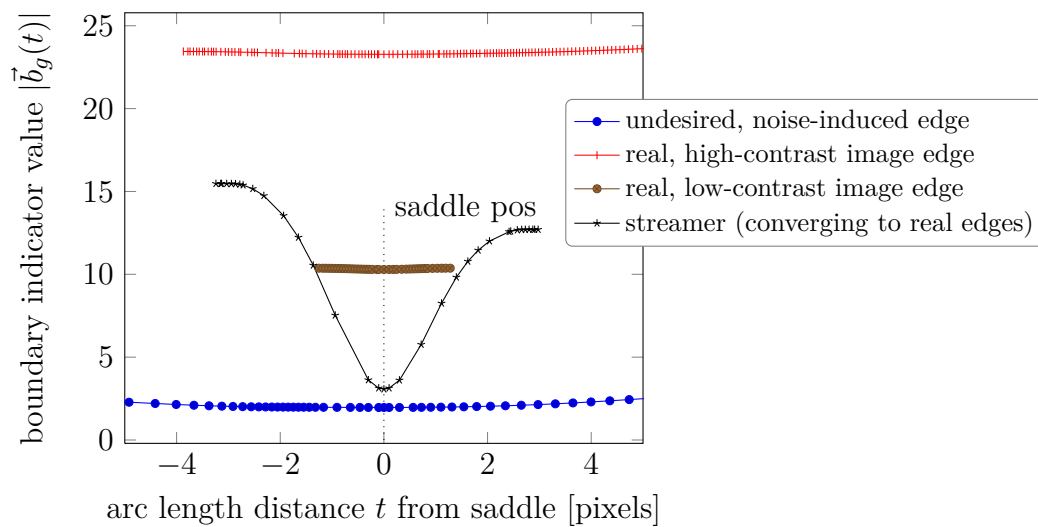
## 12 pgfplotstest.hansmeine\_app.tex

### 12.1 Application example of Hans Meine

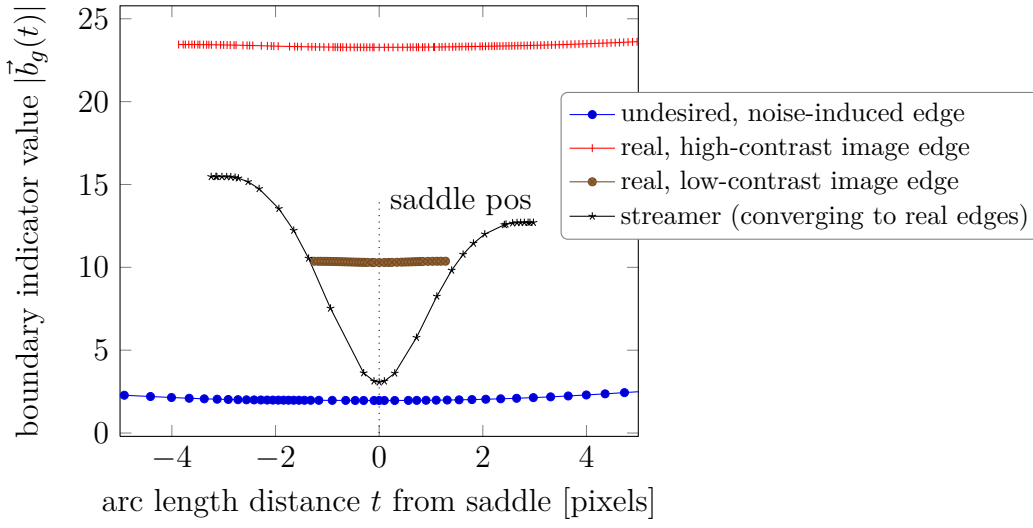
This example has been copied with permission from <http://kogs-www.informatik.uni-hamburg.de/~meine/tikz/plots>. Please note that the first plot's input data as it is found in the url above is slightly shifted compared to the other plots.



#### 12.1.1 With plot file



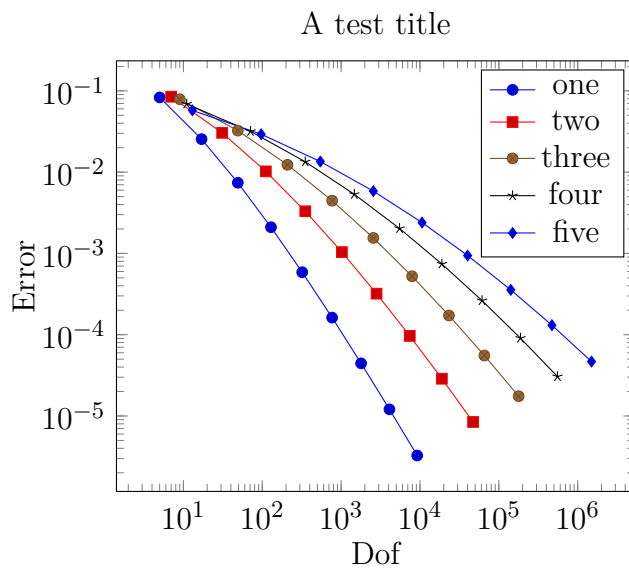
## 12.1.2 With plot file and restricted bounding box



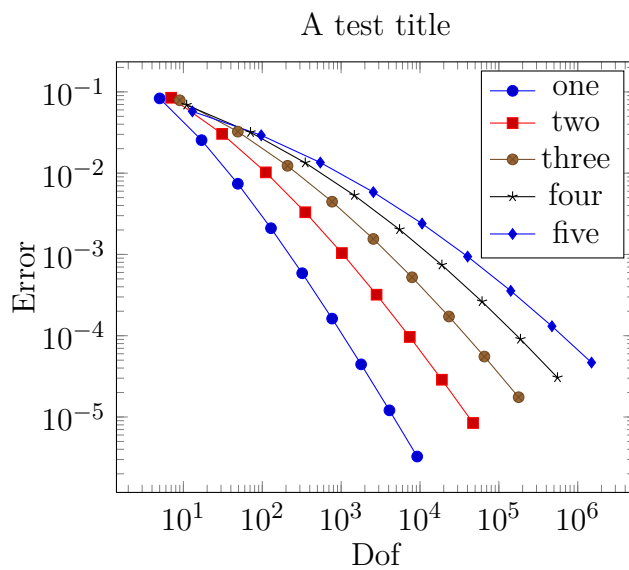
## 13 pgfplotstest.legend.tex

### 13.1 Legends

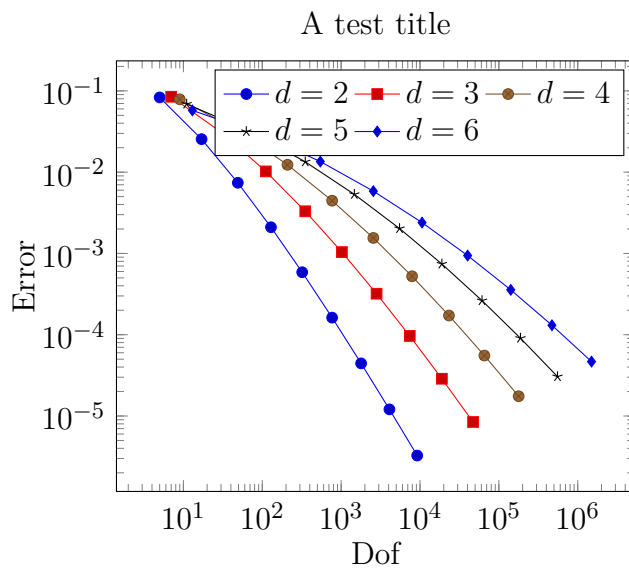
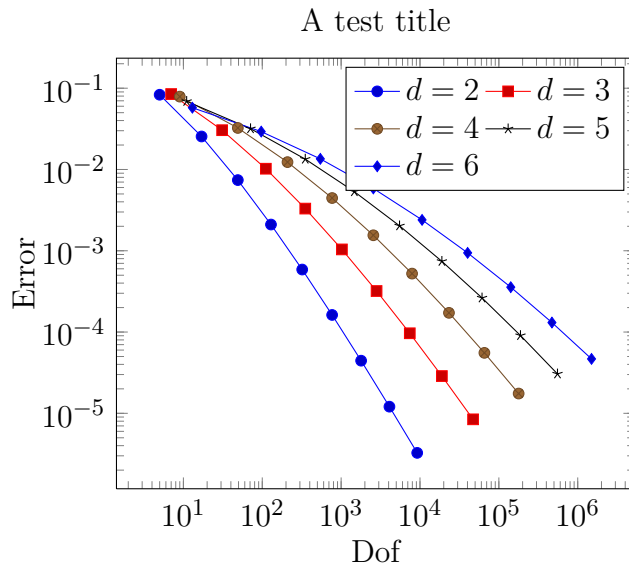
#### 13.1.1 Old-format legends with two backslashes as separator

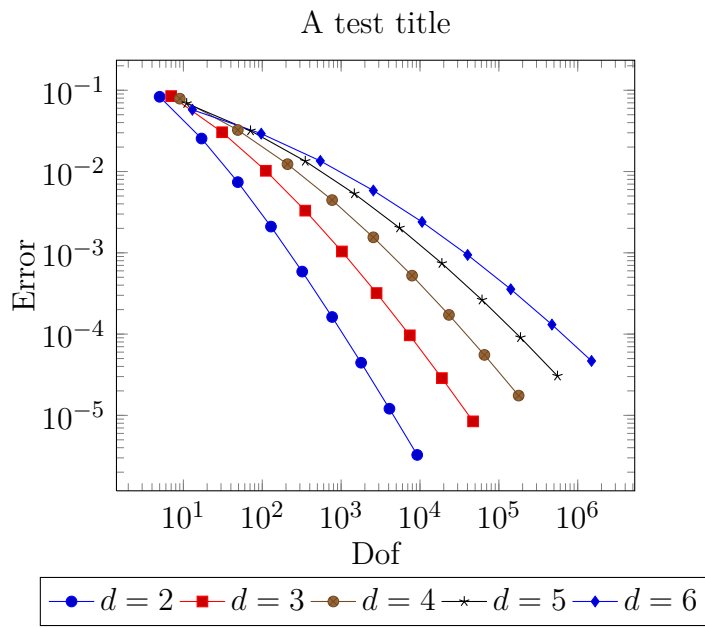
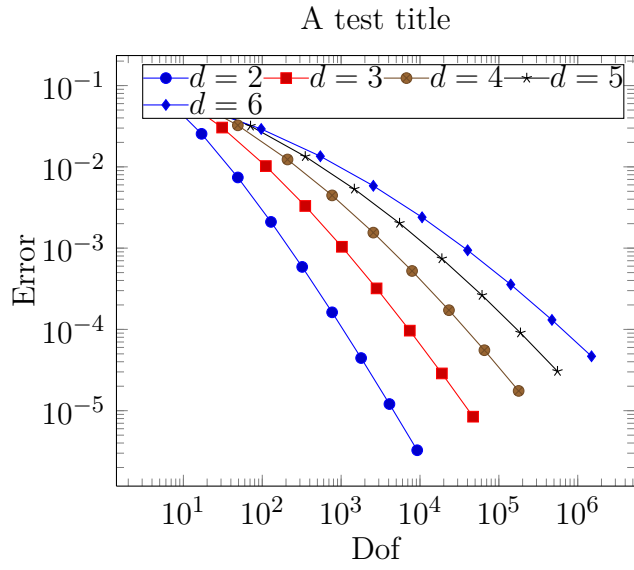


