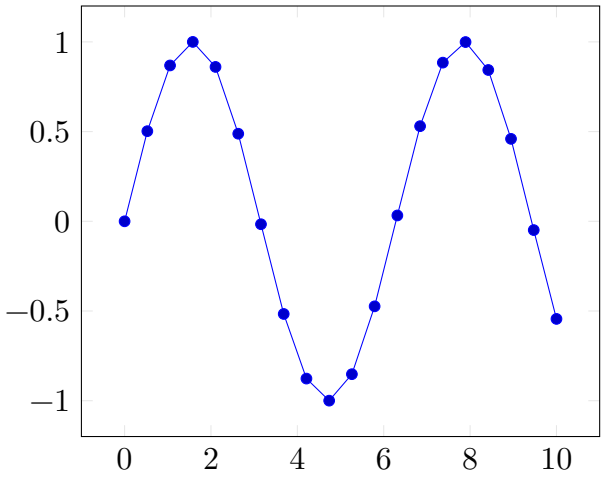
WARNING: This file is merely a copy-pasted version of the latex tests. It suffices to check whether the context version compiles and does roughly what is expected. The reference test is, however, only available for latex!

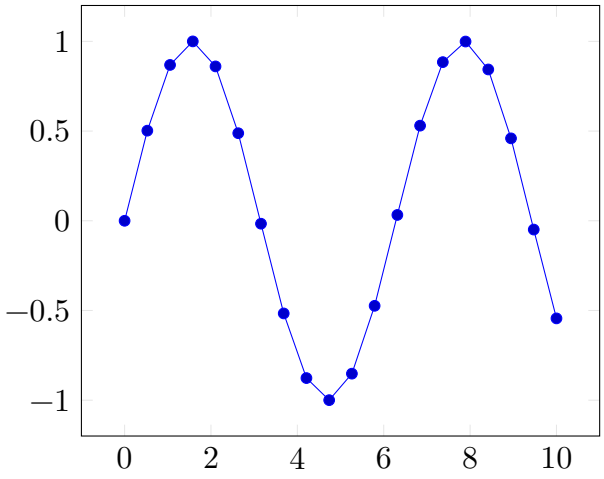
1 pgfplotstest.file.tex

1.1 `plot file' test

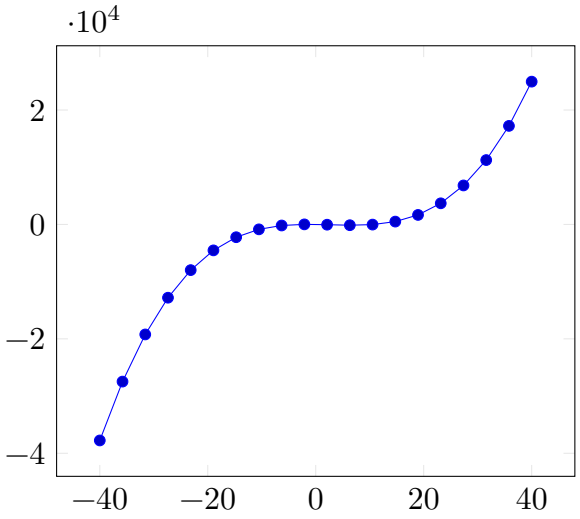
1.1.1 A file in gnuplot format 'num num i'



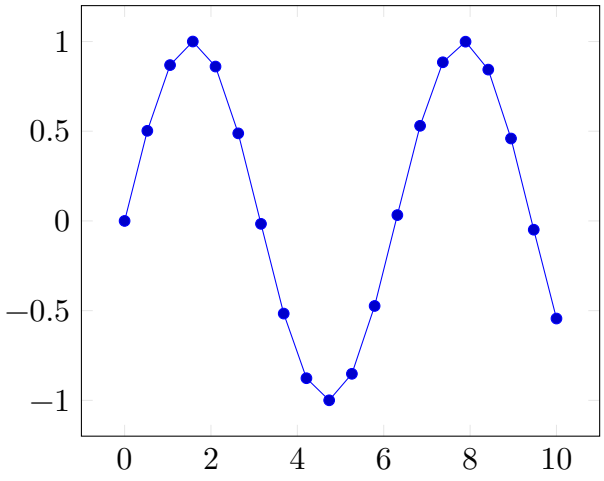
1.1.1.1 Same file loaded with `plot table'



1.1.2 A file which differs slightly from gnuplot format

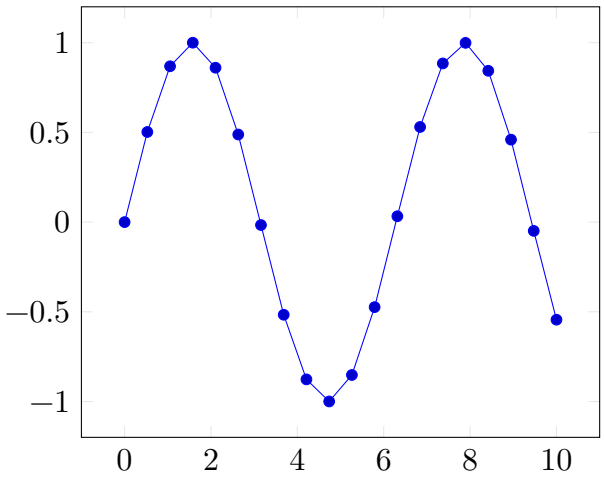


1.1.3 A file which starts with newlines

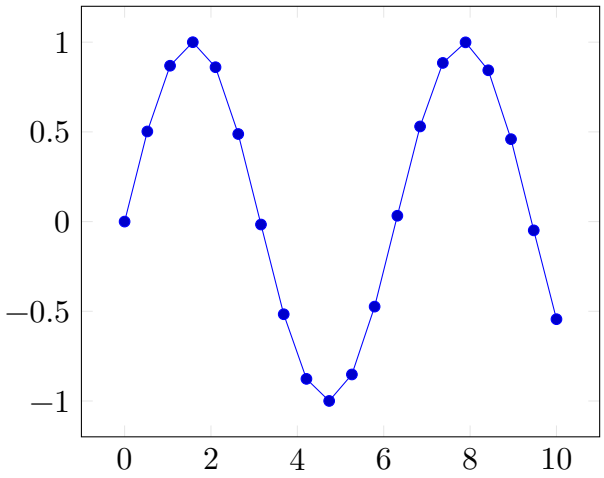


1.1.3.1 Same file loaded with `plot table'

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

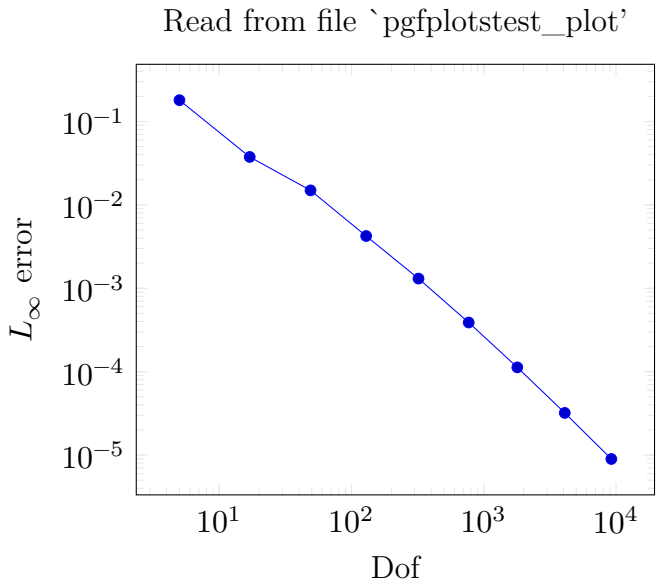


1.1.3.2 testing space gobbling in 'plot file' command

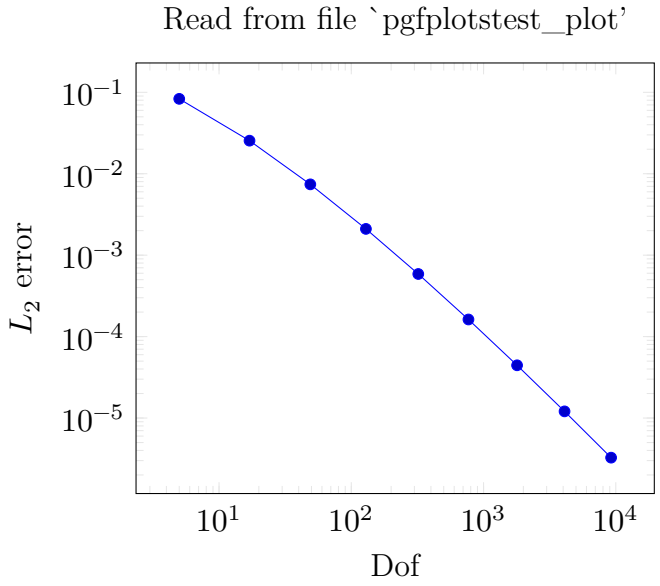


1.2 `plot table' test

1.2.1 Plot by column `dof' versus column `Lmax'

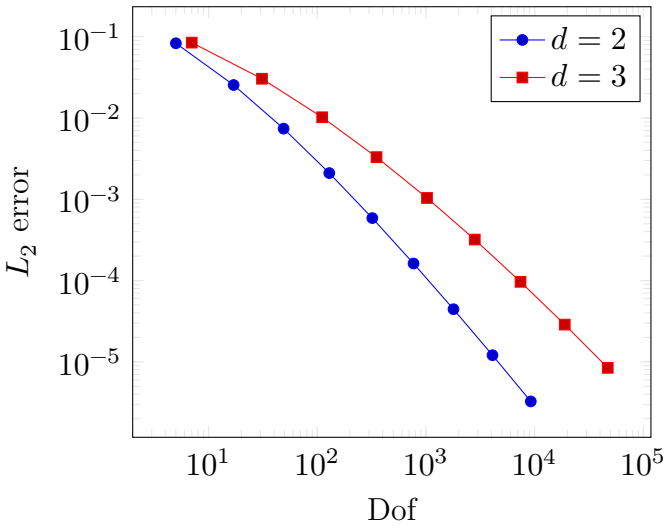


1.2.2 Plot by column 2 versus column 3



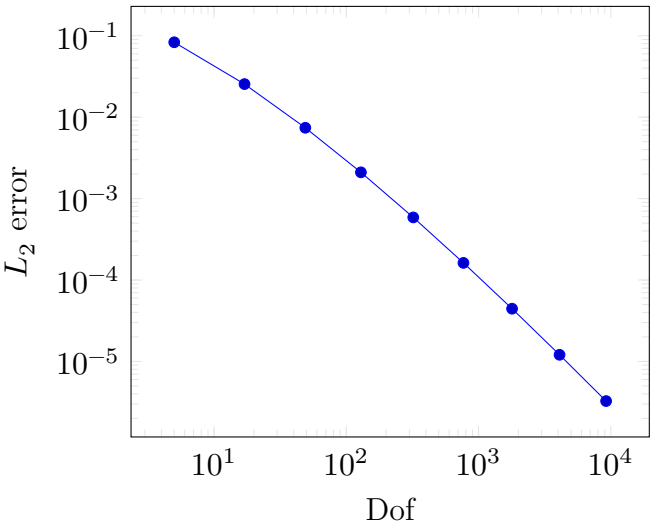
1.2.3 Plot by preloaded tables

Read from file `pgfplotstest_plot' and `pgfplotstest_plot3'



1.2.4 a table which has no column names

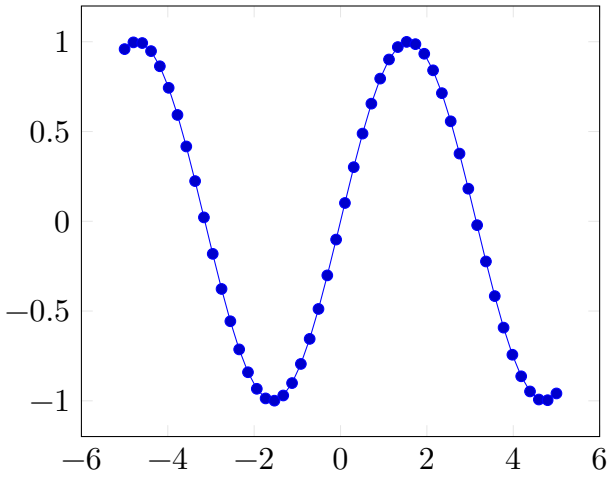
Read from file `pgfplotstest_plotnocolnames'



2 pgfplotstest.function.tex

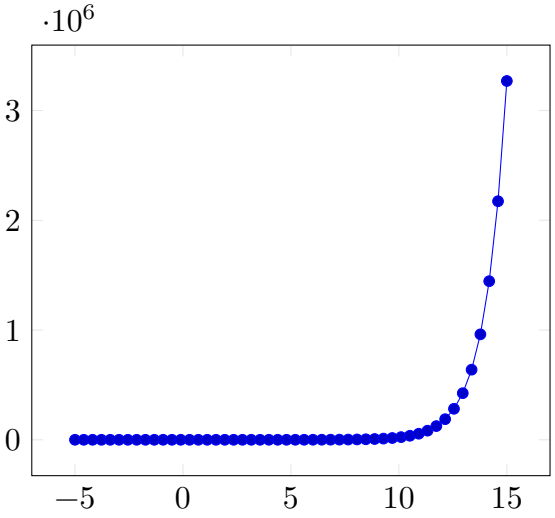
2.1 `plot function' test

2.1.1 sin(x)

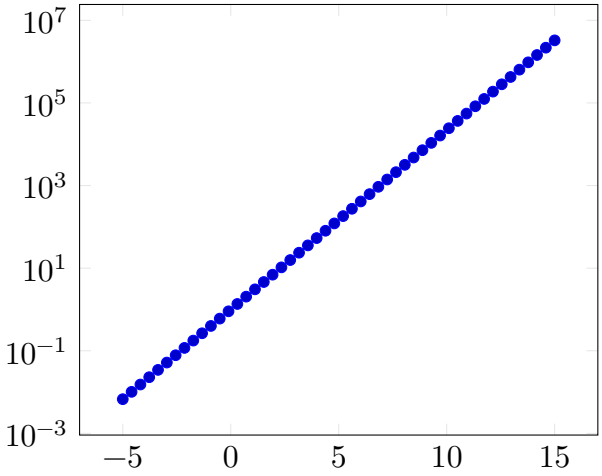


2.1.2 exp(x)

2.1.2.1 linear



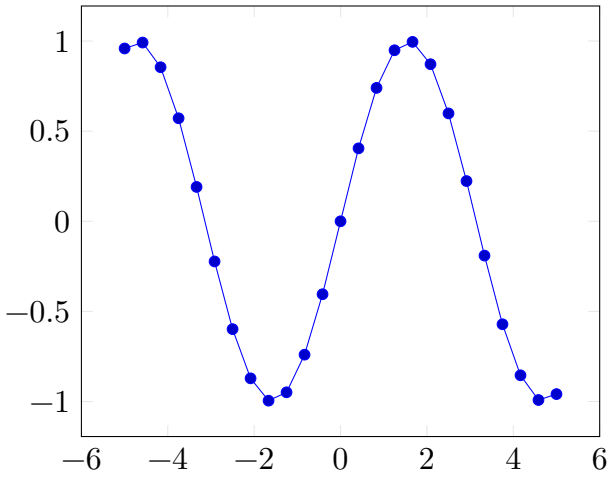
2.1.2.2 semilogy



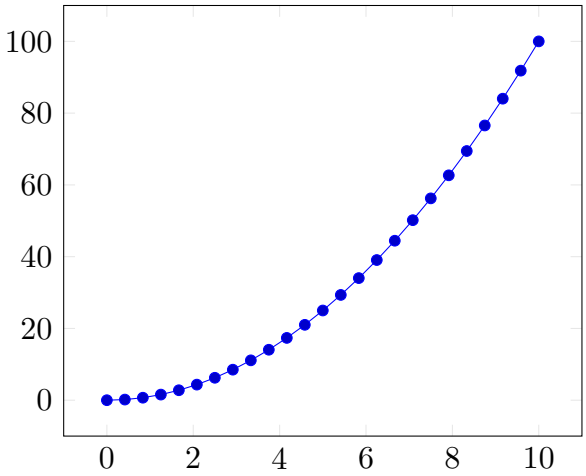
3 pgfplotstest.expr.tex

3.1 `plot expression' test

3.1.1 sin(x)



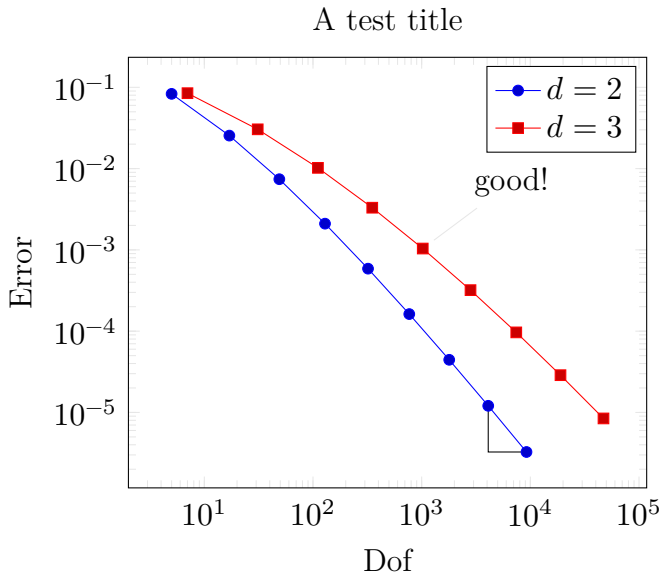
3.1.2 x^2



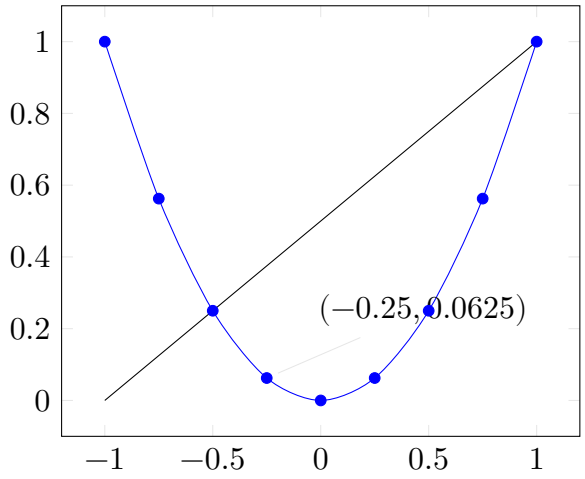
4 pgfplotstest.axispath.tex

4.1 Testing path commands inside of axis

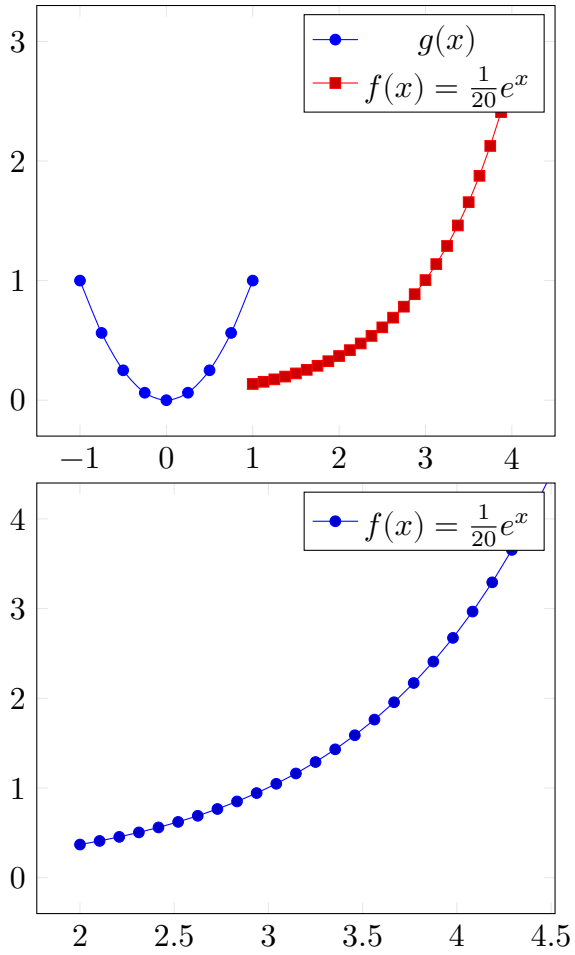
4.1.1 log plot



4.1.2 Linear plot



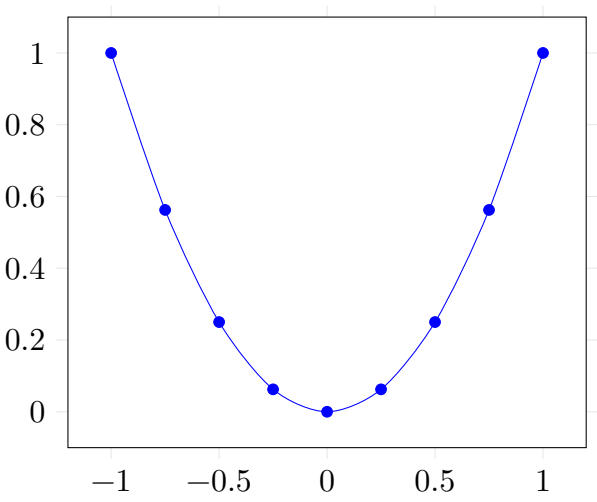
4.2 Checking plot expression



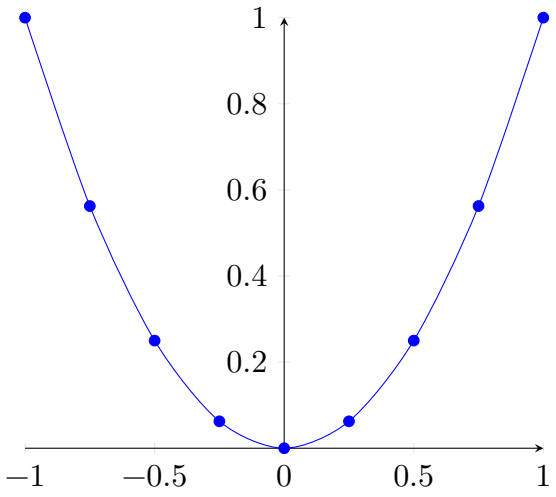
5 pgfplotstest.axislines.tex

5.1 Axislines placement

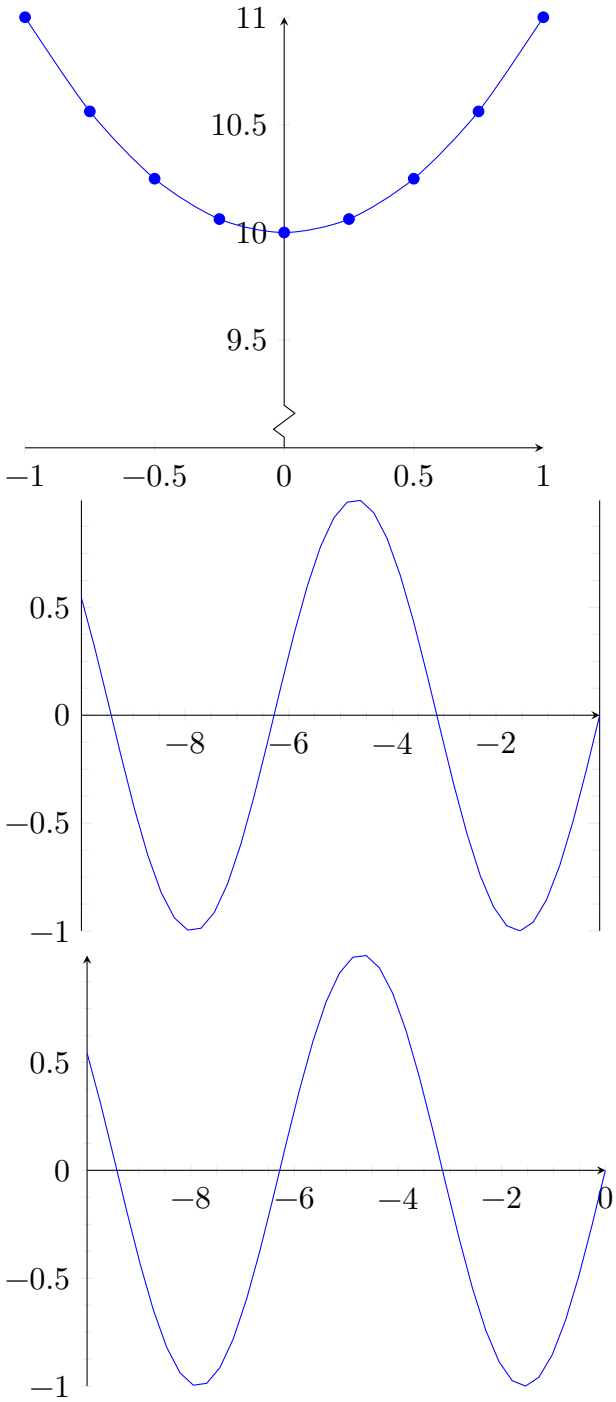
5.1.1 tick align=outside

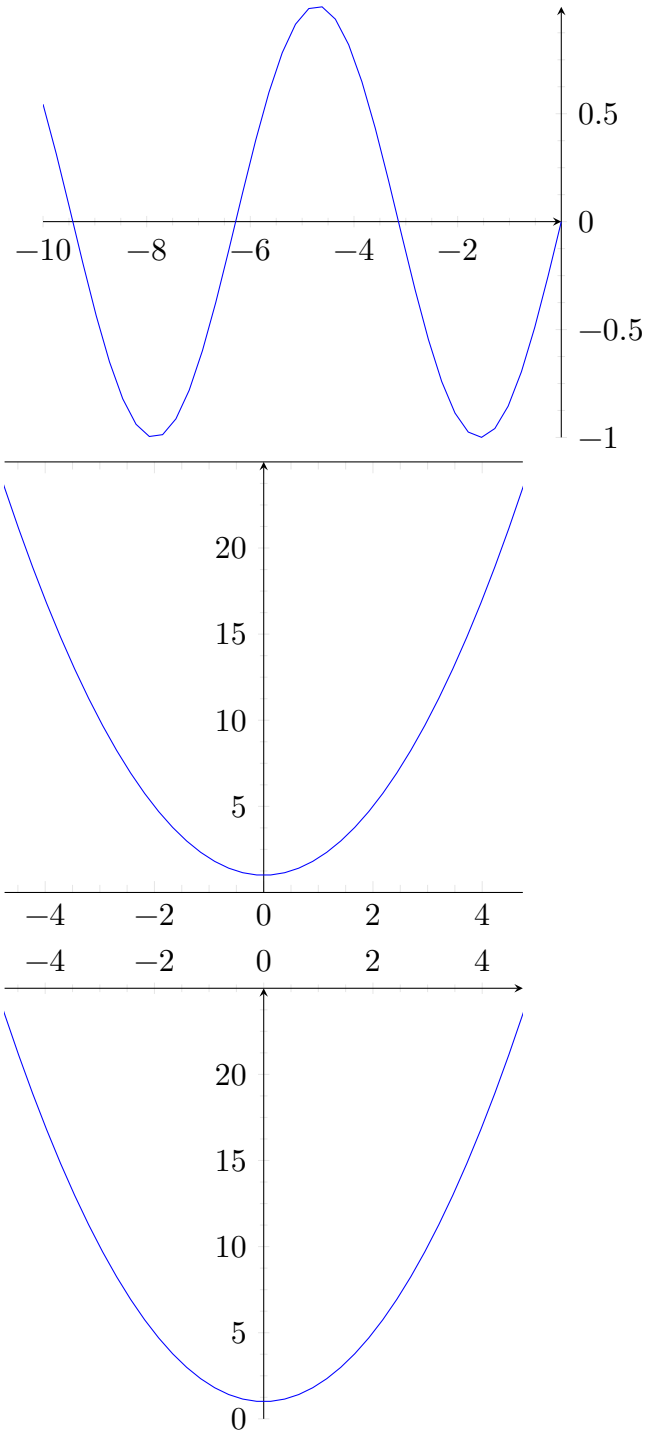


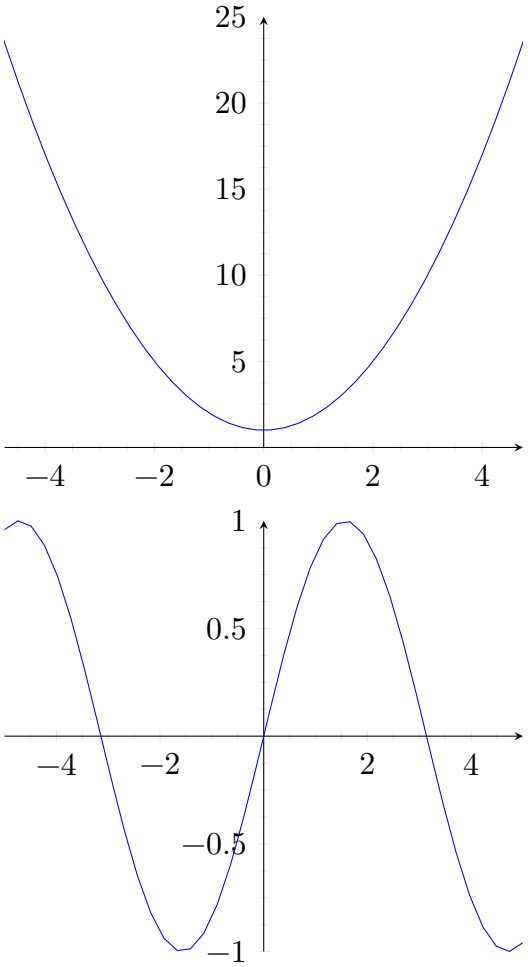
5.1.2 axis y line/ axis x line



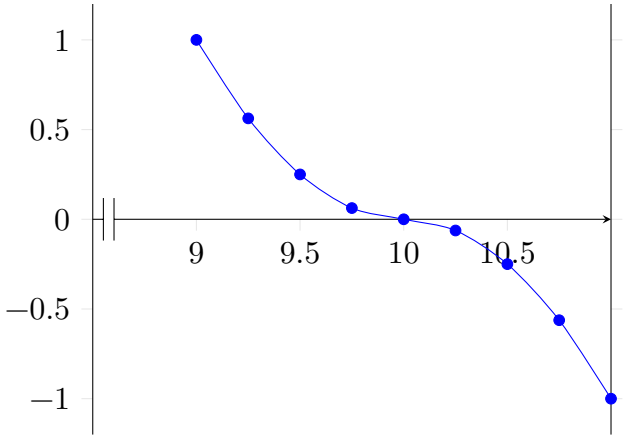
5.1.3 axis [xy] line/ tick align/ y discont