#### 13.1.2 Using comma-separated-legends

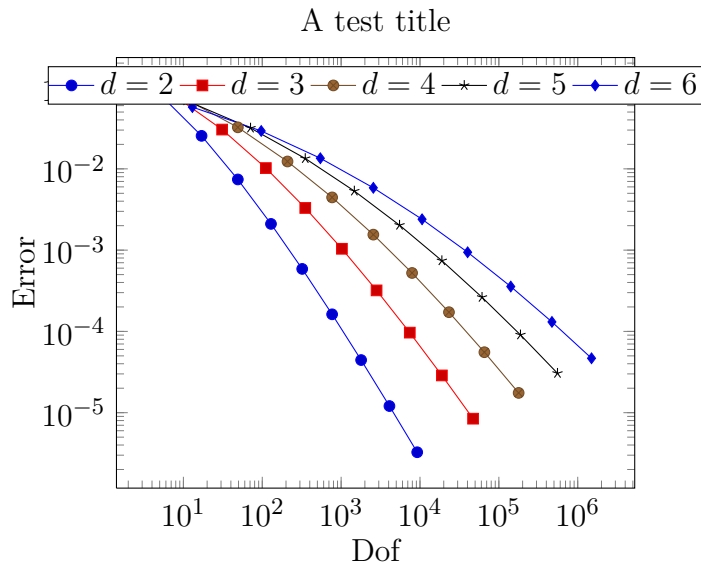


## 13.1.3 testing legend columns

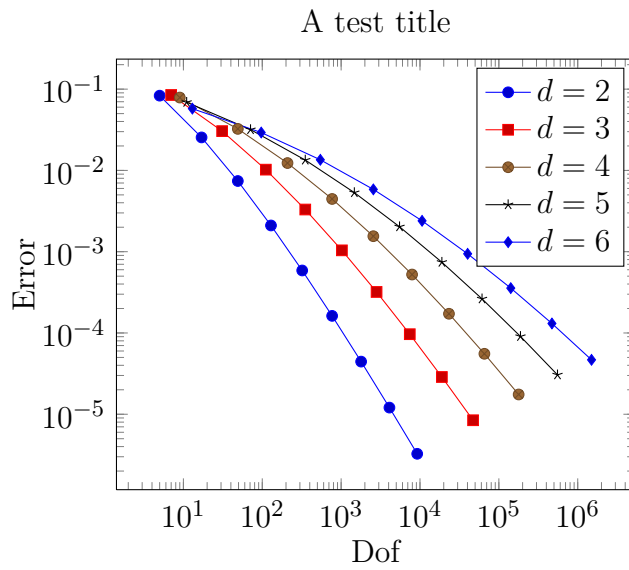




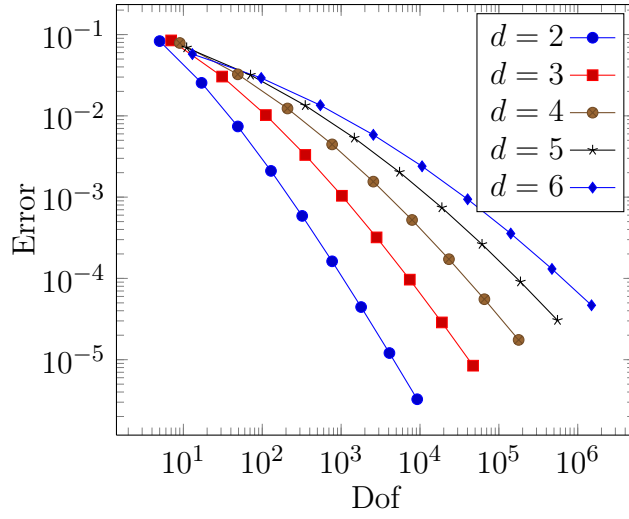




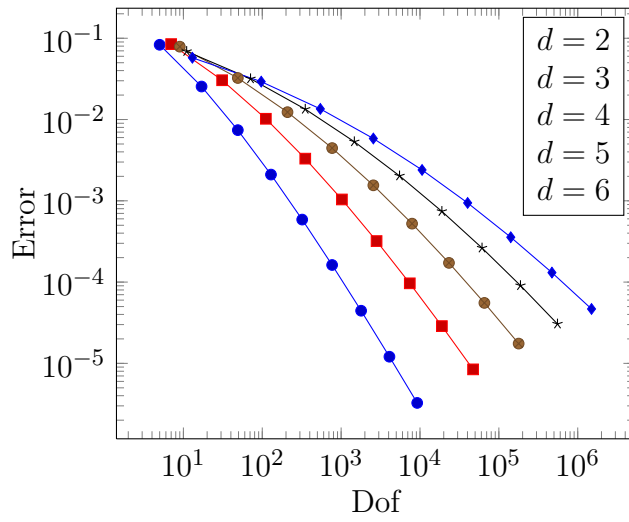
#### 13.1.4 “legend plot pos” options



A test title



A test title

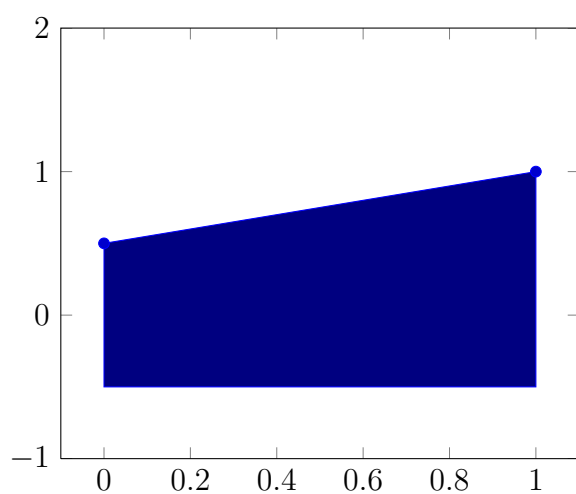


## 14 pgfplotstest.misc.tex

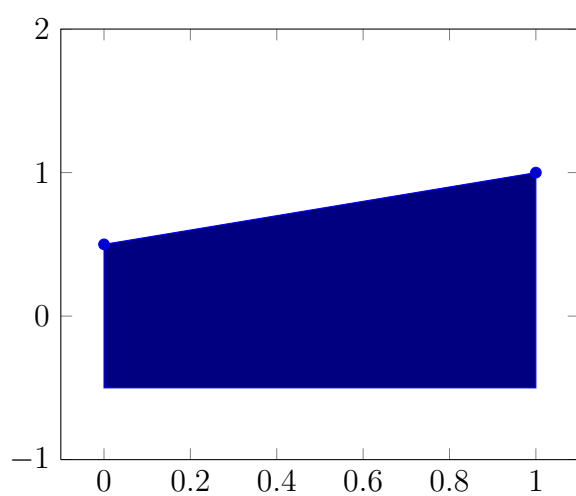
### 14.1 Paths after addplot

#### 14.1.1 plot coordinates

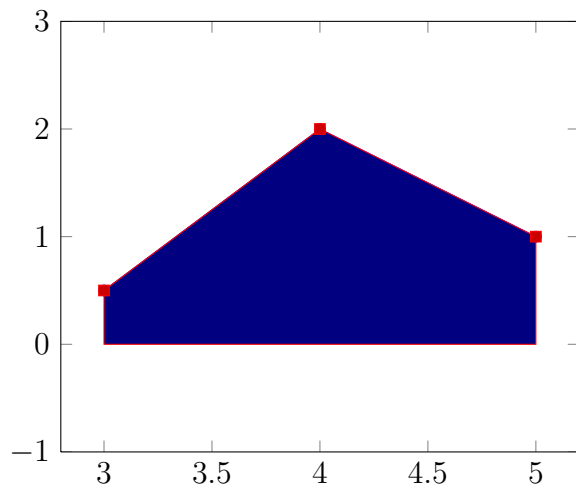
##### 14.1.1.1 without space after 'coordinates'



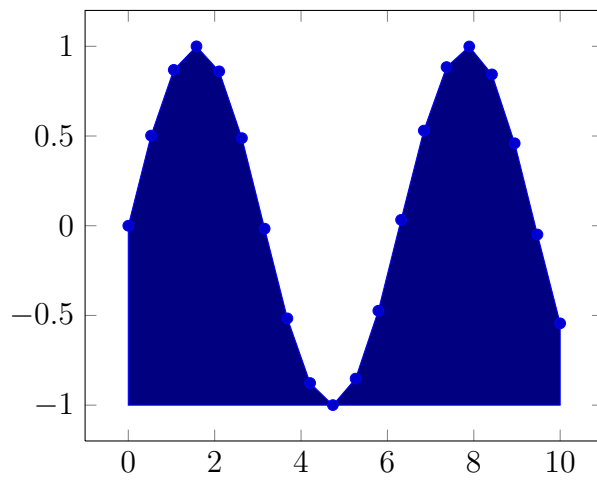
##### 14.1.1.2 with space after 'coordinates'



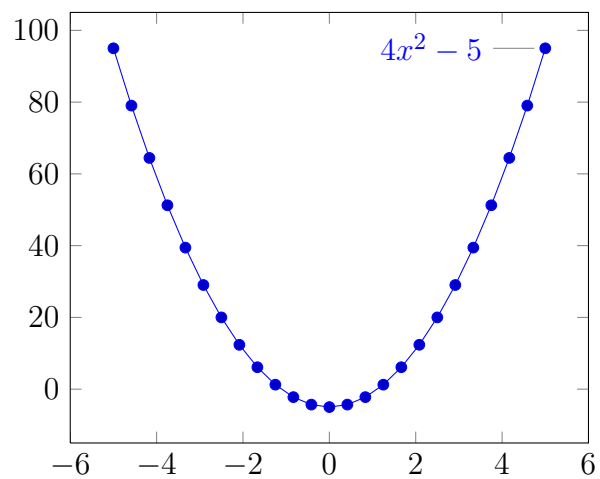
## 14.1.1.3 using closedcycle path



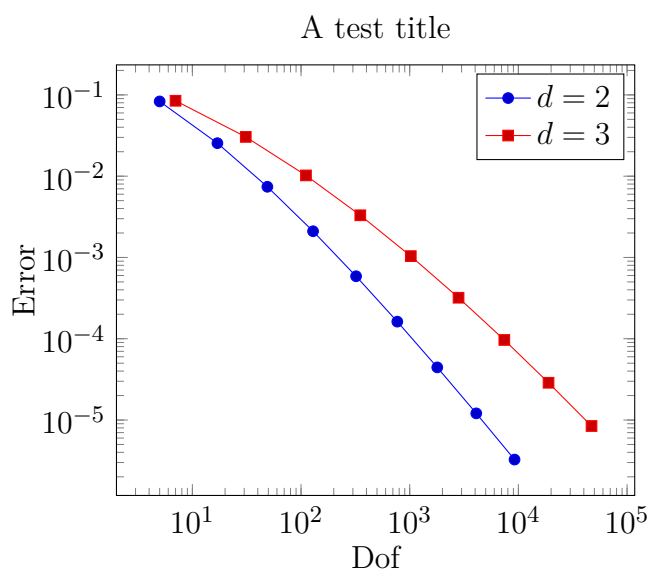
## 14.1.2 plot table



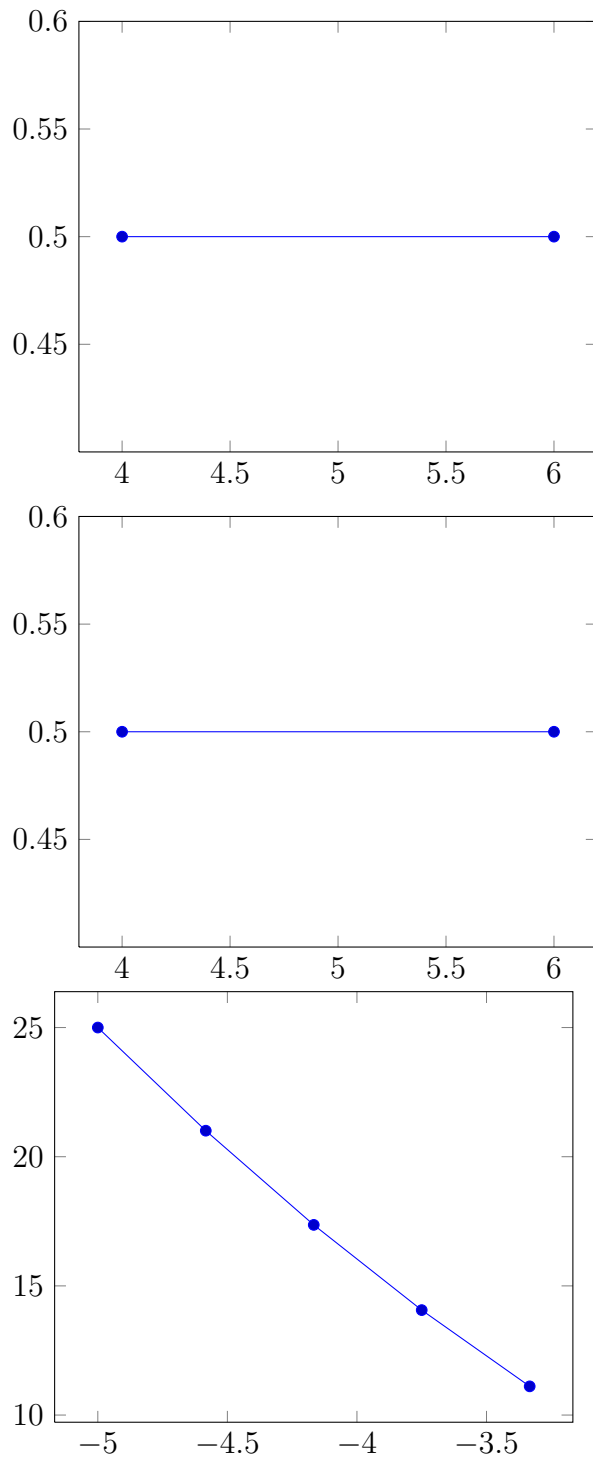
## 14.1.3 plot function



## 14.2 Title-option

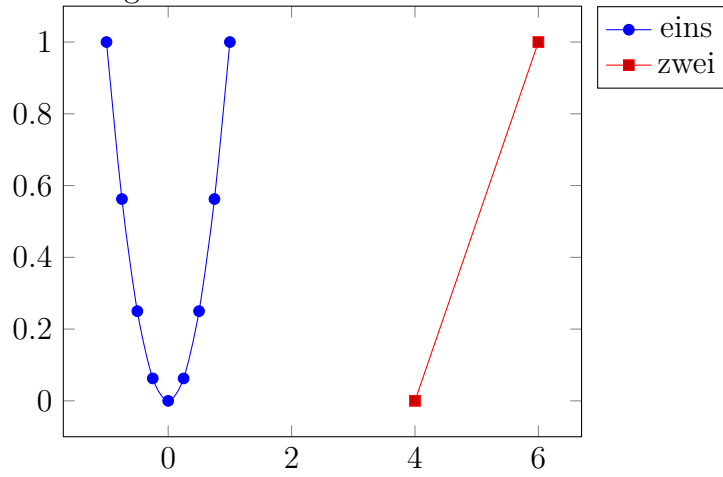


## 14.3 Filter test

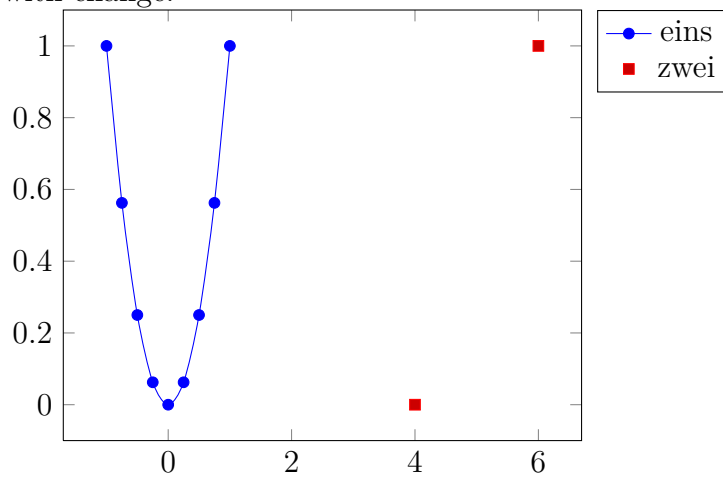


## 14.4 Test for addplot+[...]

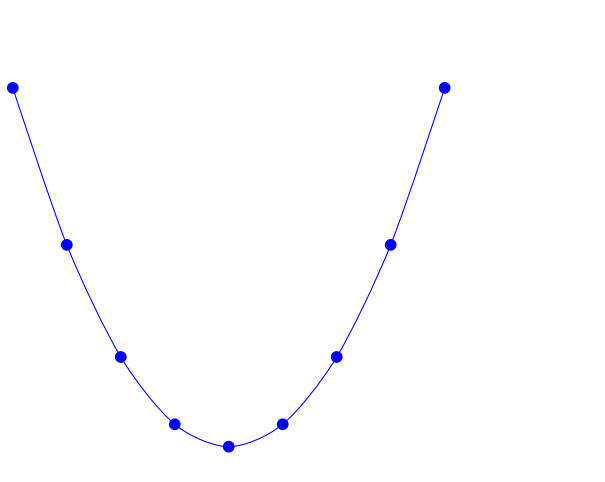
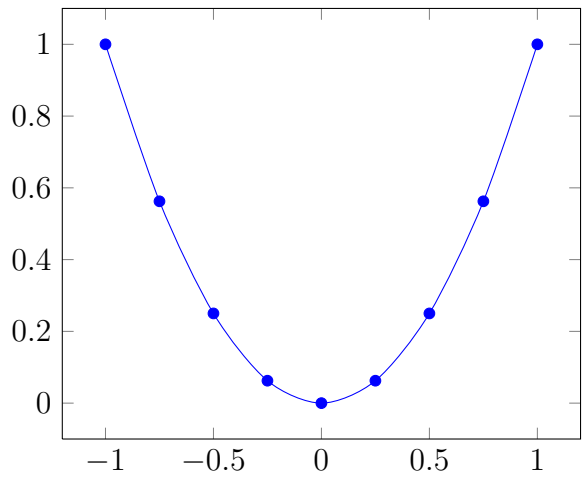
No Change:



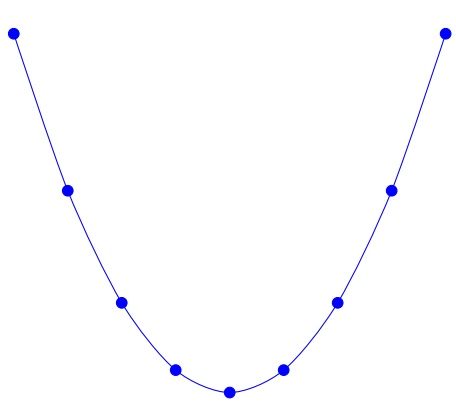
with change:



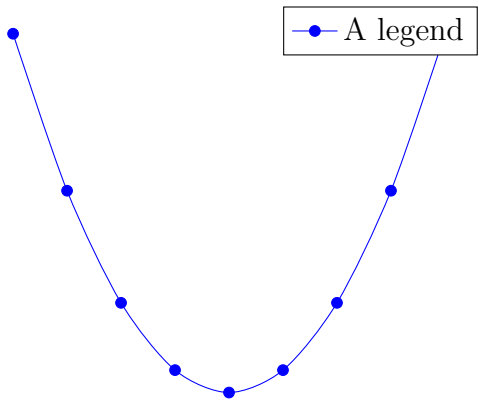
14.5 Hide axis test



A plot with hidden axis



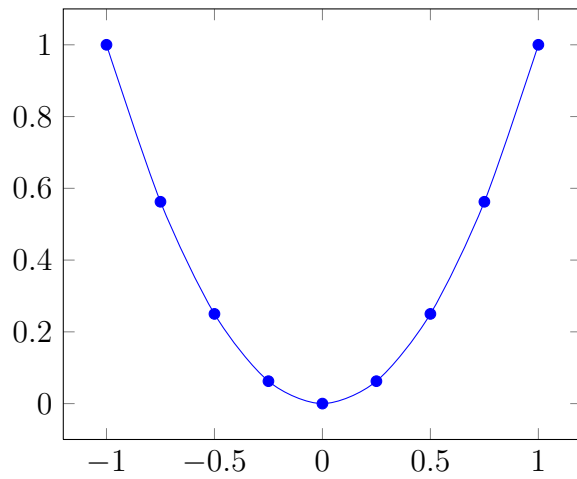
A plot with hidden axis



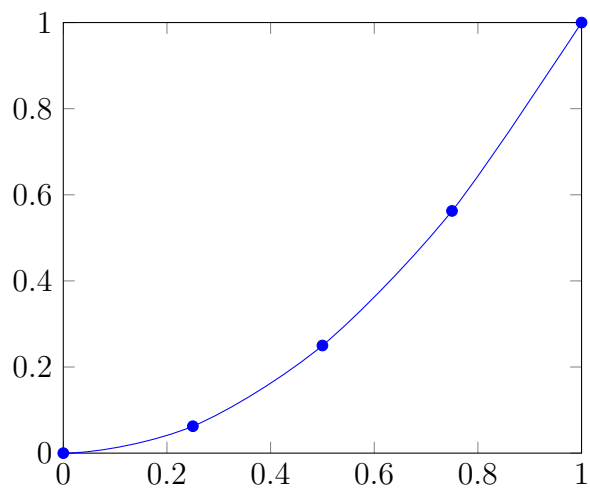


## 14.6 disabledatascaling / disablelogfilter

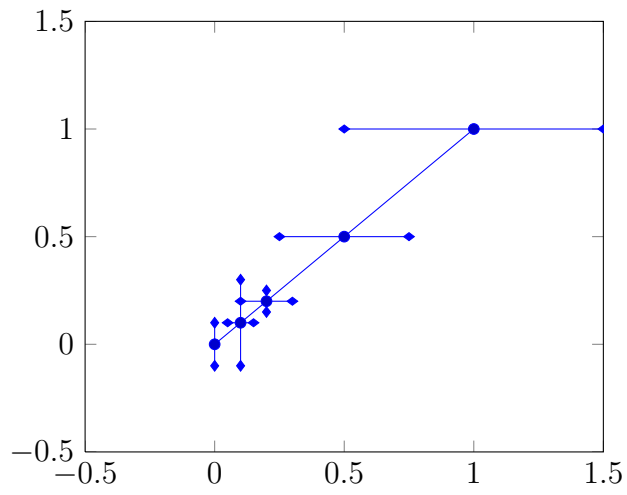
### 14.6.1 disabledatascaling



### 14.6.2 disabledatascaling + explicit limits



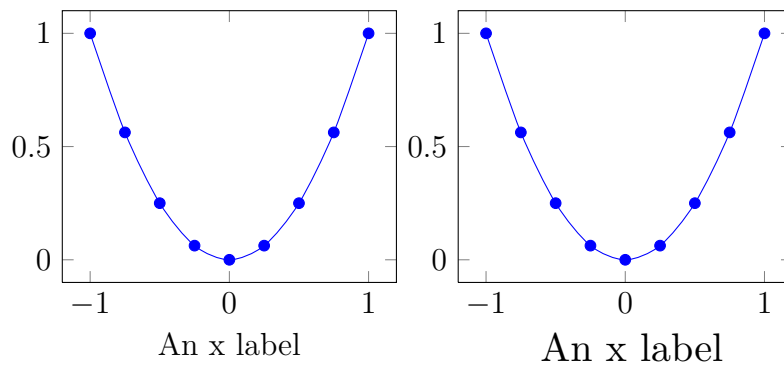
## 14.6.3 disabledatascaling + explicit limits + error bars



## 15 pgfplotstest.align.tex

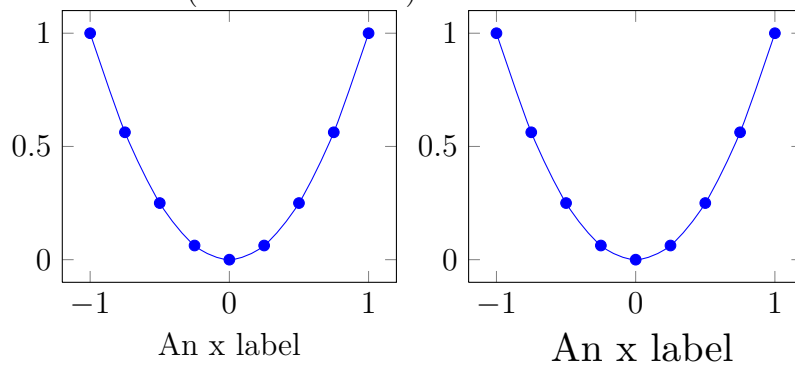
### 15.1 Anchors, alignment, baselines, sub nodes

#### 15.1.1 Baseline alignment

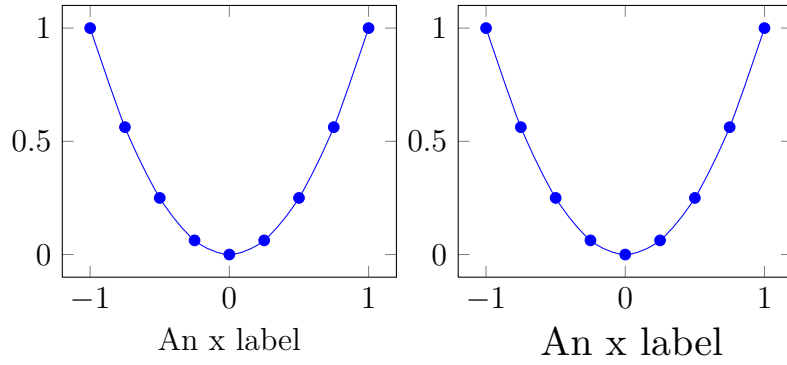


#### 15.1.2 Baseline alignment and externalized graphics

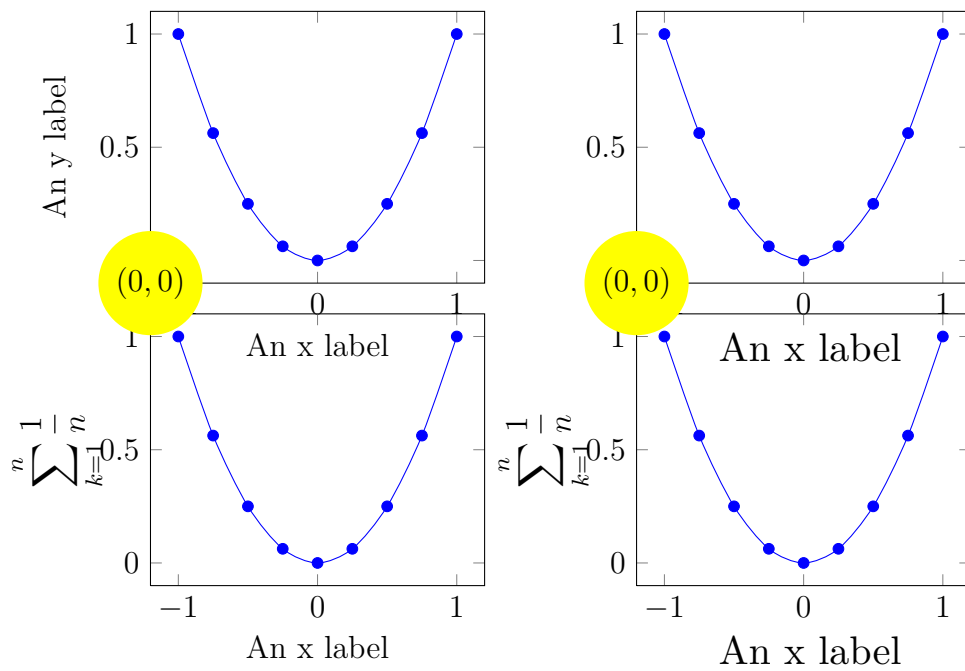
One needs `\beginpgfgraphicnamed` around the complete paragraph, so this here doesn't work (see source code):



## 15.1.3 Baseline alignment and externalized graphics II

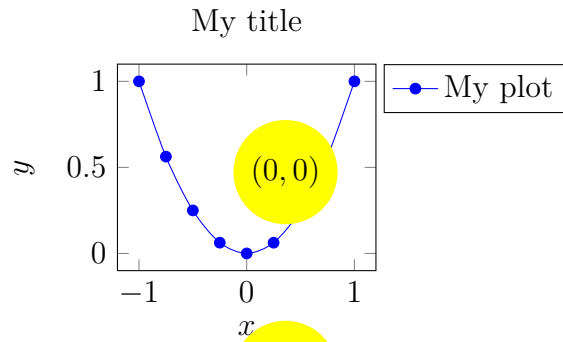


## 15.1.4 Horizontal and Vertical alignment

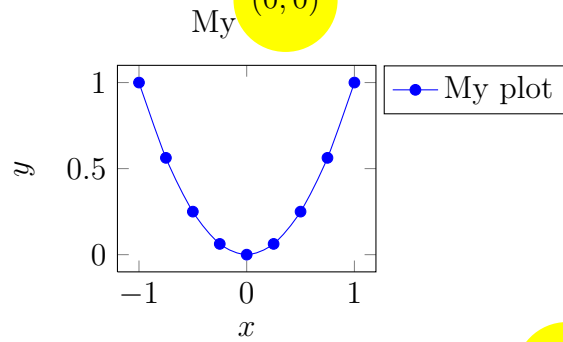


## 15.1.5 Anchortest

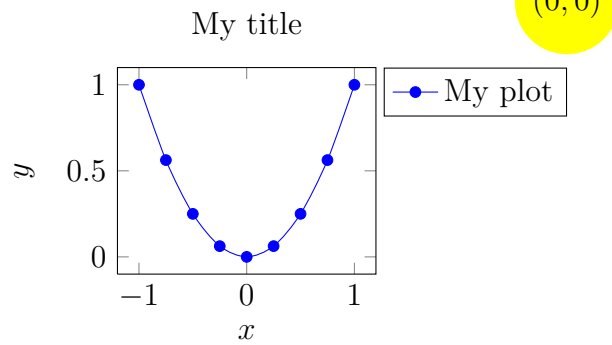
outer center:



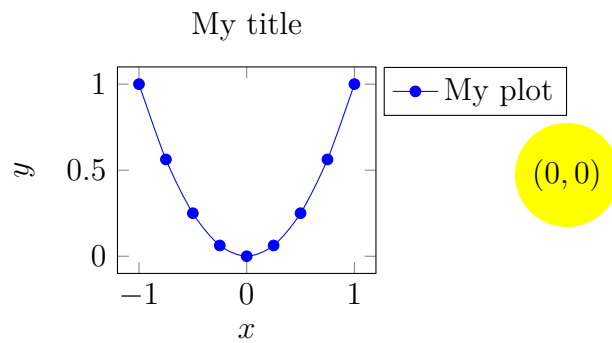
outer north:



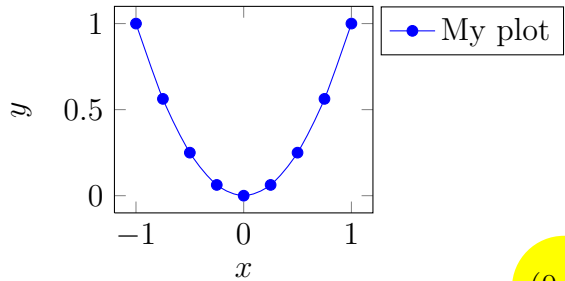
outer north east:



outer east:

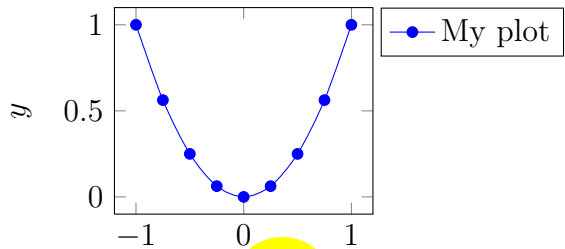


outer south east:  
My title



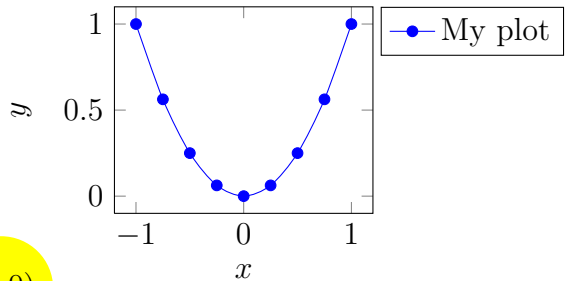
(0,0)

outer south:  
My title



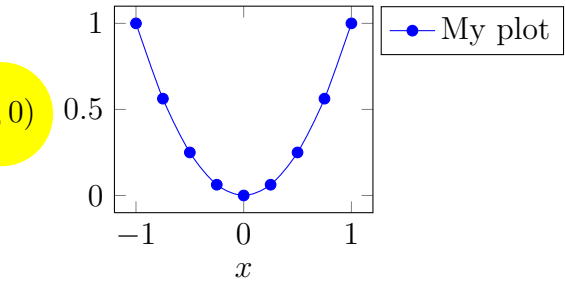
(0,0)

outer south west:  
My title

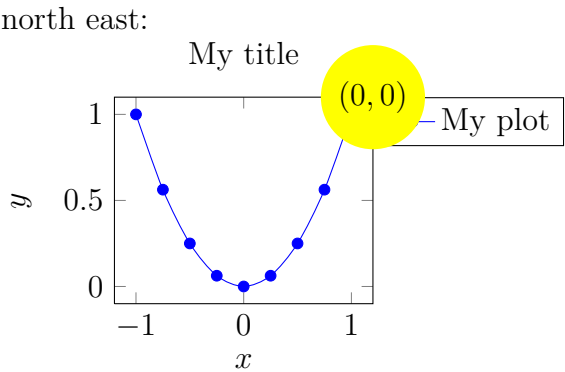
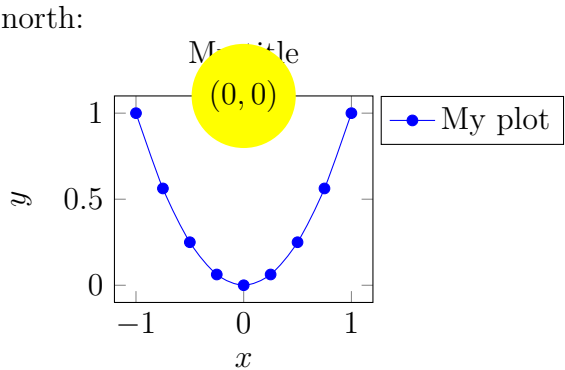
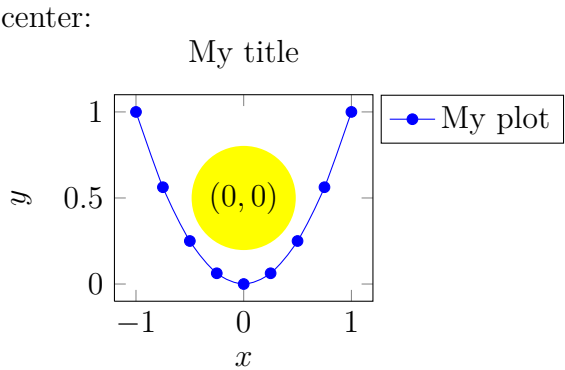
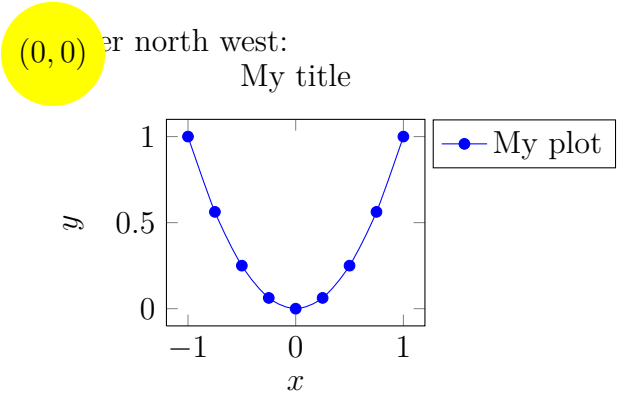


(0,0)

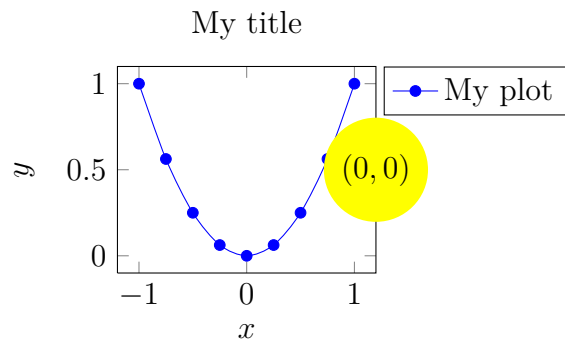
outer west:  
My title



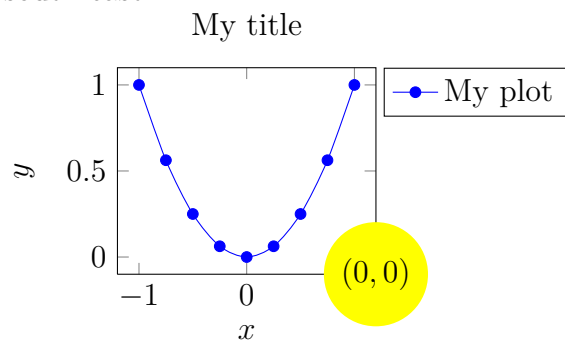
(0,0)



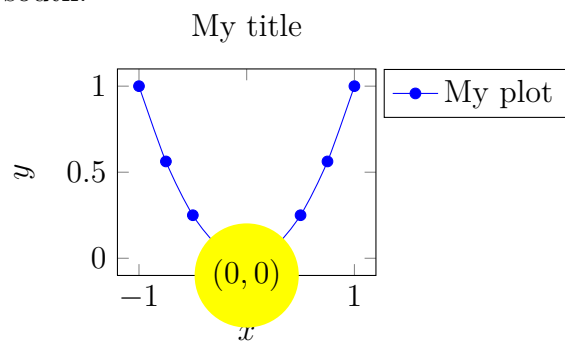
east:



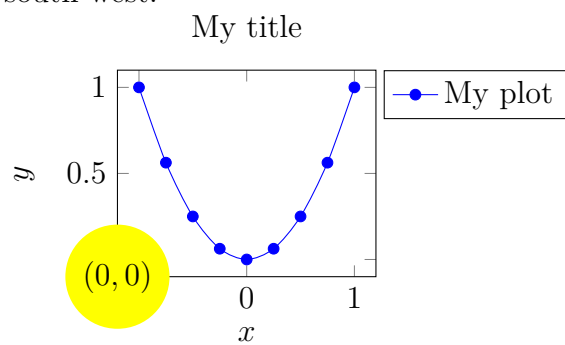
south east:



south:

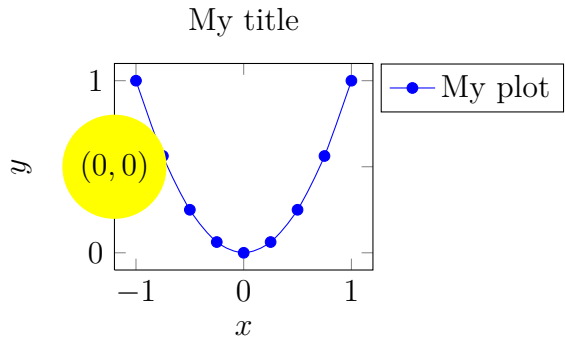


south west:

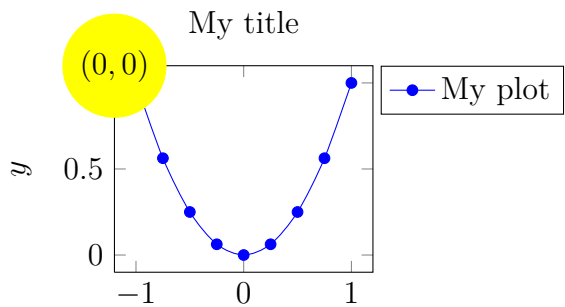




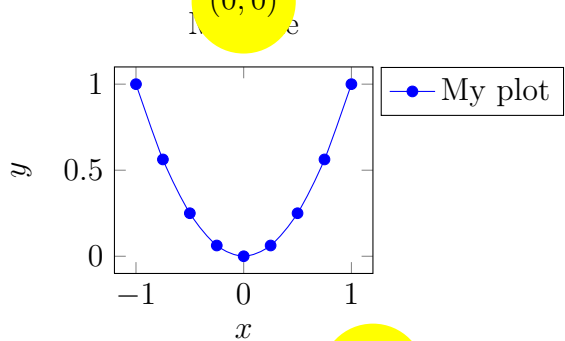
west:



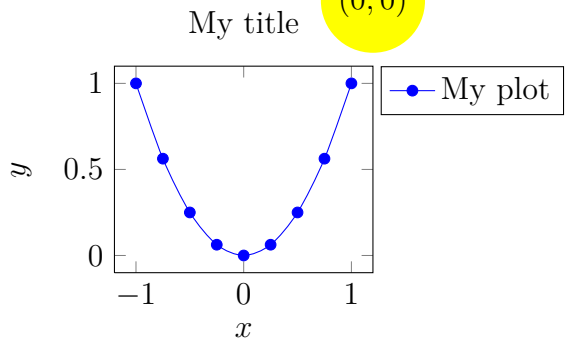
north west:



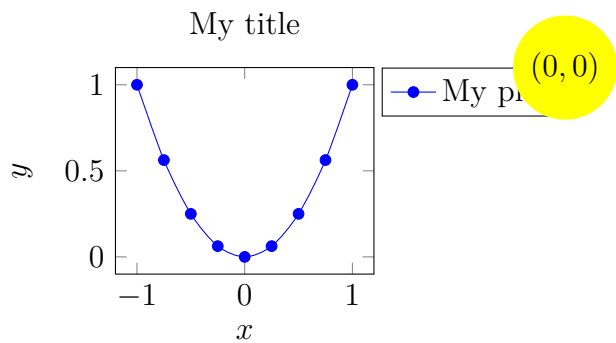
above north:



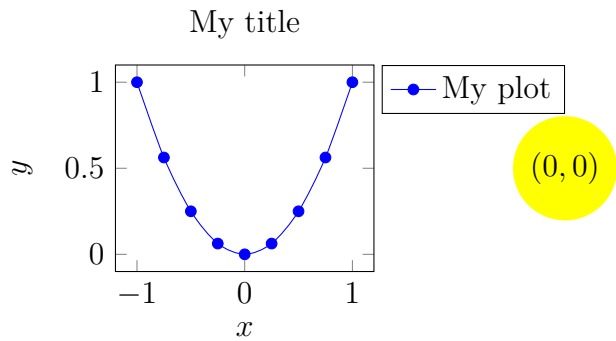
above north east:



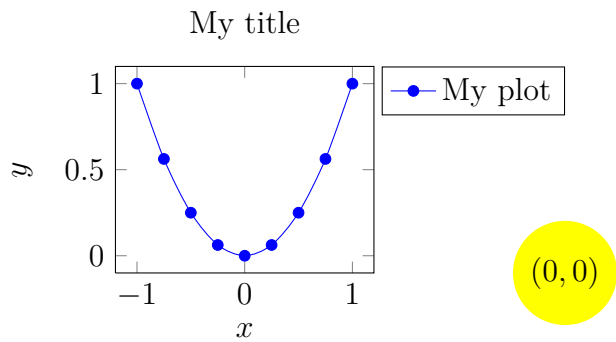
right of north east:



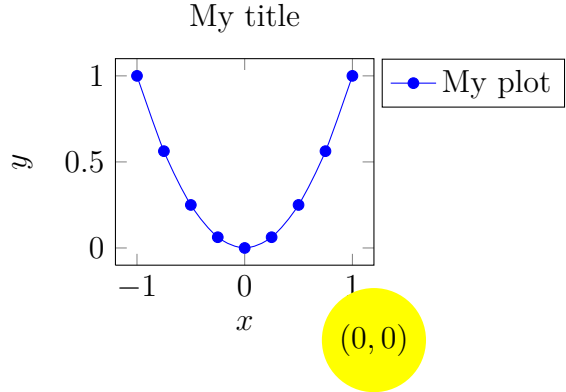
right of east:



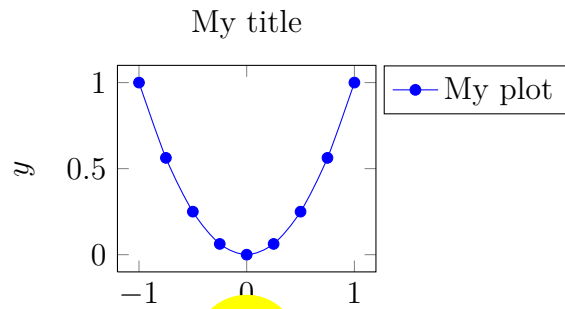
right of south east:



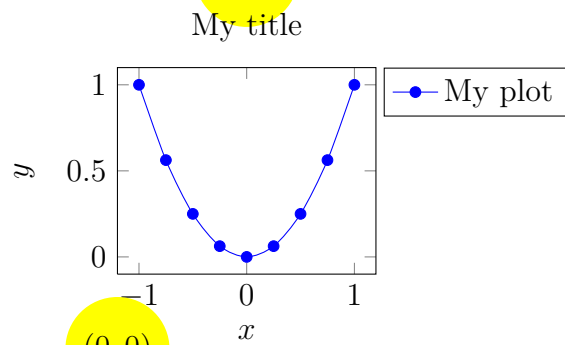
below south east:



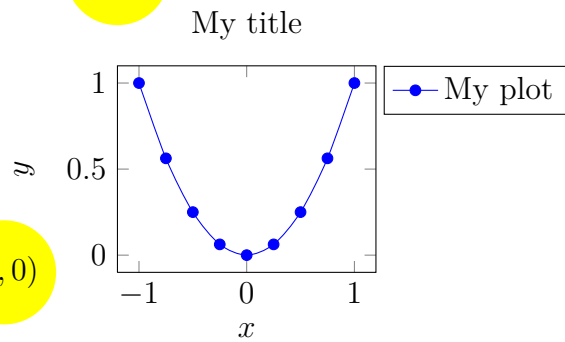
below south:



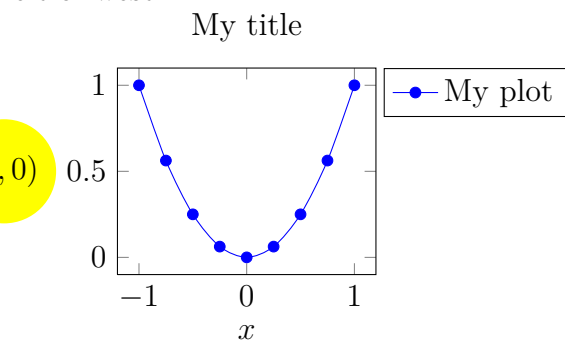
below south west:



left of south west:



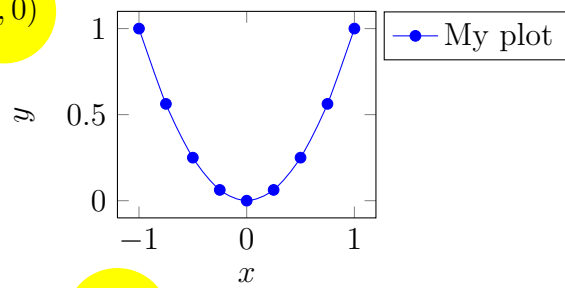
left of west:



left of north west:

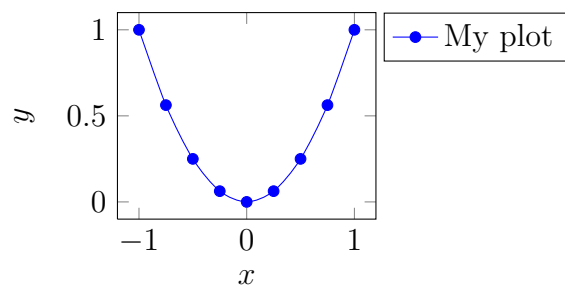
My title

(0,0)

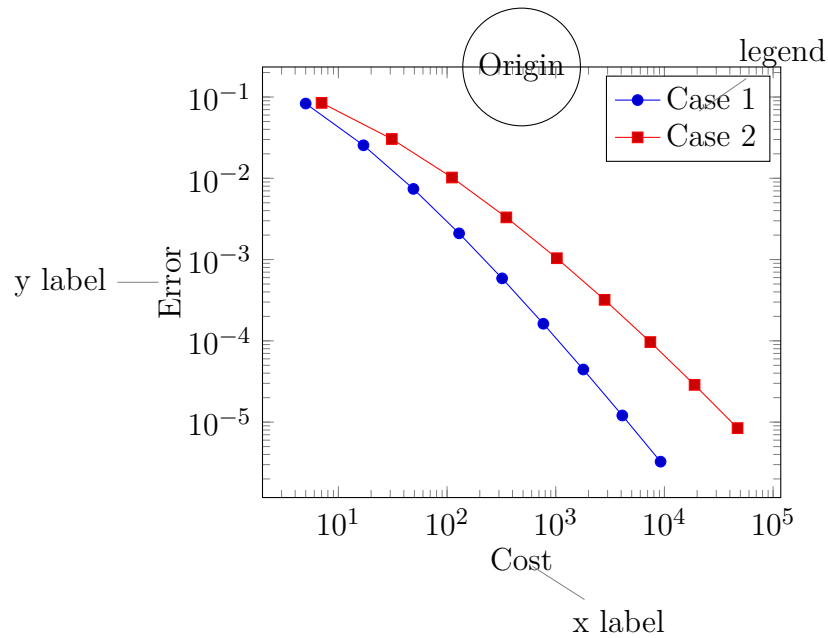


above (0,0) west:

My title

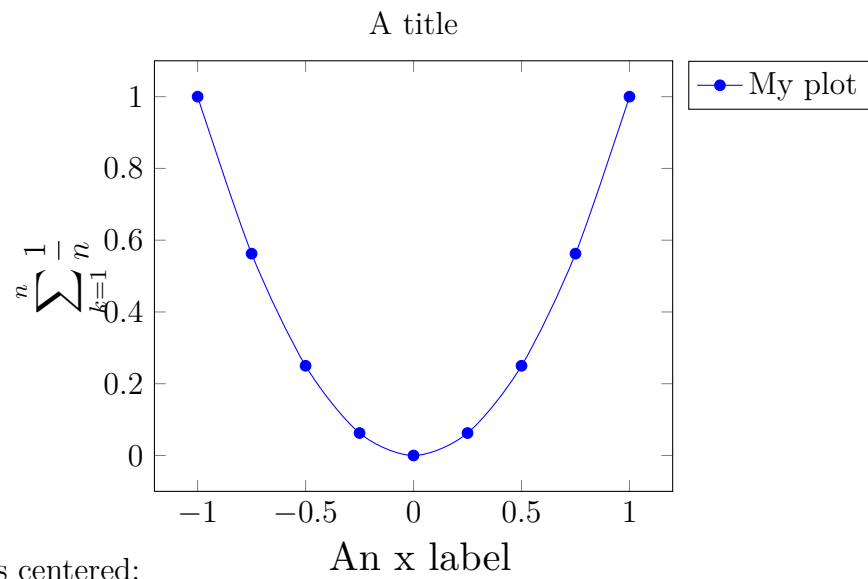


### 15.1.6 Accessing sub-nodes



### 15.1.7 Funny bounding boxes

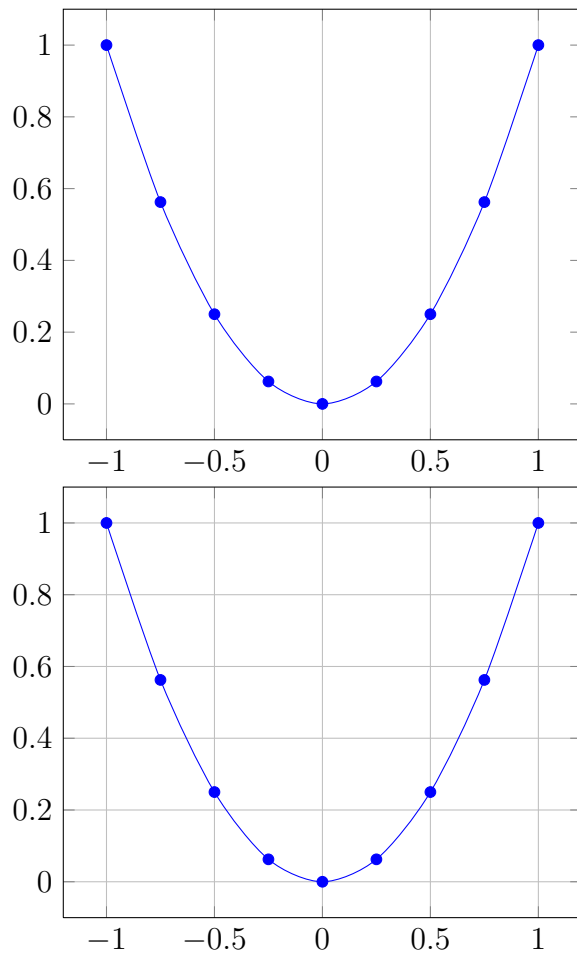
15.1.7.1 (my plot.below south west) rectangle (my plot.above north east)

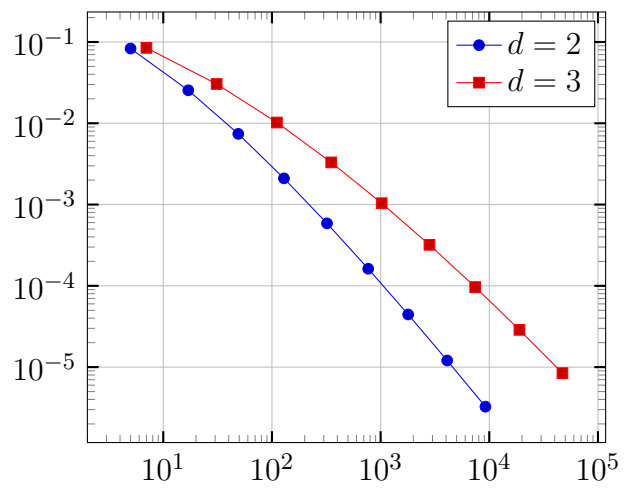
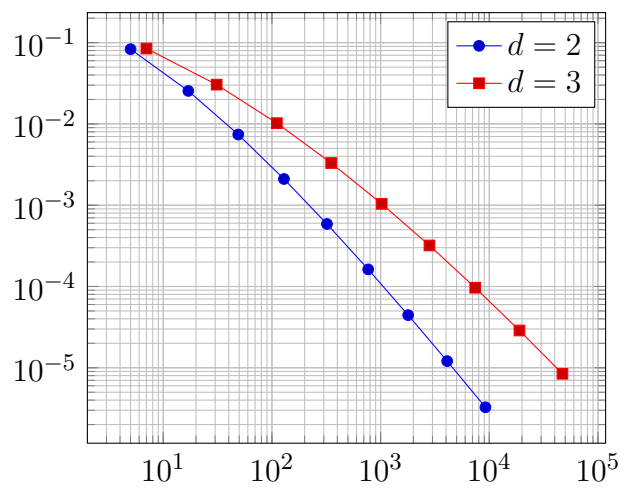
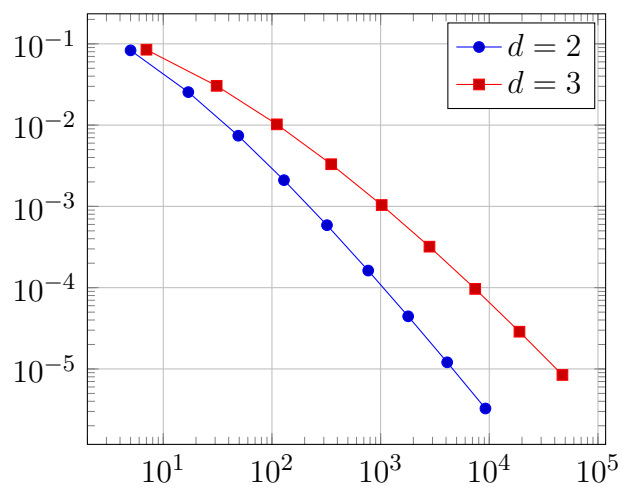


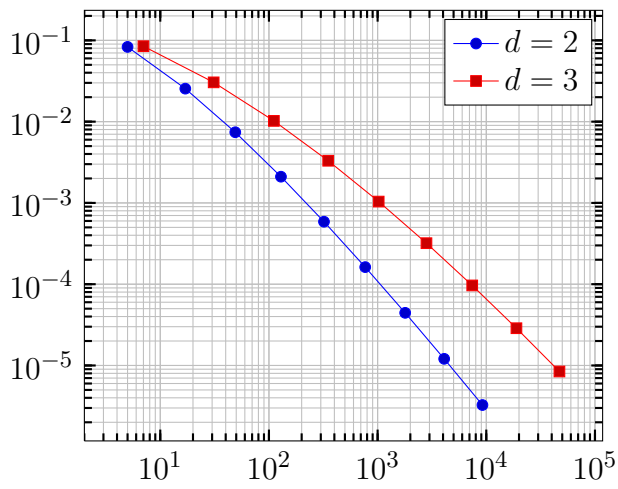
The following figure is centered:

## 16 pgfplotstest.gridtick.tex

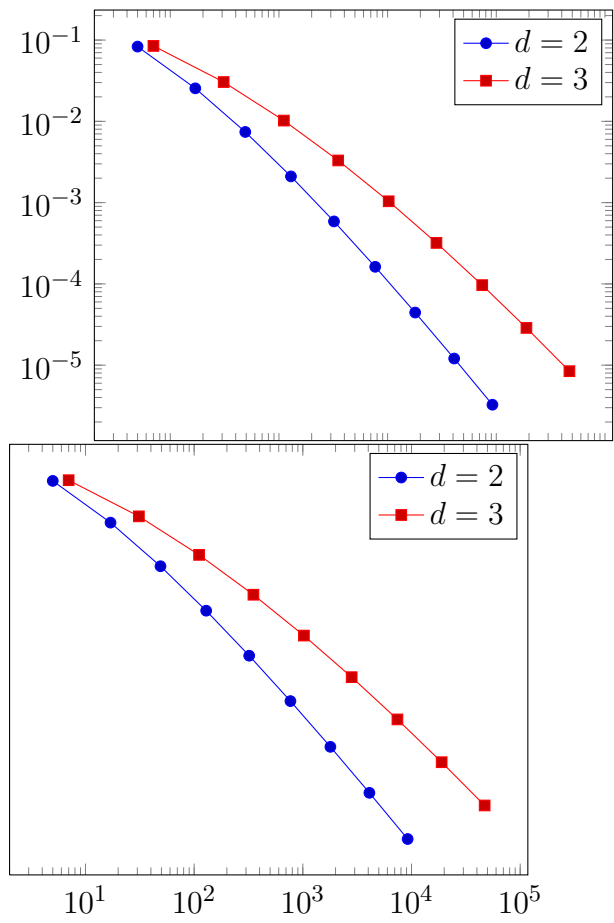
### 16.1 Grid lines test



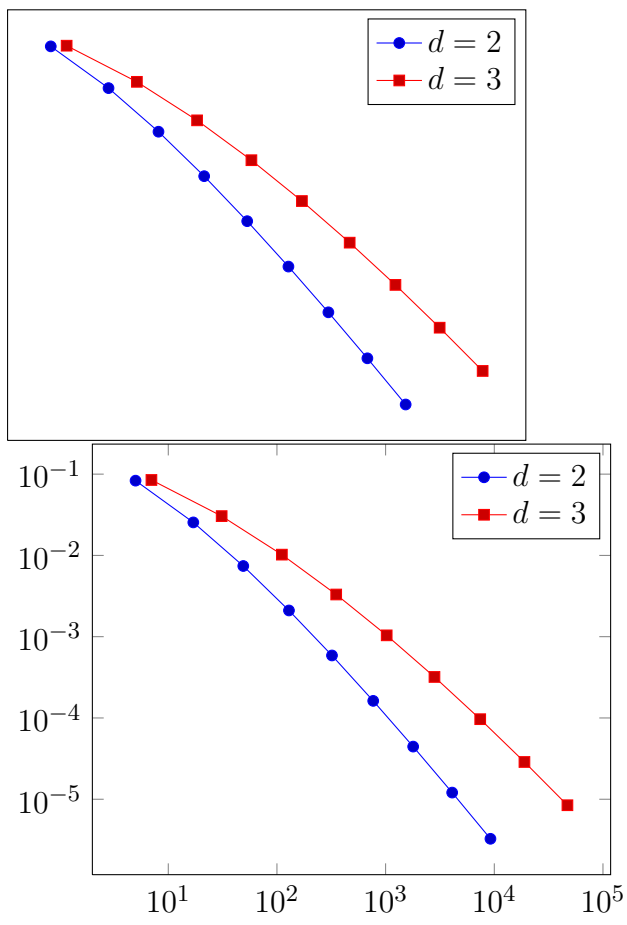




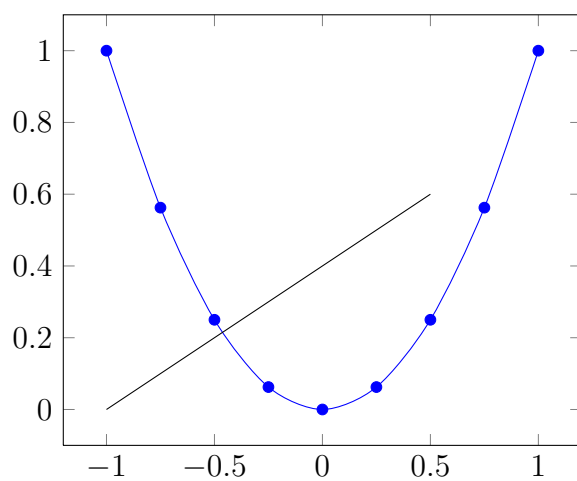
## 16.2 Tick lines test

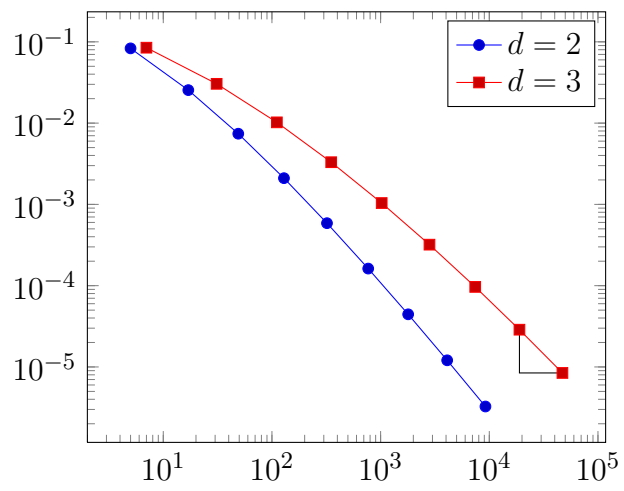






### 16.3 TikZ-coordinate system “axis”

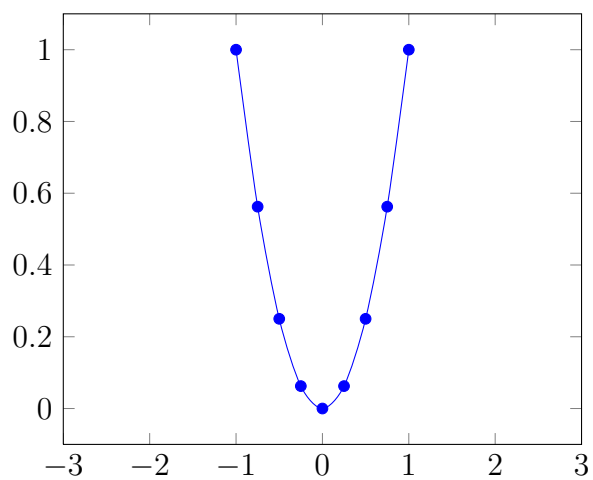




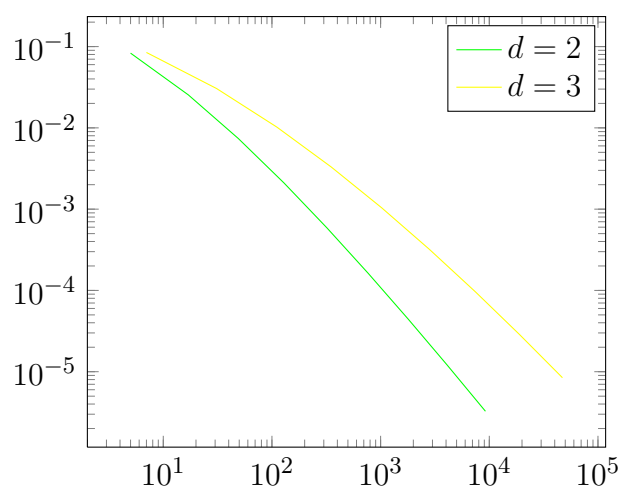
## 17 pgfplotstest.styles.tex

### 17.1 Style tests

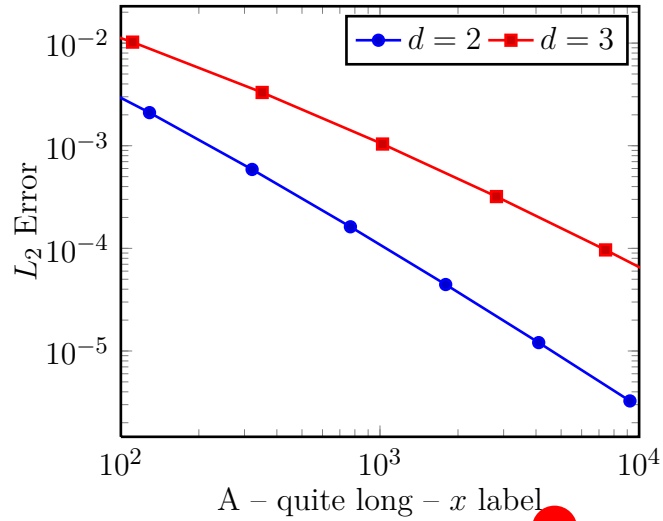
#### 17.1.1 Limits in ‘every axis’; ‘cycle list’ option and ‘cycle list name’ option