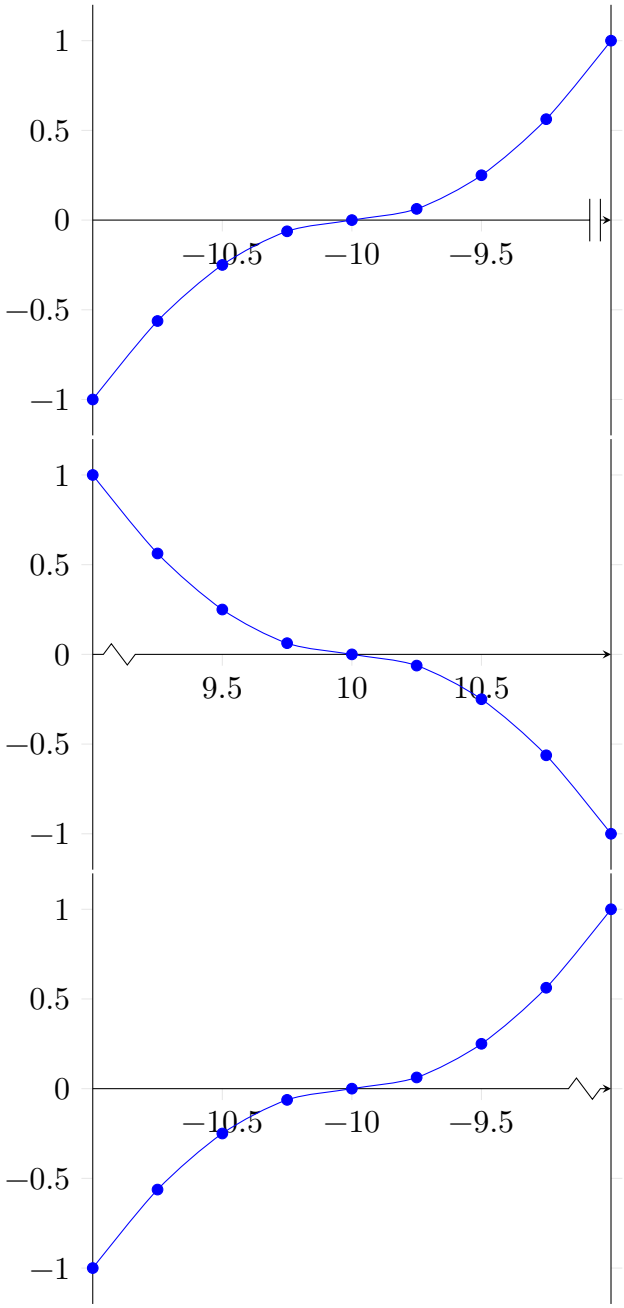


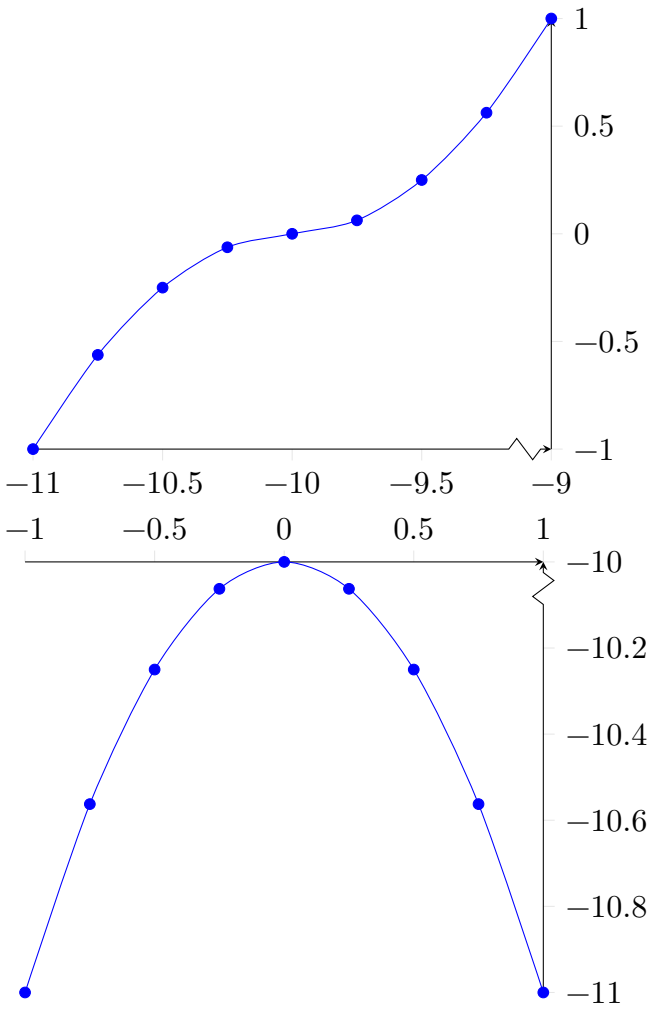

0.5
0
−0.5
−1
−10
−8
−6
−4
−2
20
15
10
5
−4
−2
0
2
4
−4
−2
0
2
4
20
15
10
5
0



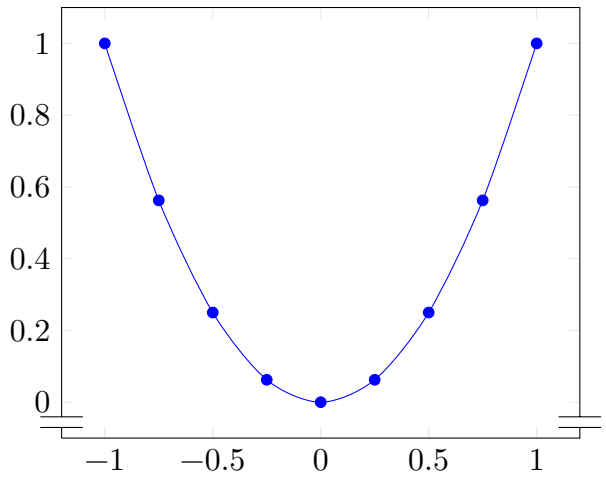
5.1.4 axis [xy] line/ tick align/ x discont




1
0.5
0
−0.5
−1
−10.5
−10
−9.5
1
0.5
0
−0.5
−1
9.5
10
10.5
1
0.5
0
−0.5
−1
−10.5
−10
−9.5

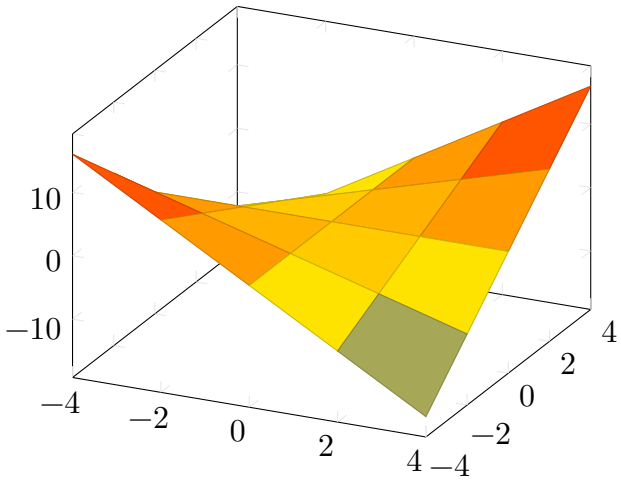

1
0.5
0
−0.5
−1
−11
−10.5
−10
−9.5
−9
−1
−0.5
0
0.5
1
−10
−10.2
−10.4
−10.6
−10.8
−11

5.1.5 axis y discontinuity

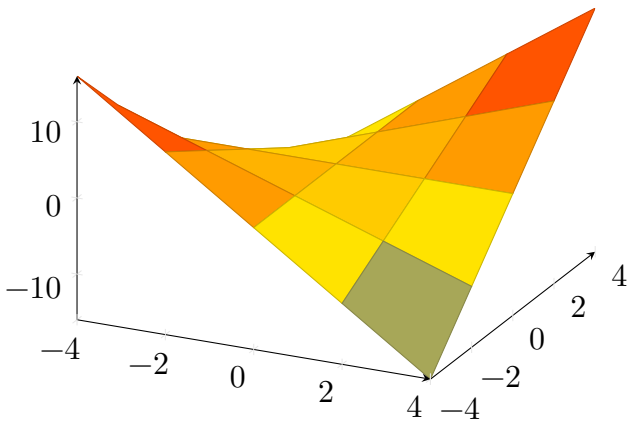


6 pgfplotstest.axislines.3d.tex

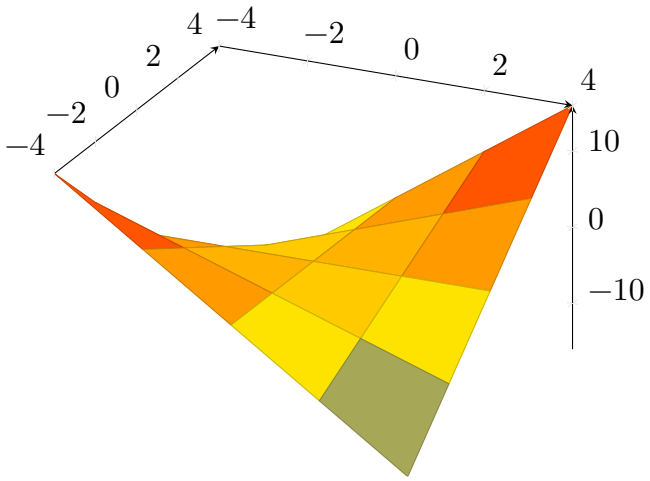
6.1 Boxed



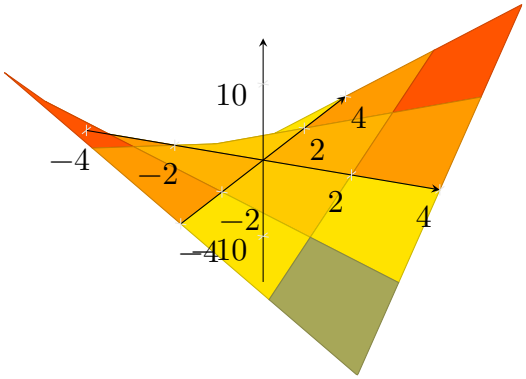
6.2 axis lines=left



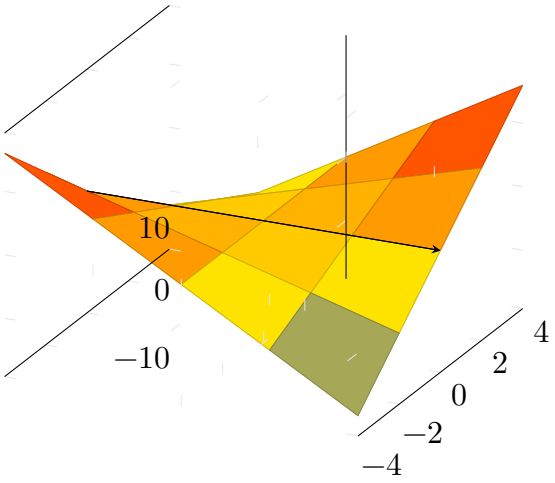
6.3 axis lines=right



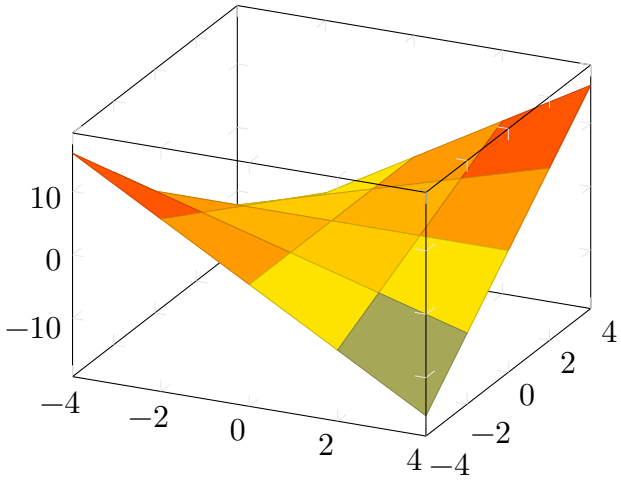
6.4 axis lines=middle,axis on top



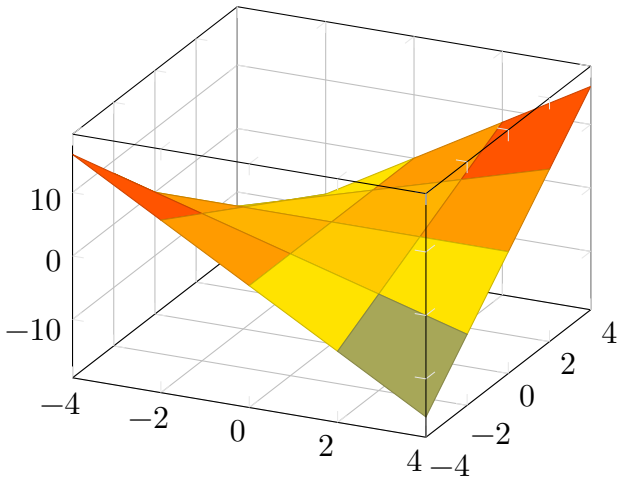
6.5 Only axis x line=middle



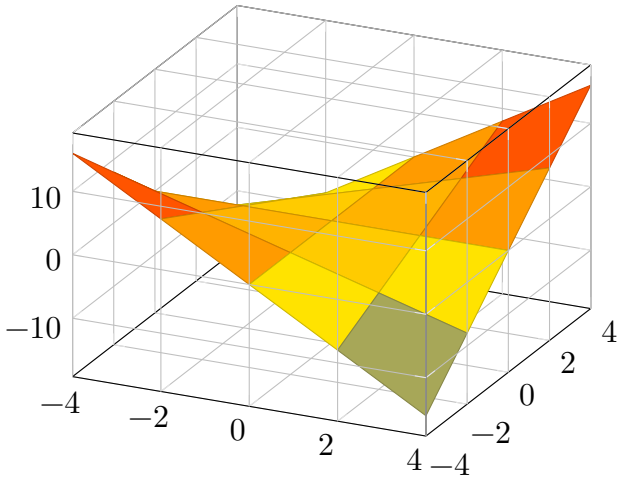
6.6 3d box=complete



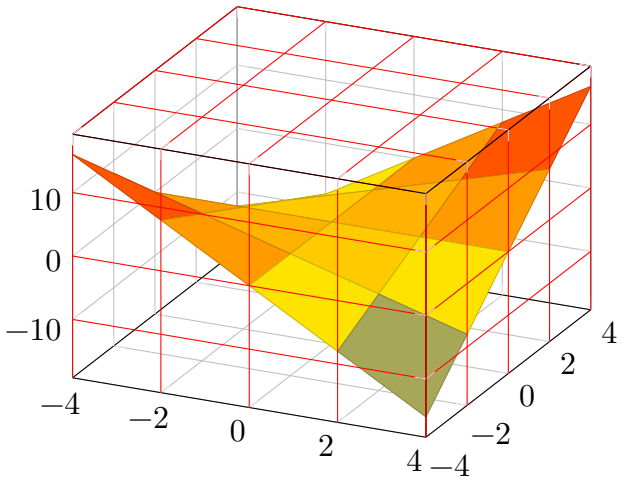
6.6.1 grid lines



6.6.2 grid lines und completeSTAR

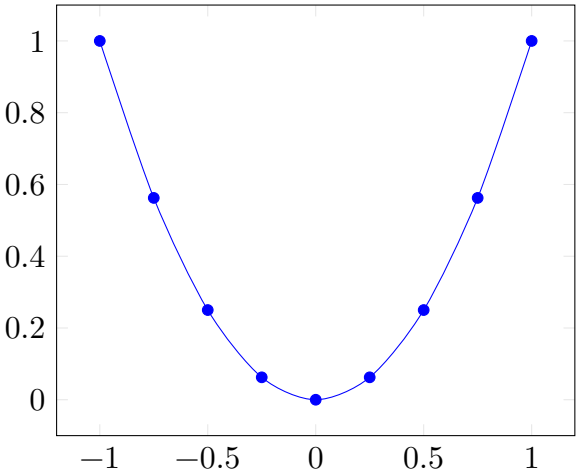


6.6.3 grid lines und completeSTAR und styles



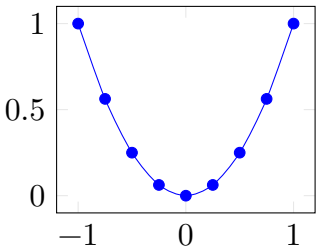
7 pgfplotstest.scaling.tex

7.1 Standard placement normal plot

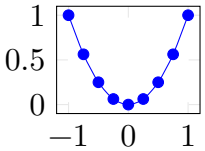


7.2 Scaling tests

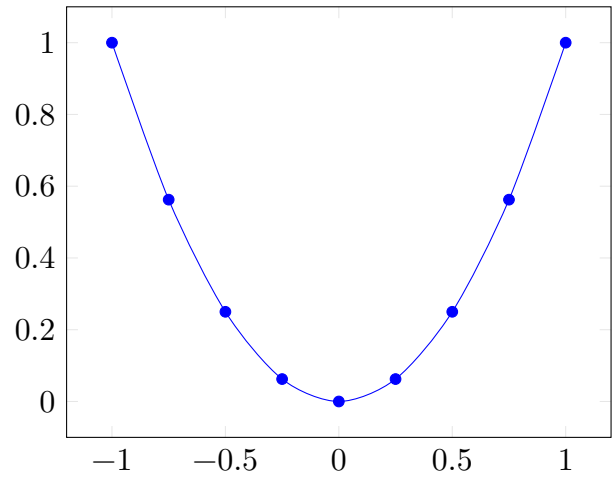
7.2.1 width=5cm



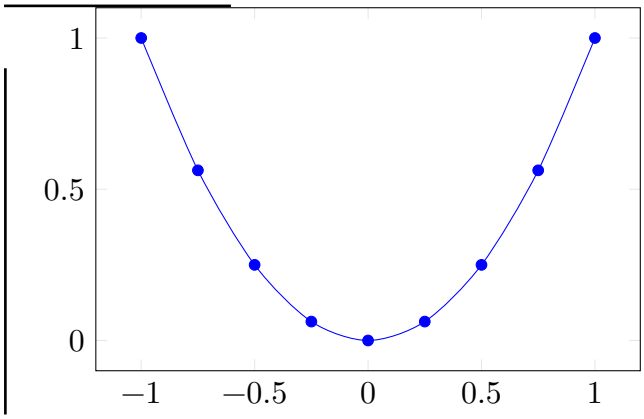
7.2.2 height=3cm



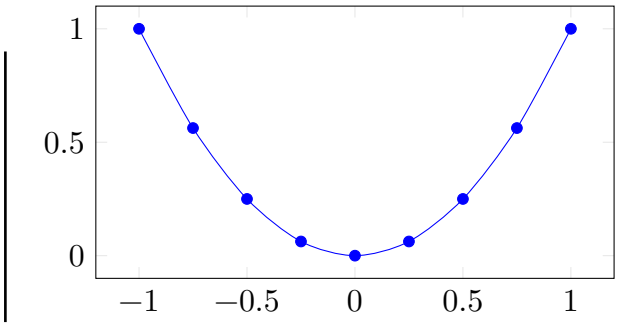
7.2.3 x=3cm



7.2.4 x=3cm, y=4cm



7.2.5 y=3cm

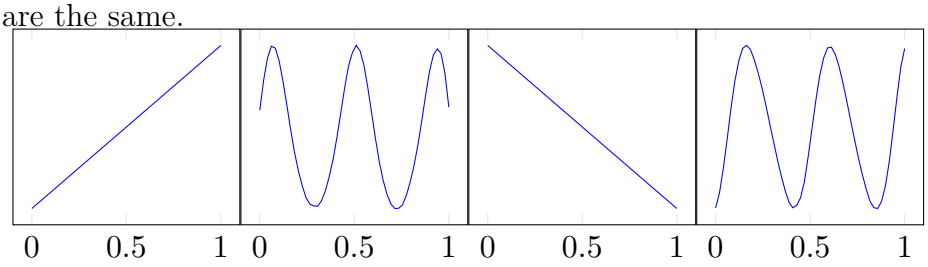


7.2.6 Scale vs. Datascale trafo

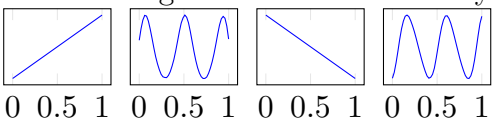
All should have the same size; especially the same height. This tests the data scale transformation and rounding inaccuracies during the computation of x and y unit vectors,

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

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.

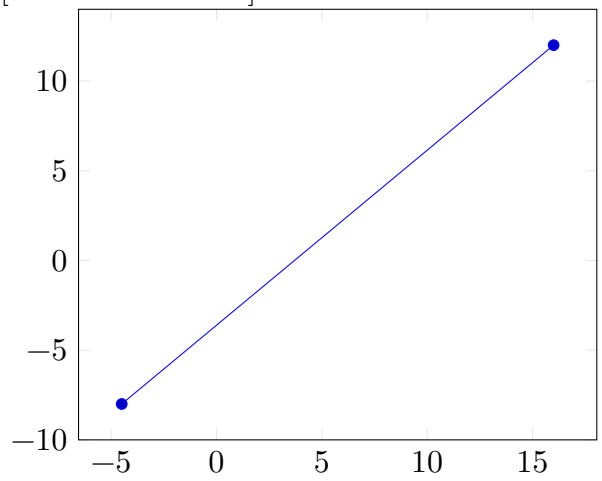


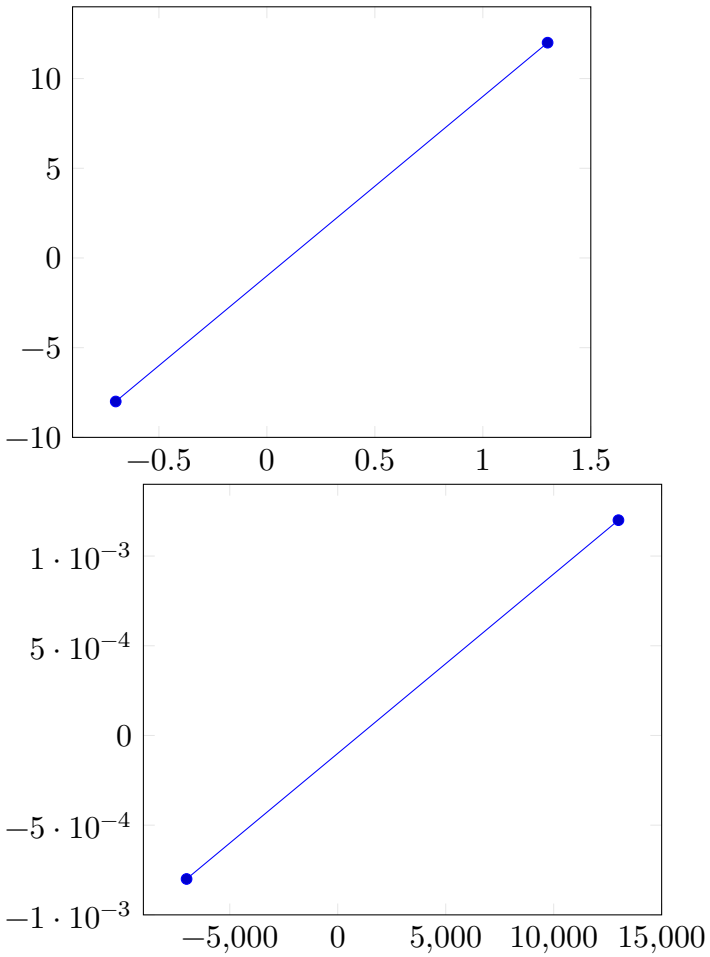
once more again without `scale only axis':



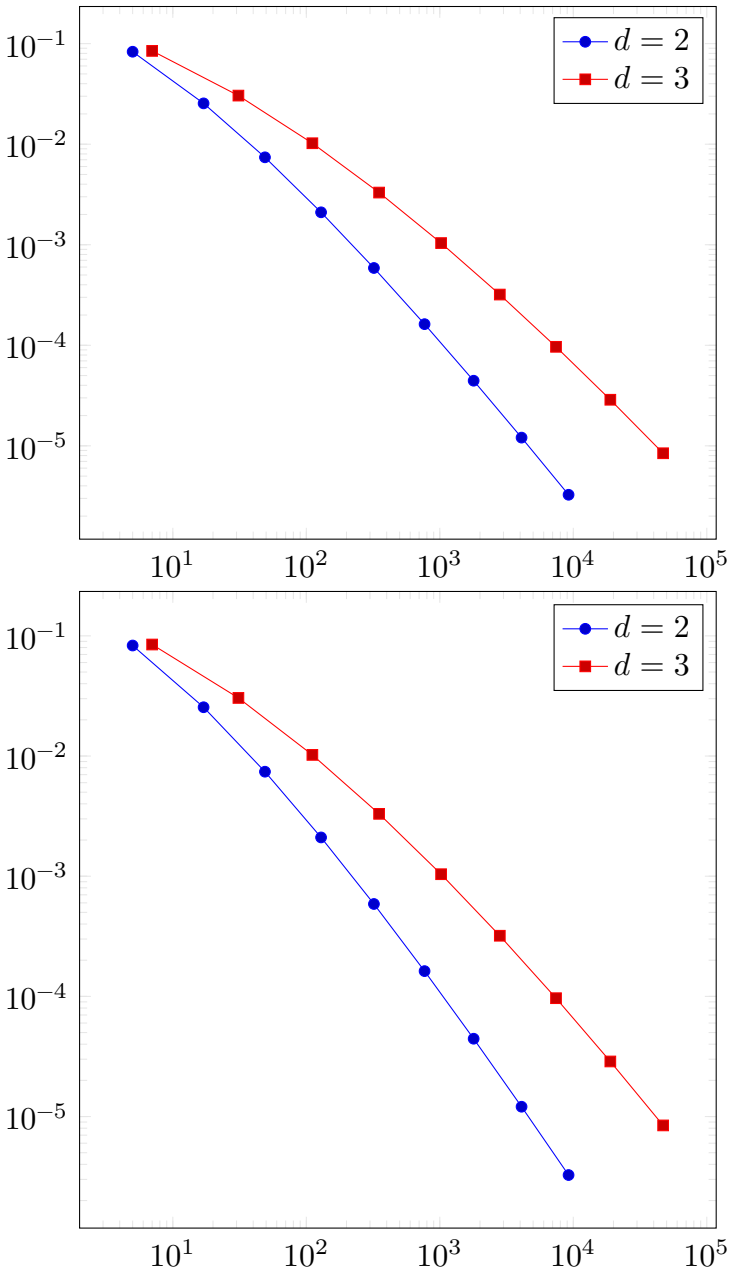
7.2.7 Testing numeric artefacts around tick position `0'

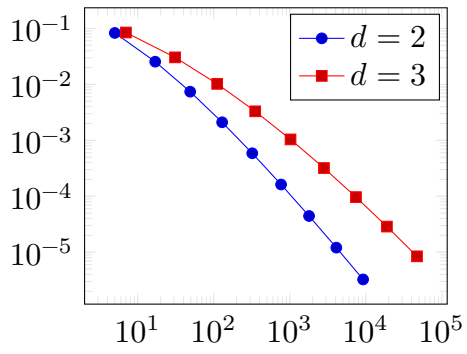
[scaled ticks=false] in this subsection




10
5
0
−5
−10
−0.5
0
0.5
1
1.5
$1 \cdot 10^{-3}$
$5 \cdot 10^{-4}$
0
$-5 \cdot 10^{-4}$
$-1 \cdot 10^{-3}$
−5,000
0
5,000
10,000
15,000