#### 17.1.2 testing ‘every loglog axis’ style

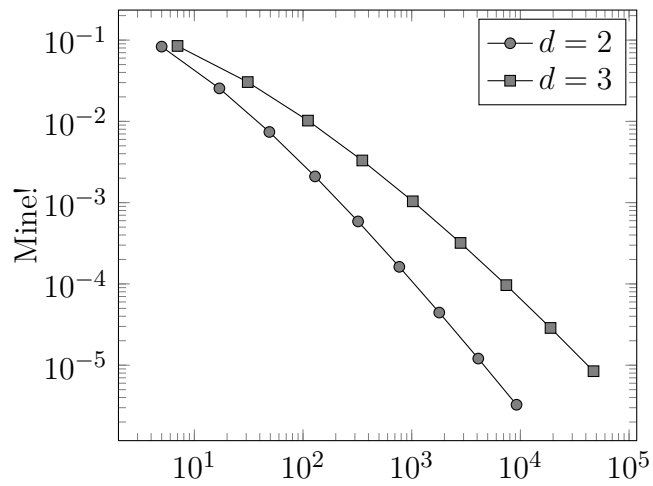


## 17.1.3 Using several ‘every ...’ styles

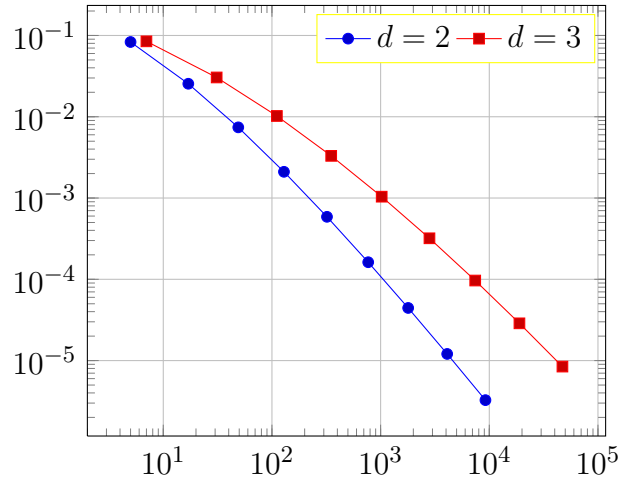


## 17.1.4 Using the ‘style=’ option

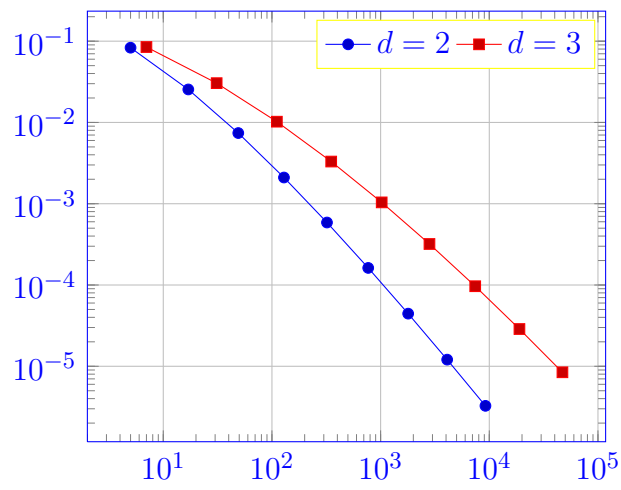
My personal title

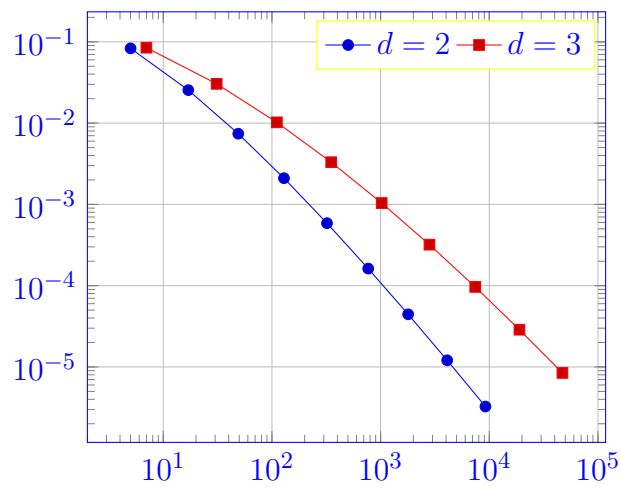


## 17.1.5 legend style, grid style, x label style etc. options

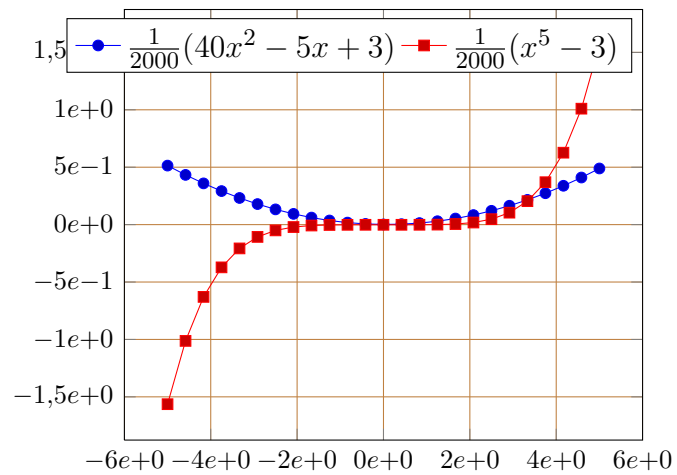


## 17.1.6 Providing TikZ-options to either tikzpicture or axis

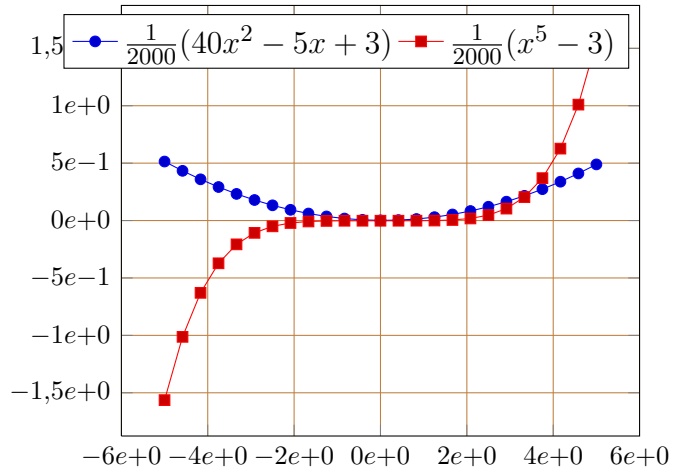




### 17.1.7 Collecting many options together

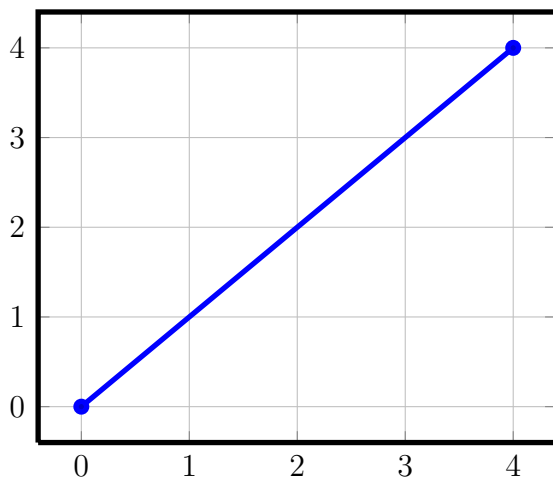


### 17.1.7.1 Putting the same options into a style...

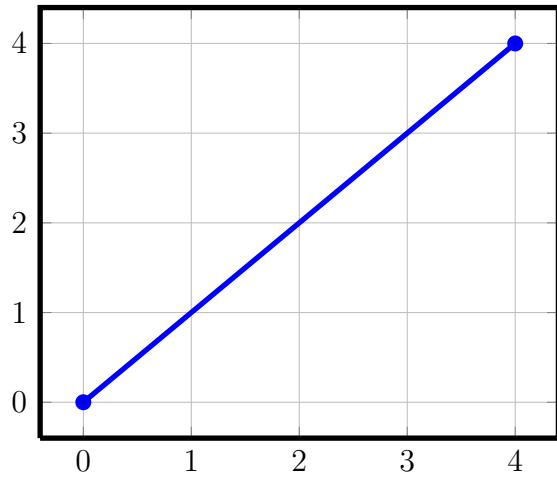


### 17.1.8 Line width

#### 17.1.8.1 2pt global



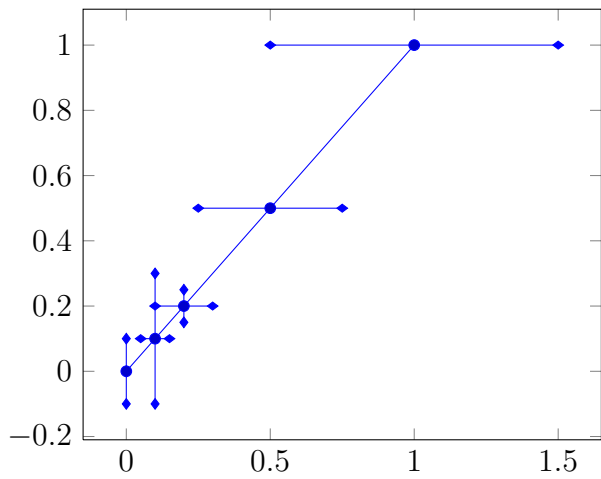
17.1.8.2 2pt in every axis



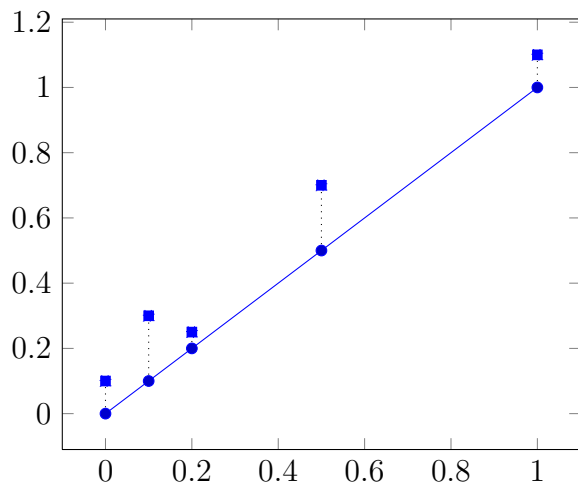


## 18 pgfplotstest.errorbars.tex

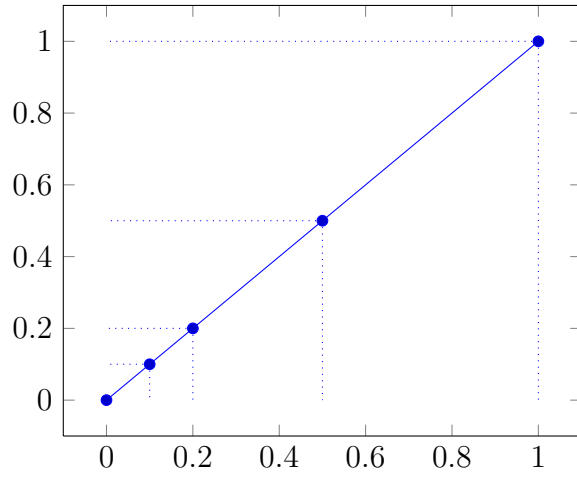
### 18.1 Errorbars



### 1 changing styles

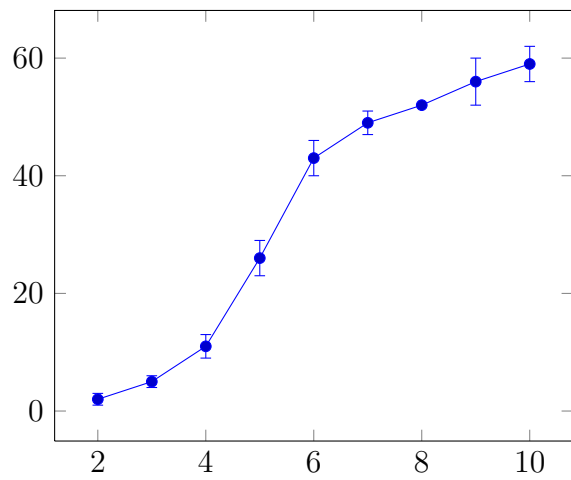


2 using 100% minus



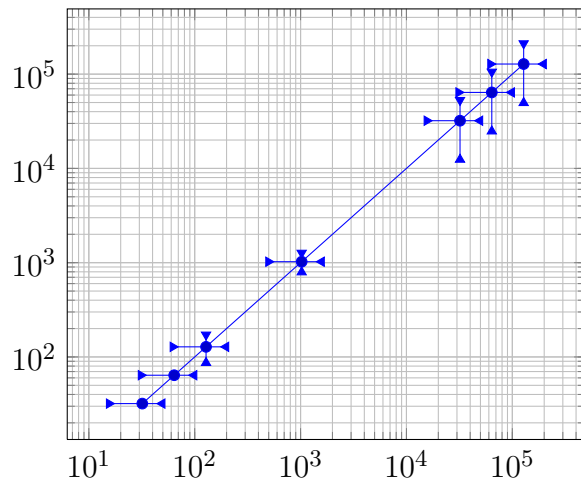
3 with plot table

maxlevel versus cgiter, table ??tbl:k

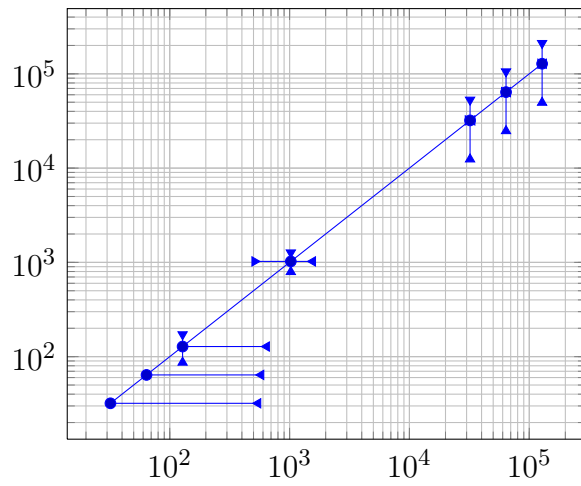


### 18.1.1 Log-plot

#### 18.1.1.1 relative errors

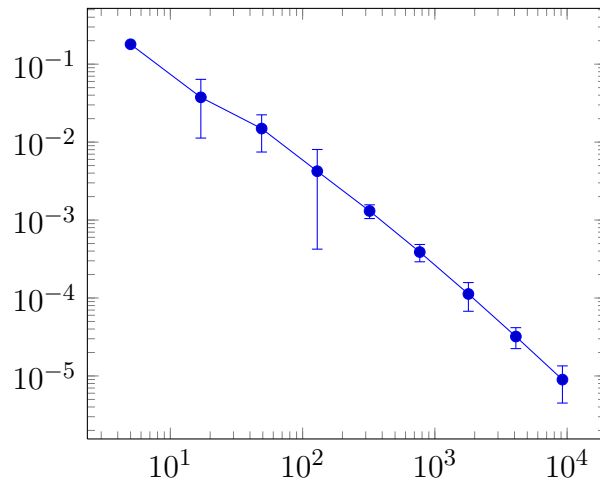