7.3 Scaling log plots

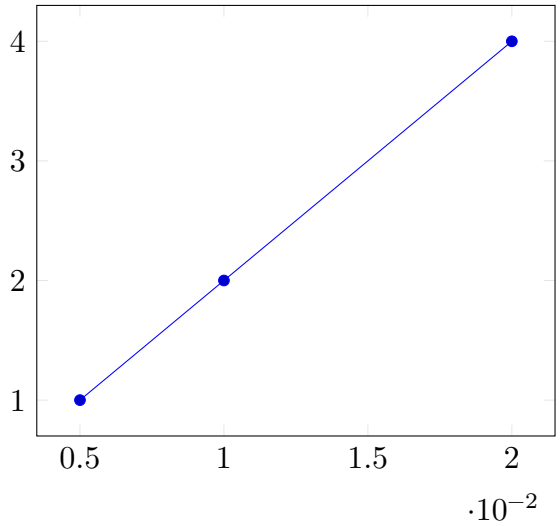




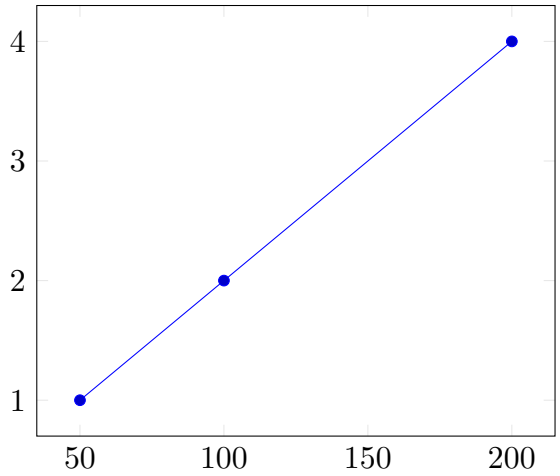
7.4 Scaletest

7.5 Scaling test for very small or very large x values

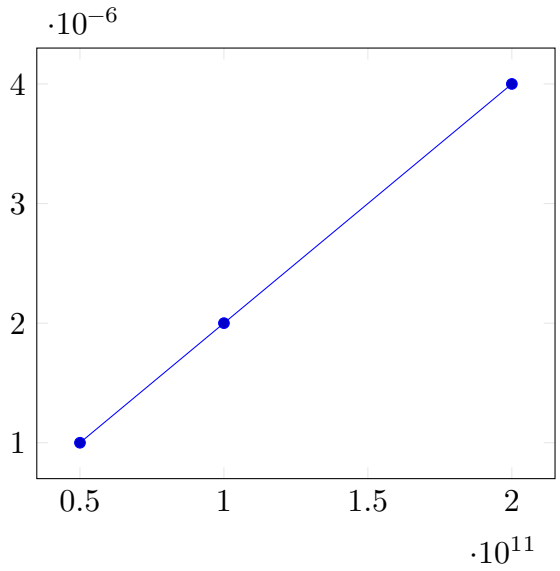
7.5.1 1e-2



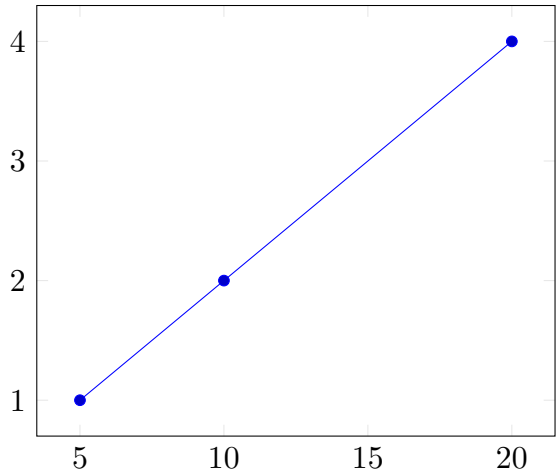
7.5.2 1e+2



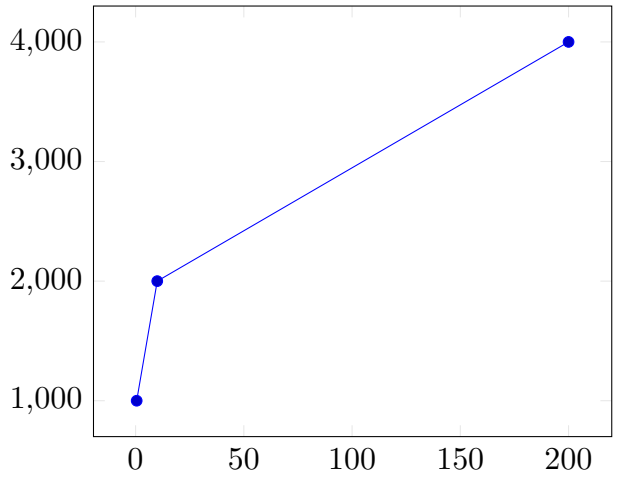
7.5.3 x=1e+11; y=1e-6



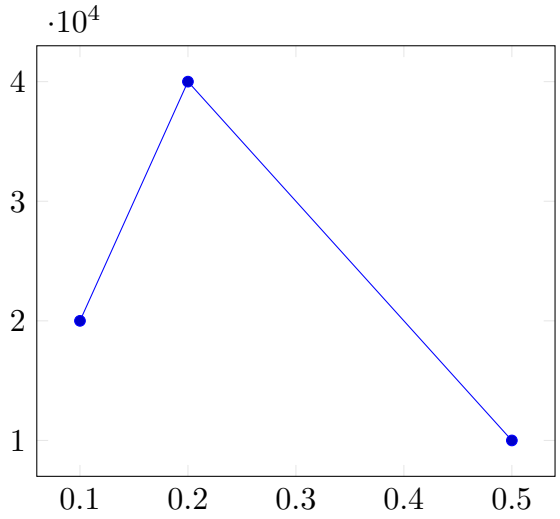
7.5.4 1e+1



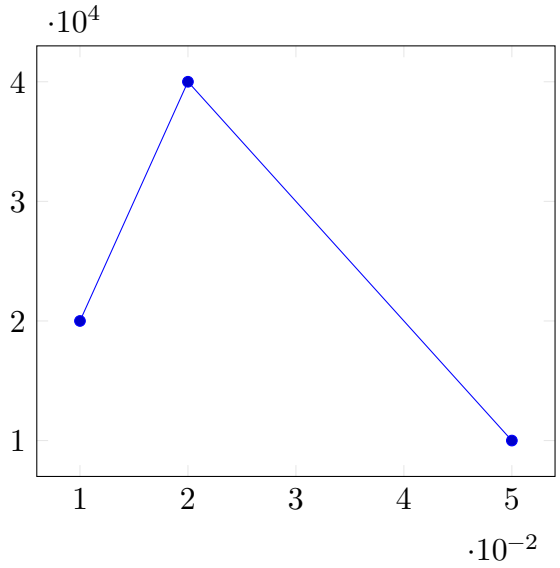
7.5.5 1e+3



7.5.6 1e+4

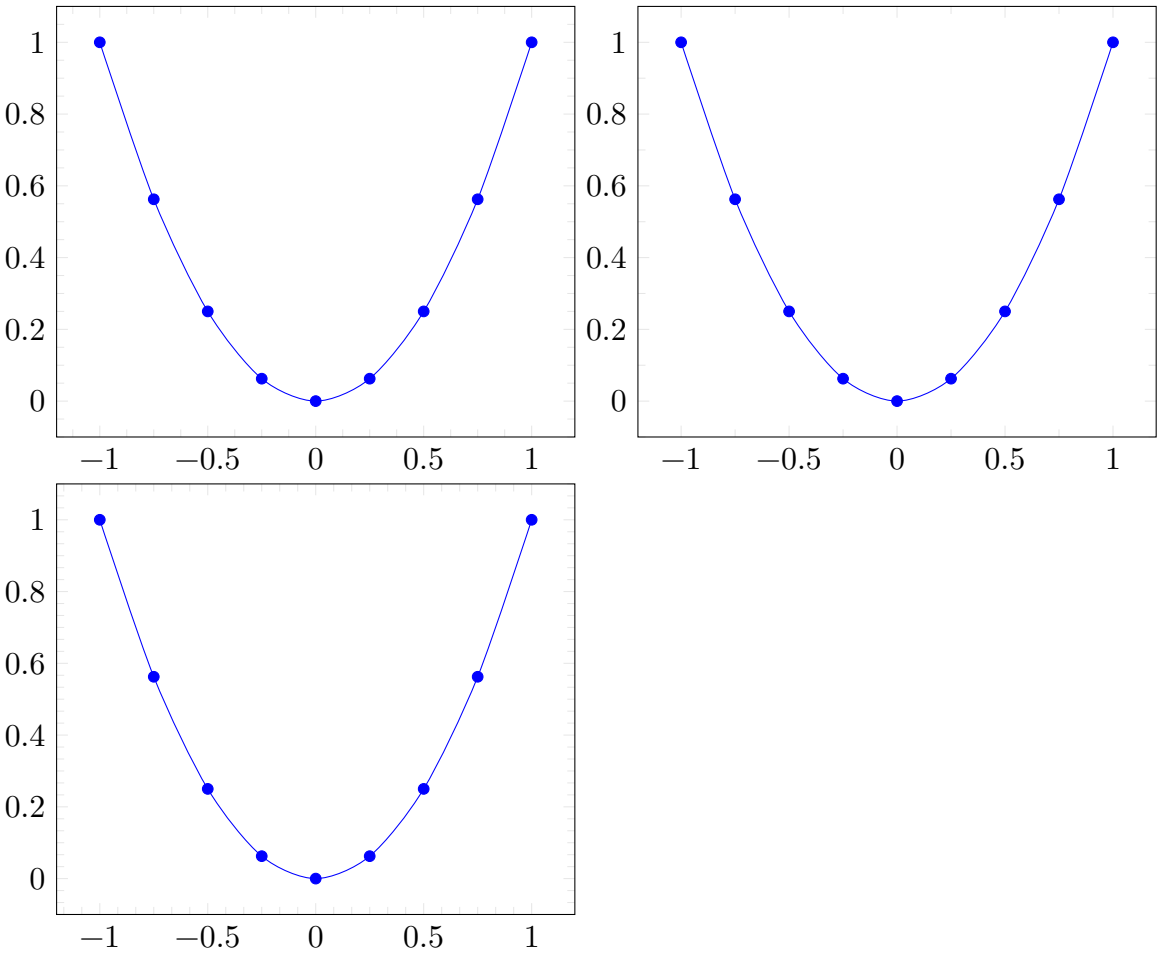


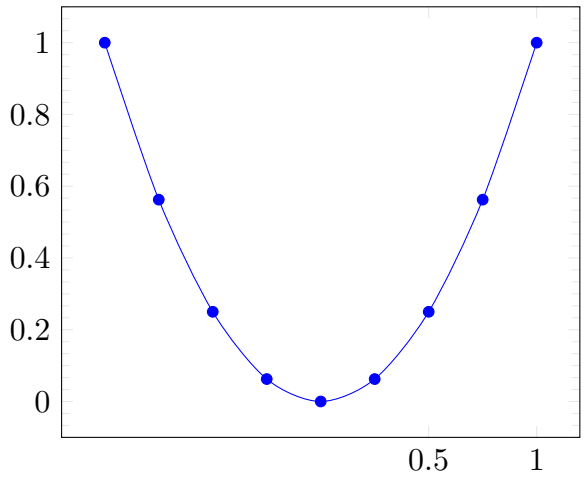
7.5.7 1e-2, 1e+4



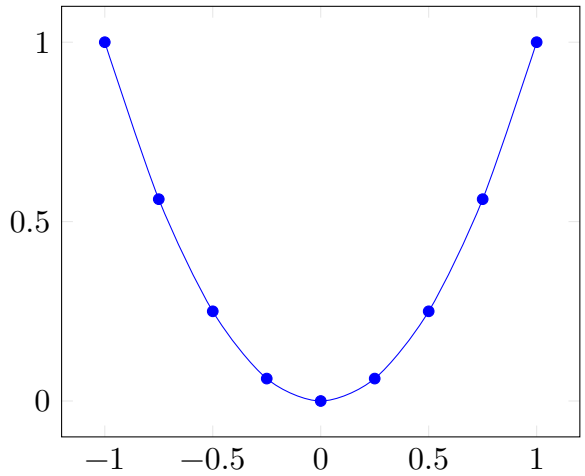
8 pgfplotstest.ticks.tex

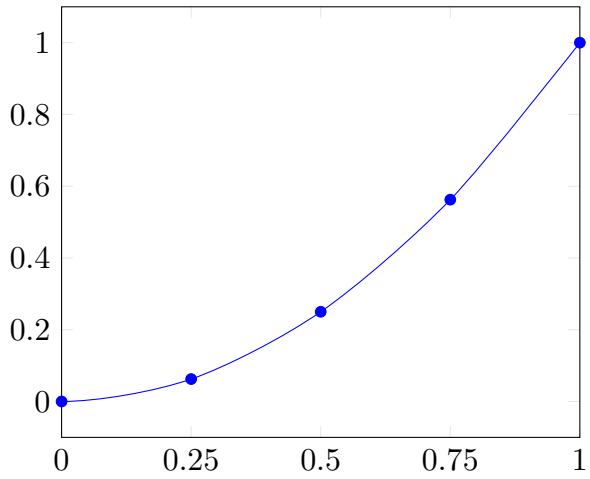
8.1 Minor ticks



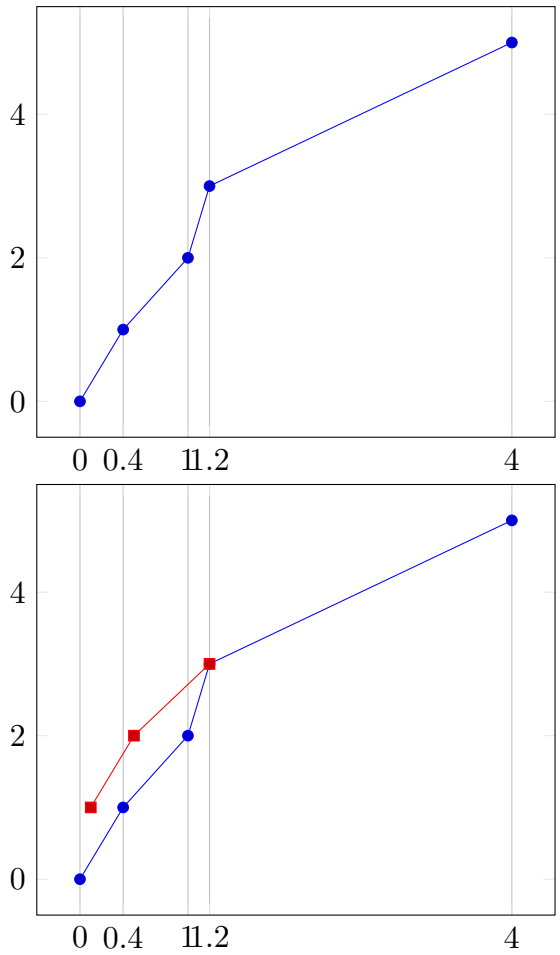


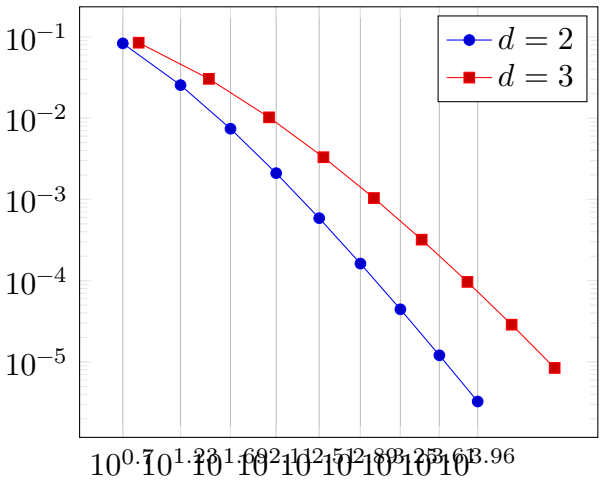
8.2 Tick placement



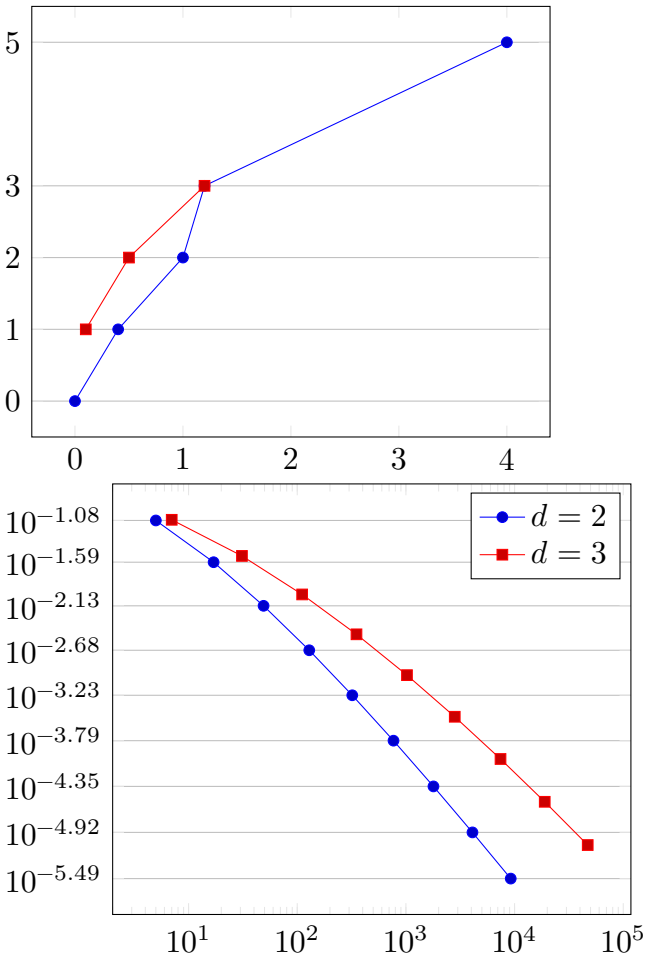


8.2.1 xtick=data



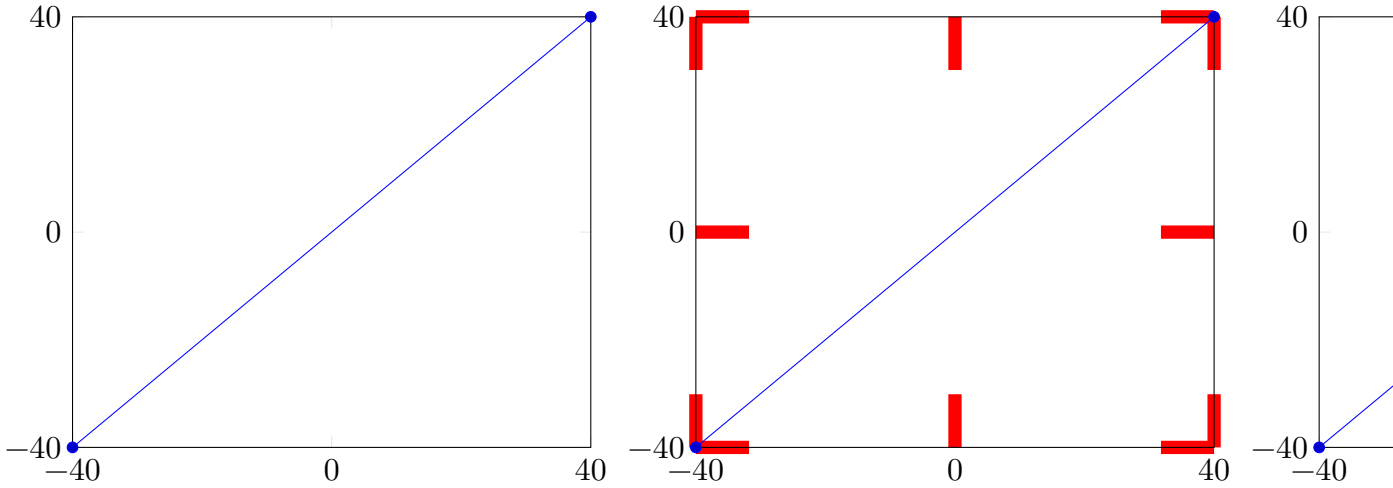


8.2.1.1 ytick=data

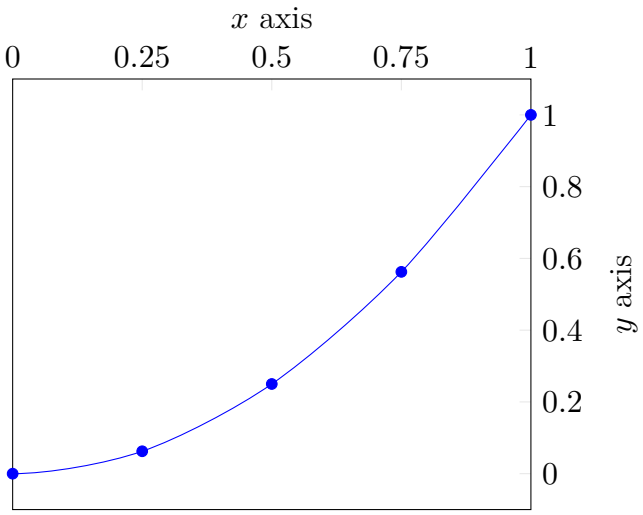


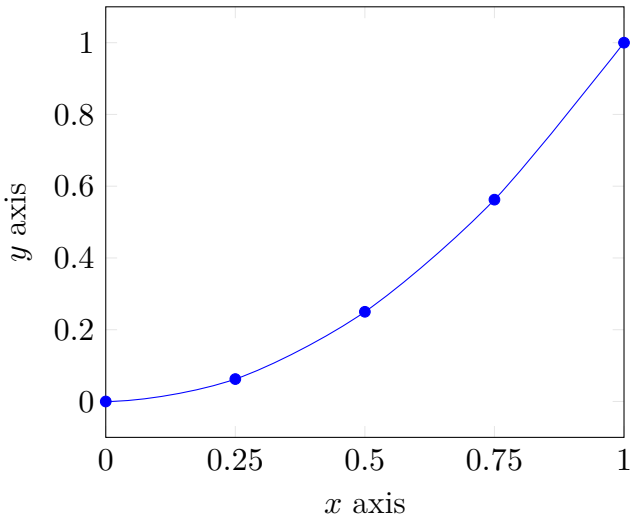
8.2.2 ticks on axis rectangle

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



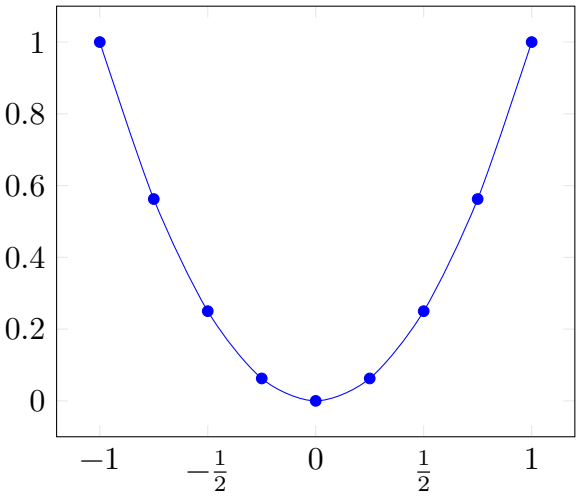
8.2.3 modified labels



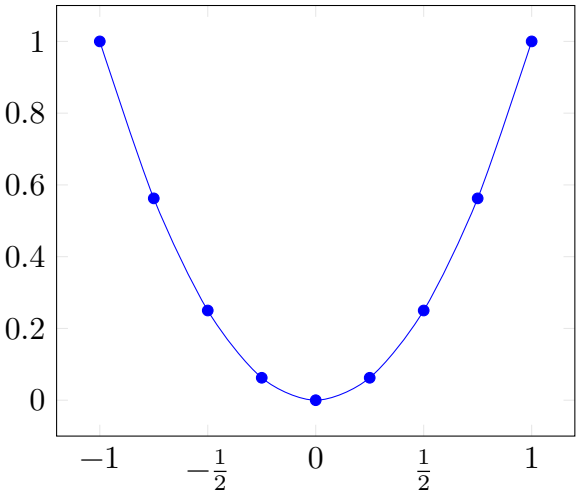


8.3 Tick label assigment tests

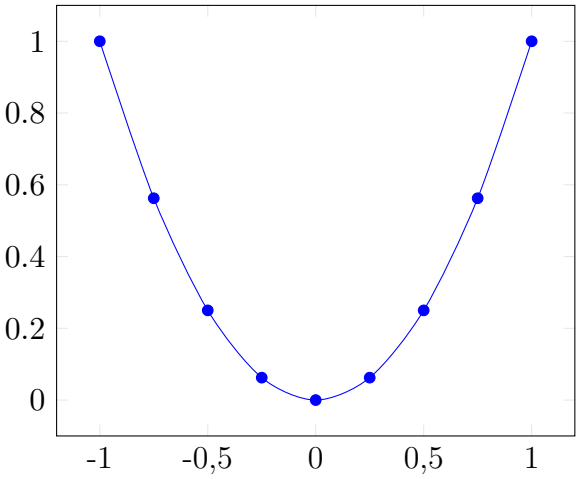
8.3.1 Using xticklabel and xtick



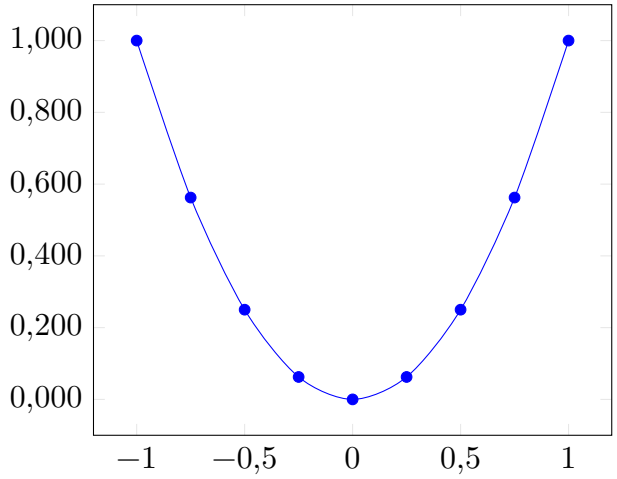
8.3.2 Using xticklabels



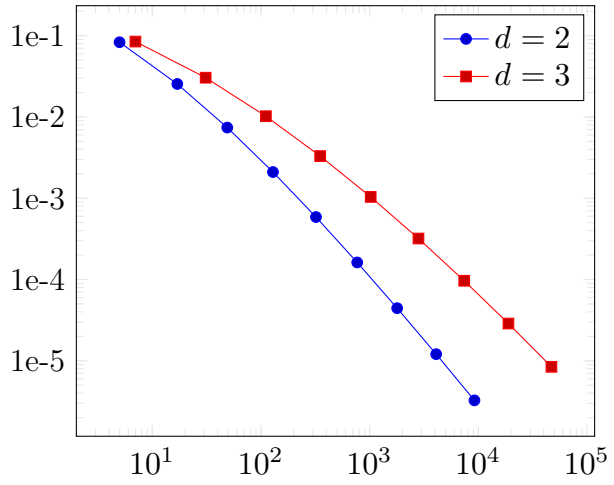
8.3.3 With xtick labels and commas by hand