#### 18.1.1.2 x fixed=500, y explicit relative



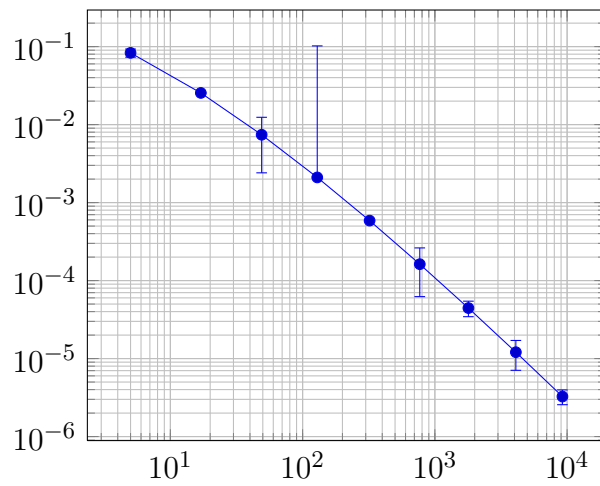
## 18.1.1.3 with plot table

dof versus Lmax, table ??tbl:k



## 18.1.1.4 with plot table absolute

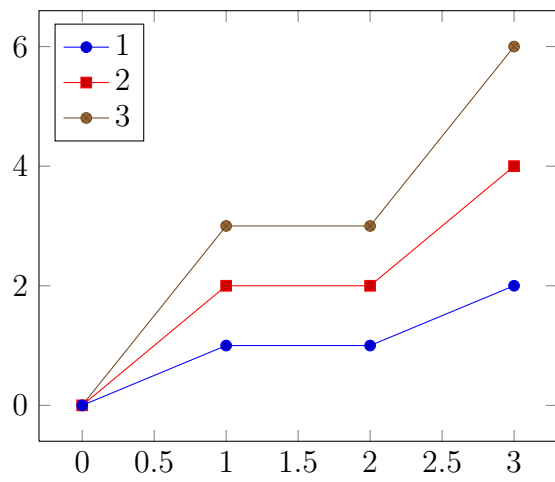
dof versus L2, table ??tbl:k



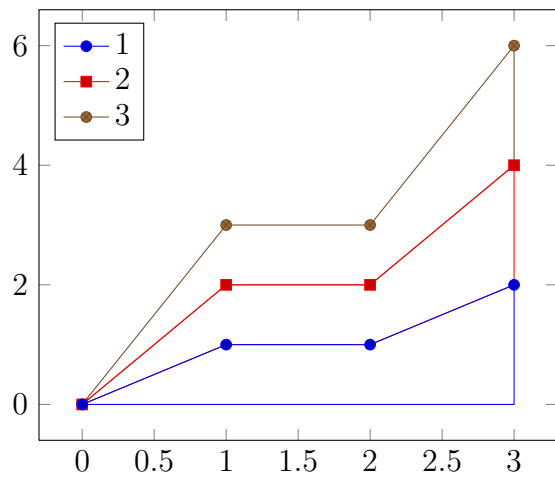
## 19 pgfplotstest.plottypes.tex

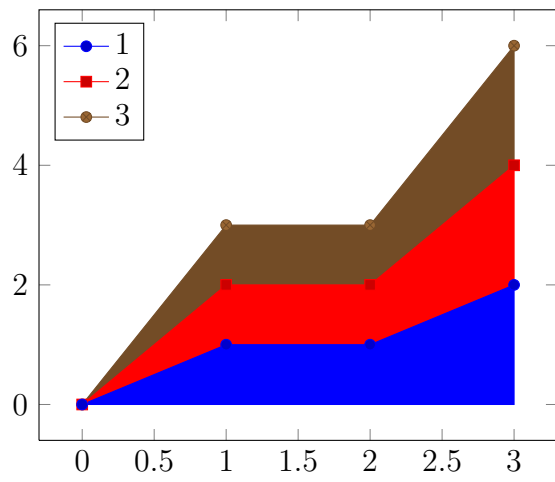
### 19.1 Stacked plots

#### 19.1.1 stack y, sharp plot

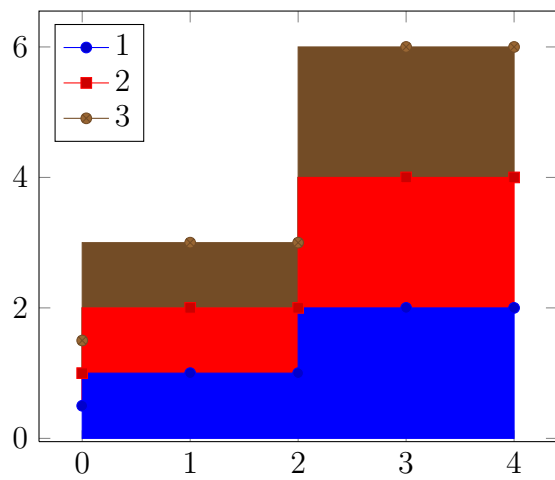
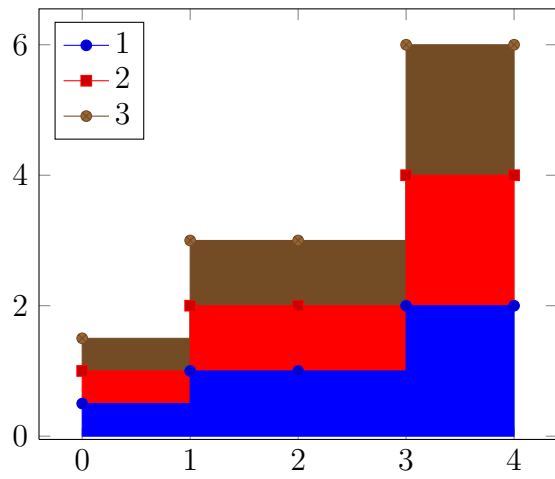


#### 19.1.1.1 with closedcycle

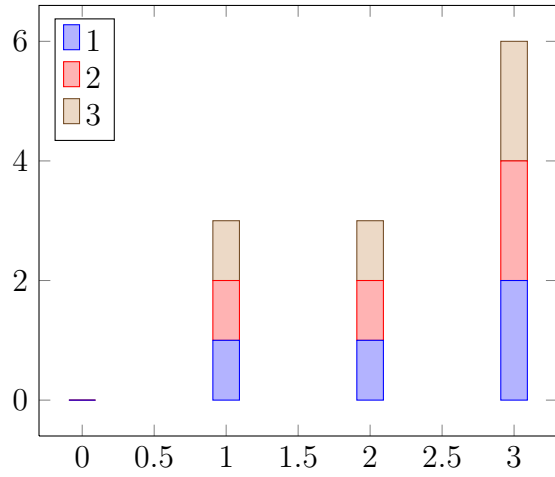




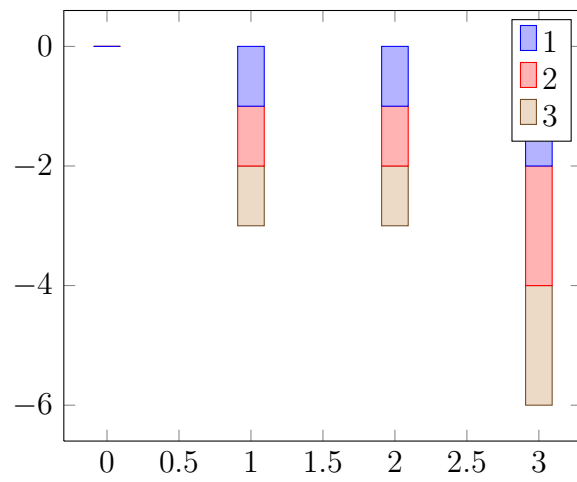
19.1.1.2 with closedcycle and const plots



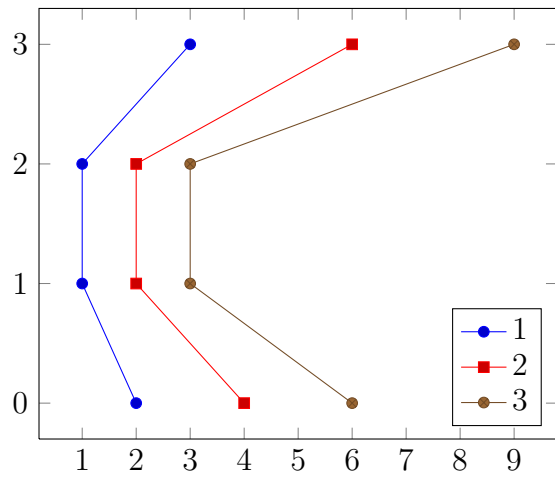
## 19.1.2 stack y, ybar



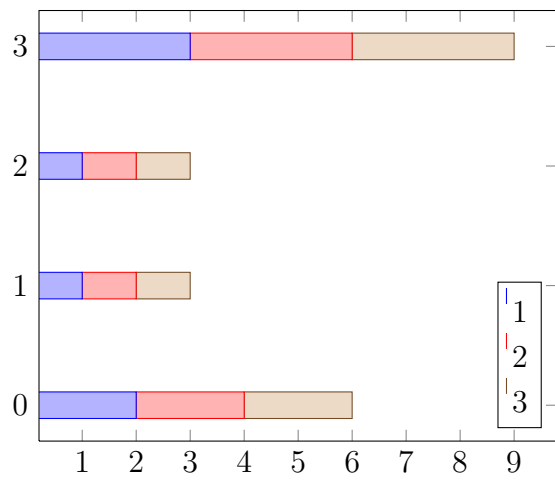
## 19.1.3 stack y, ybar, minus



## 19.1.4 stack x, sharp plot [not useful]

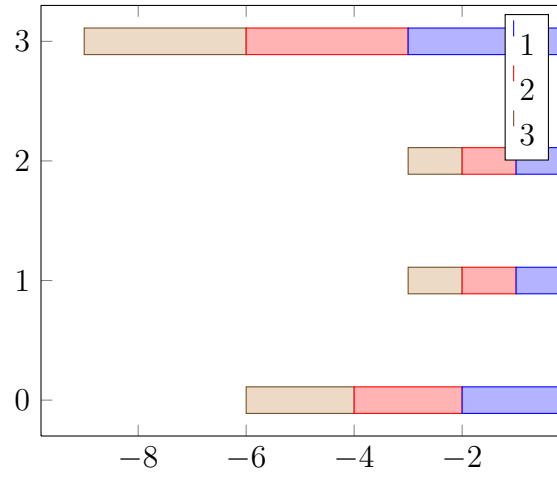


## 19.1.5 stack x, xbar

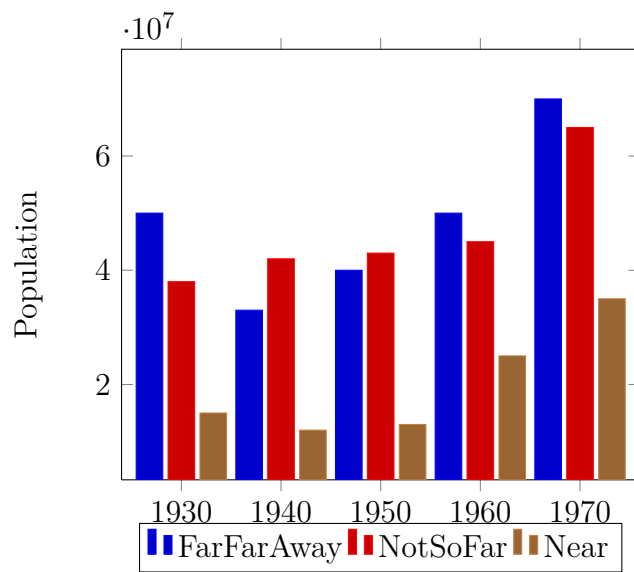




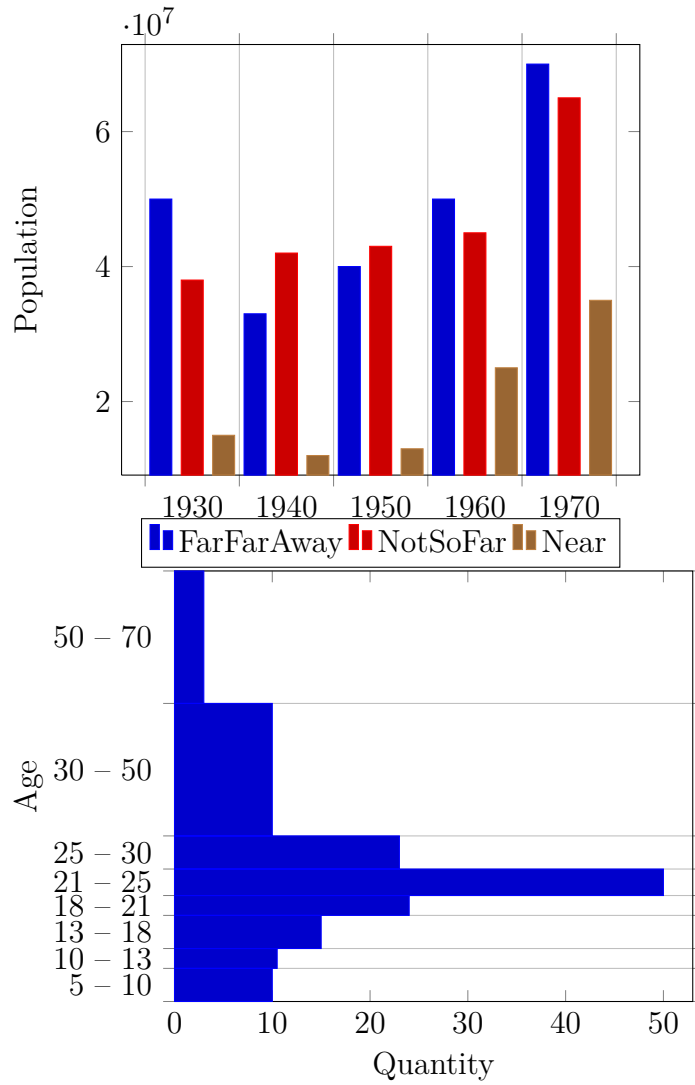
## 19.1.6 stack x, xbar, minus



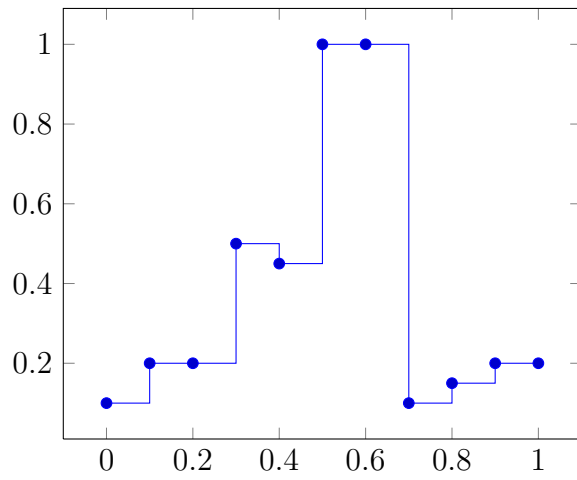
## 19.2 Bar diagrams



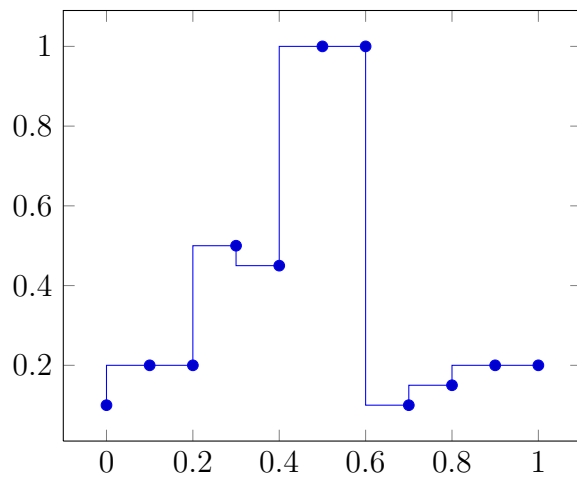
## 19.2.1 Interval bar handlers



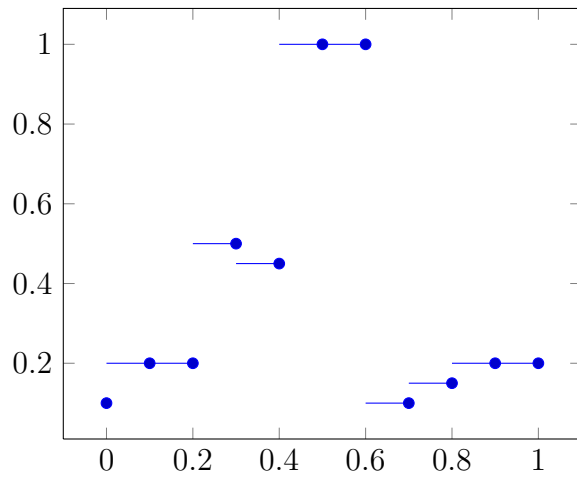
## 19.3 const plot



## 19.4 const plot mark right



## 19.5 jump mark right



## 19.6 jump mark left