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

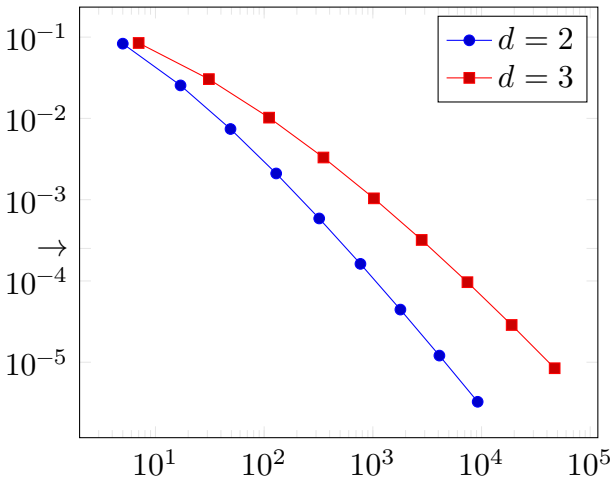


8.3.5 Using yticklabels in logplot

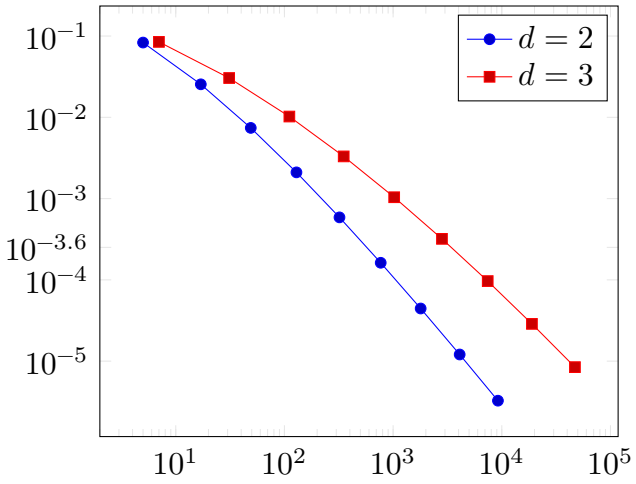


8.4 Tick/Tick-Label placement log plots

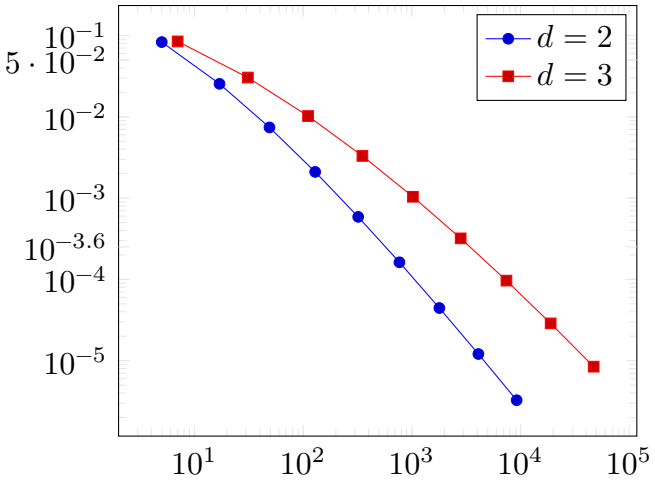
8.4.1 ytickten



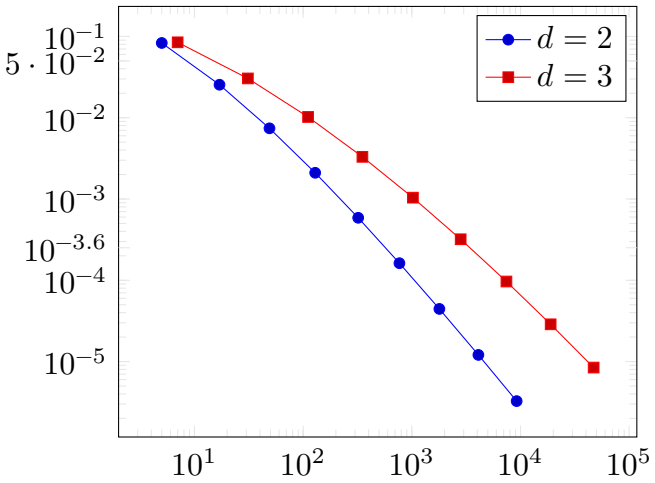
8.4.2 ytick



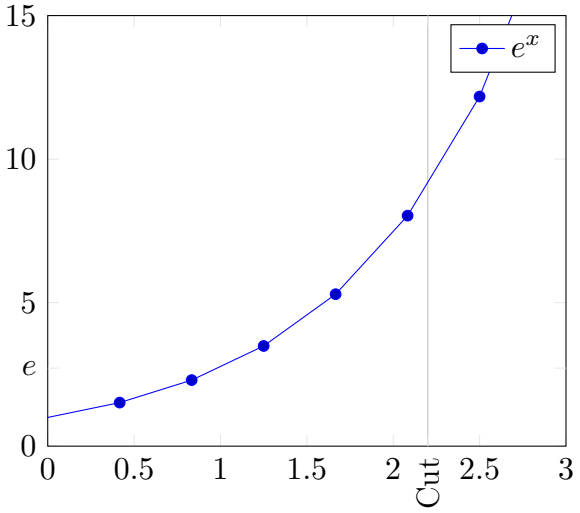
8.4.3 extra y ticks



8.4.4 extra y ticks and formatted label



8.4.5 extra x and y ticks, linear plot



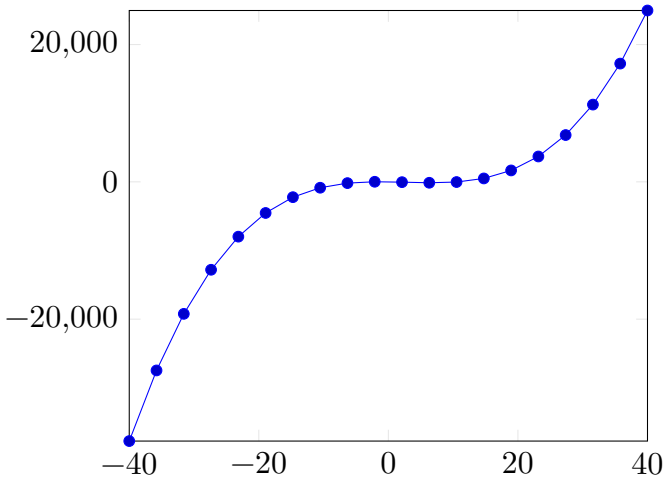
9 pgfplotstest.enlargelimits.tex

9.1 Limit computation

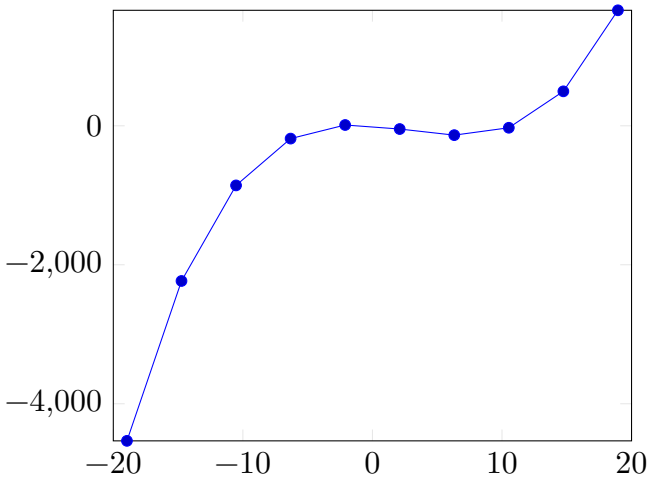
9.1.1 User specified limits

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

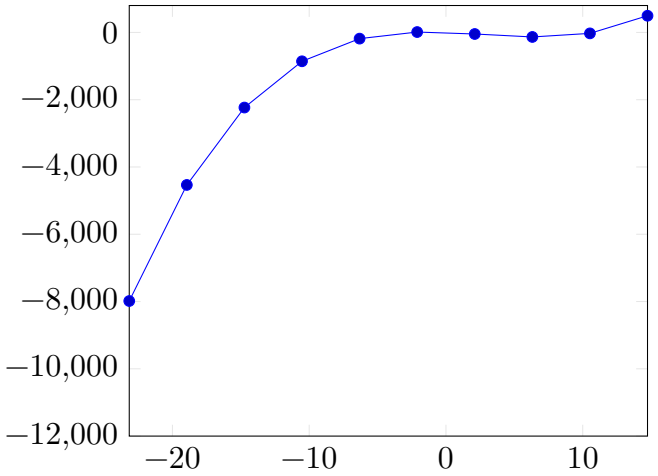
9.1.1.1 linear plot, unconstraint



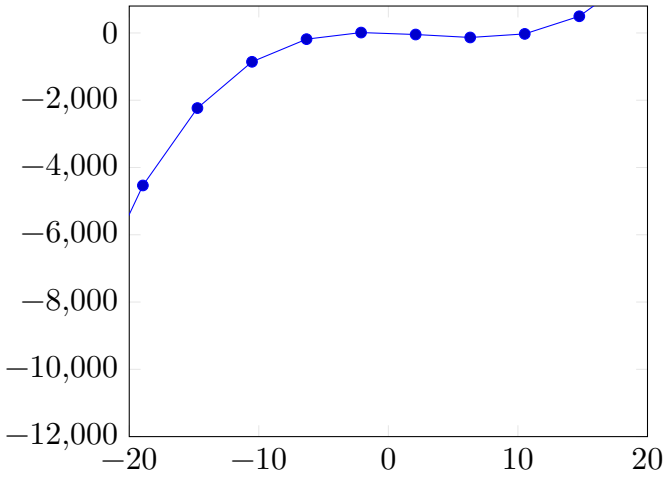
9.1.1.2 linear plot, limited to $x \in [-20, 20]$



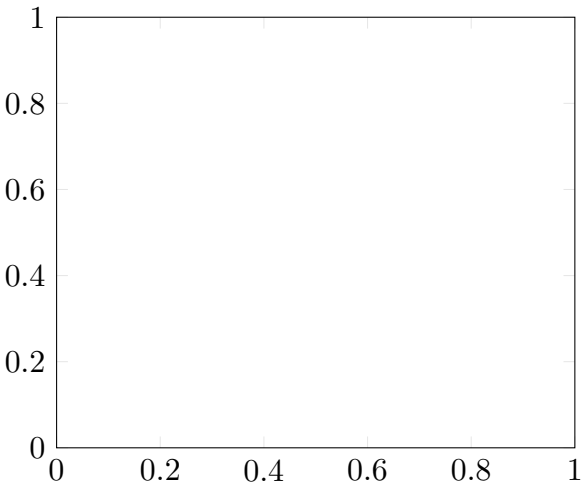
9.1.1.3 linear plot, limited to $y \in [-12000, 800]$



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



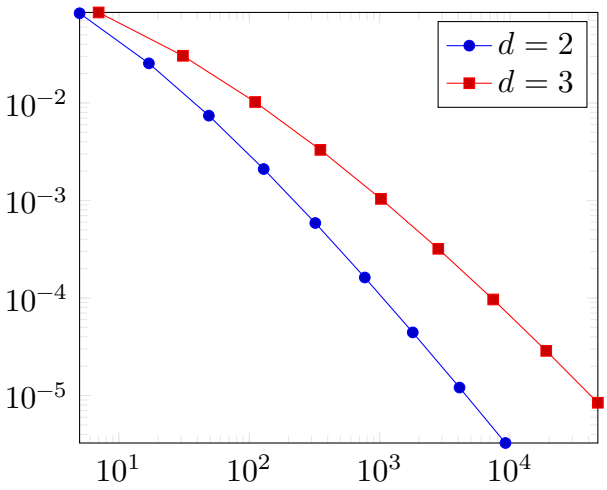
9.1.1.5 linear plot, limited to empty x-range



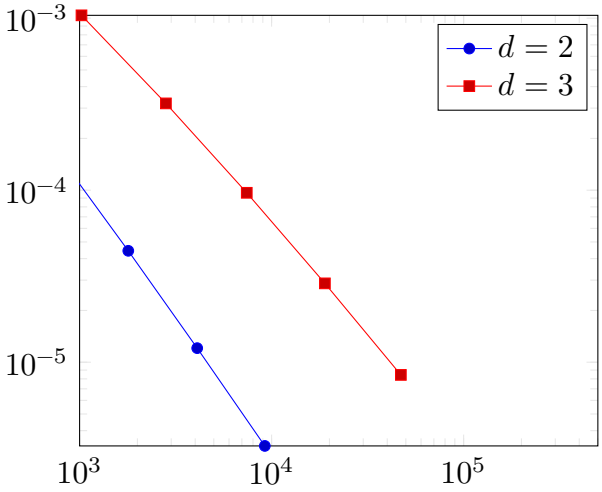
9.1.2 Log plots

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

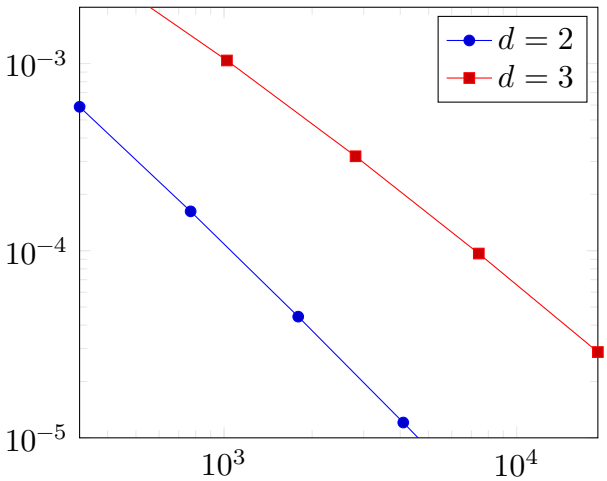
9.1.2.1 log plot unconstraint



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

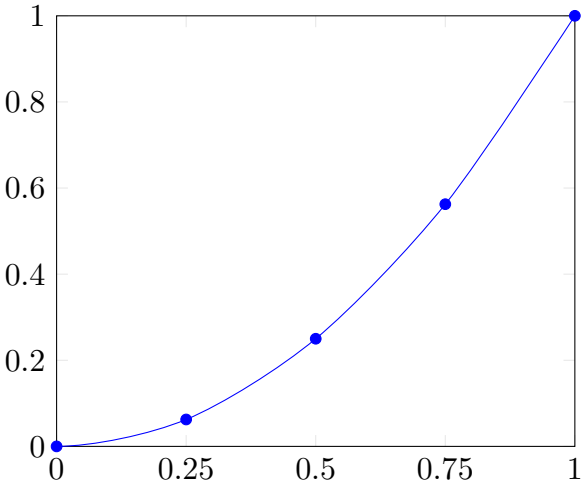


9.1.2.3 log plot limited to $y \in [10^{-5}, 2 \cdot 10^{-3}]$

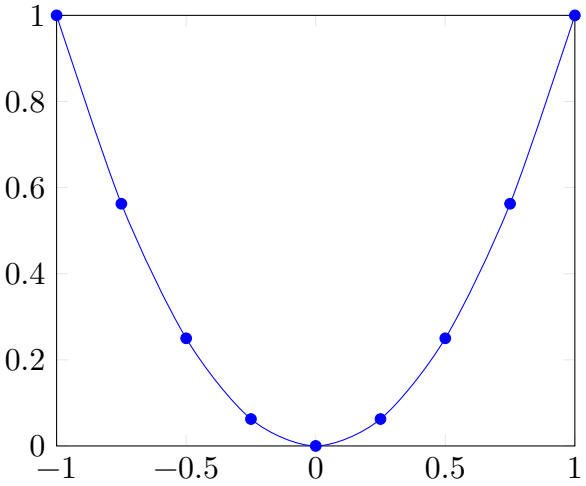


9.1.3 Enlargelimits tests

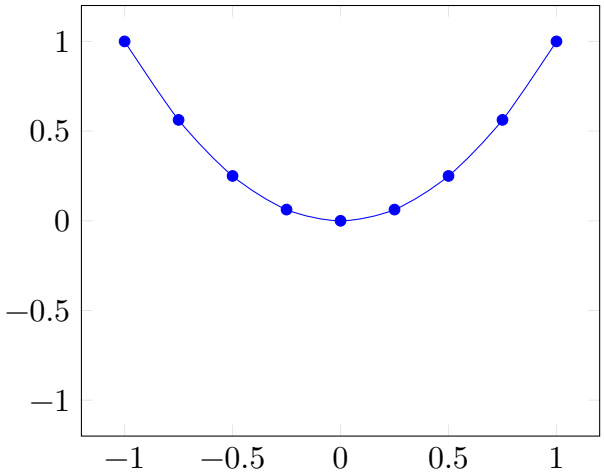
9.1.3.1 enlargelimits=false, x limits provided



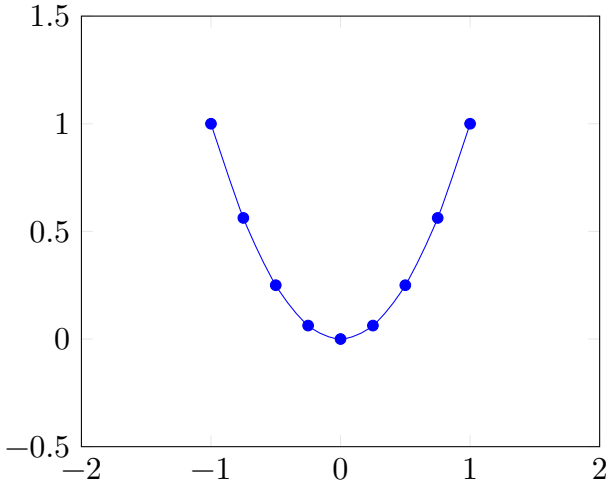
9.1.3.2 enlargelimits=false, no limits provided



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



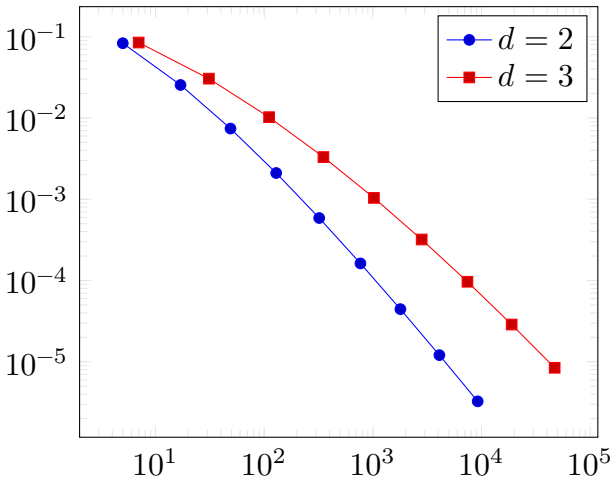
9.1.3.4 enlargelimits=0.5



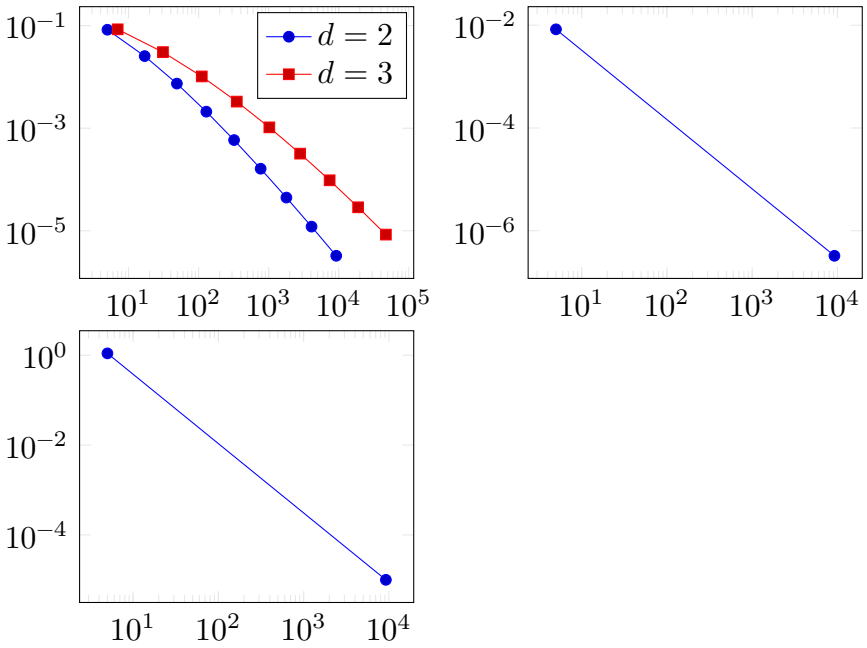
10 pgfplotstest.logplotenv.tex

10.1 Default options log plot

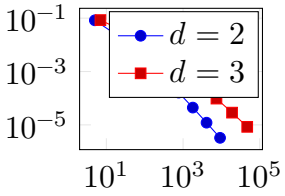
10.1.1 Default size



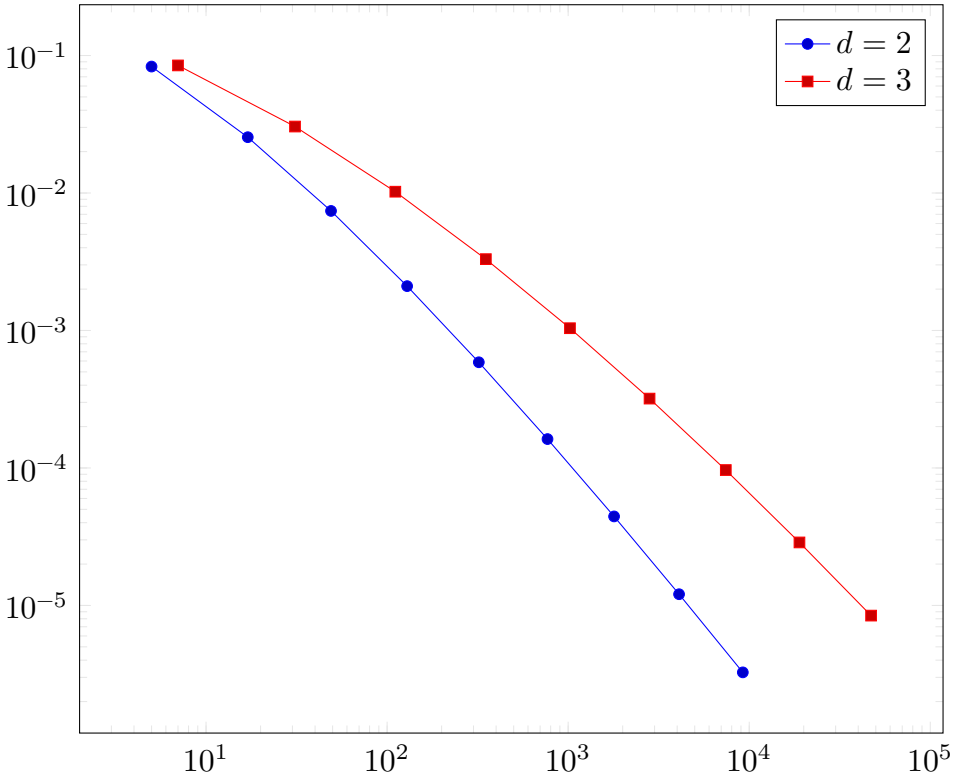
10.1.2 Small size



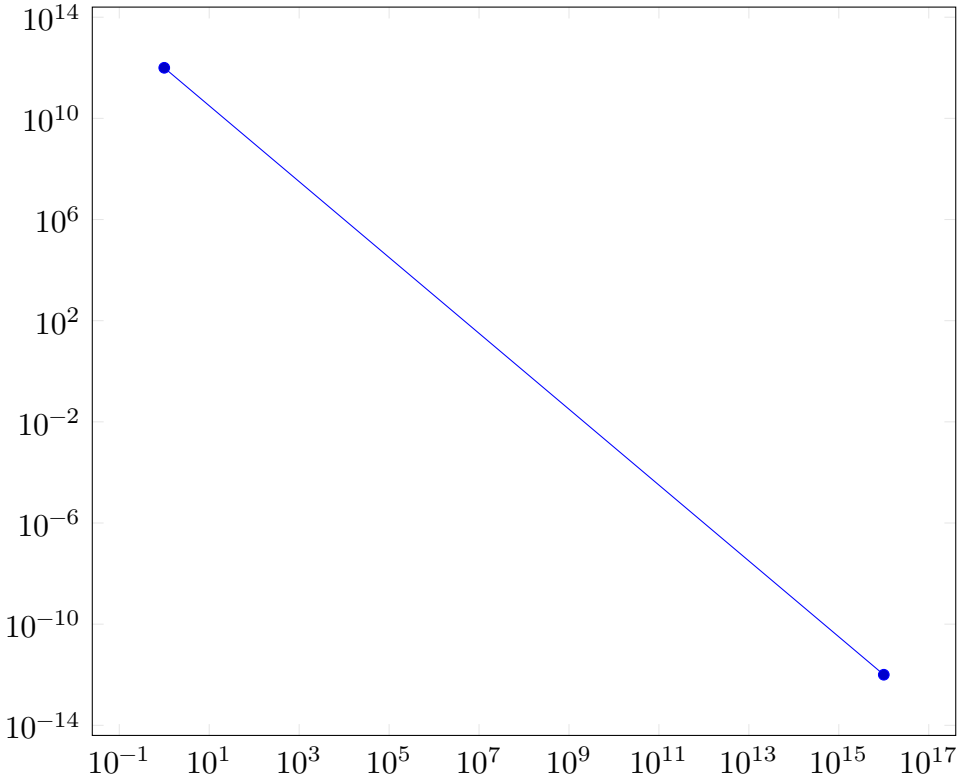
10.1.3 Very small size



10.1.4 Large size

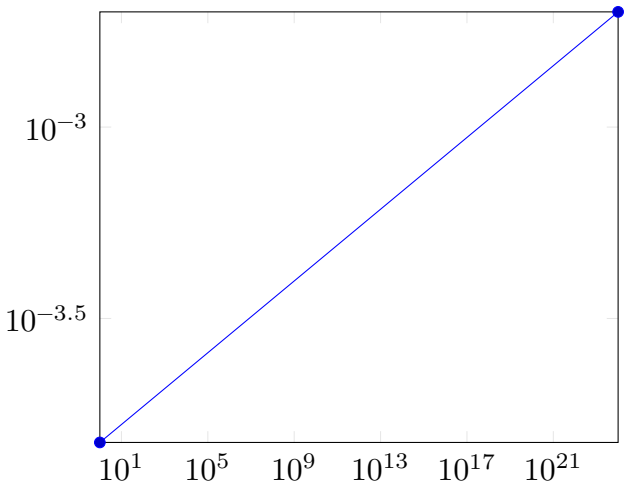


10.1.5 Large size; large range



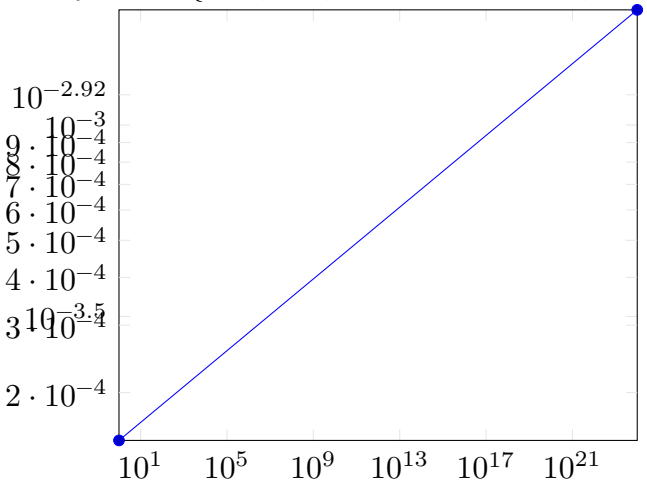
10.1.6 Extremely small y range for log plot

10.1.6.1 Without extra ticks, enlargelimits=false

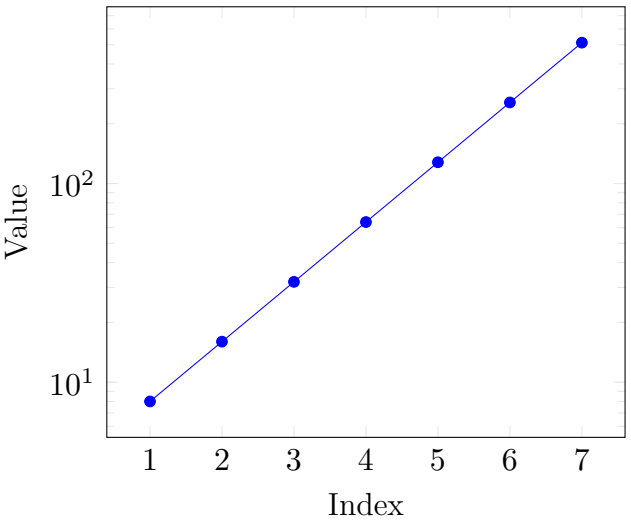


10.1.6.2 With extra ticks, enlargelimits=false

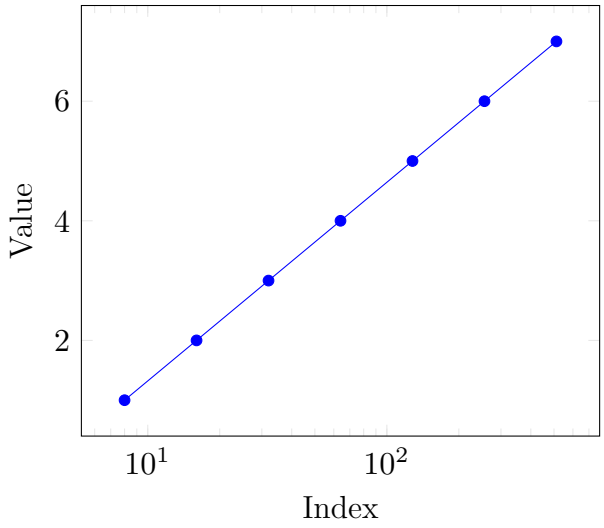
extra y ticks={2e-4,3e-4,4e-4,5e-4,6e-4,7e-4,8e-4,9e-4,1.2e-3}



10.2 Semilogy plot

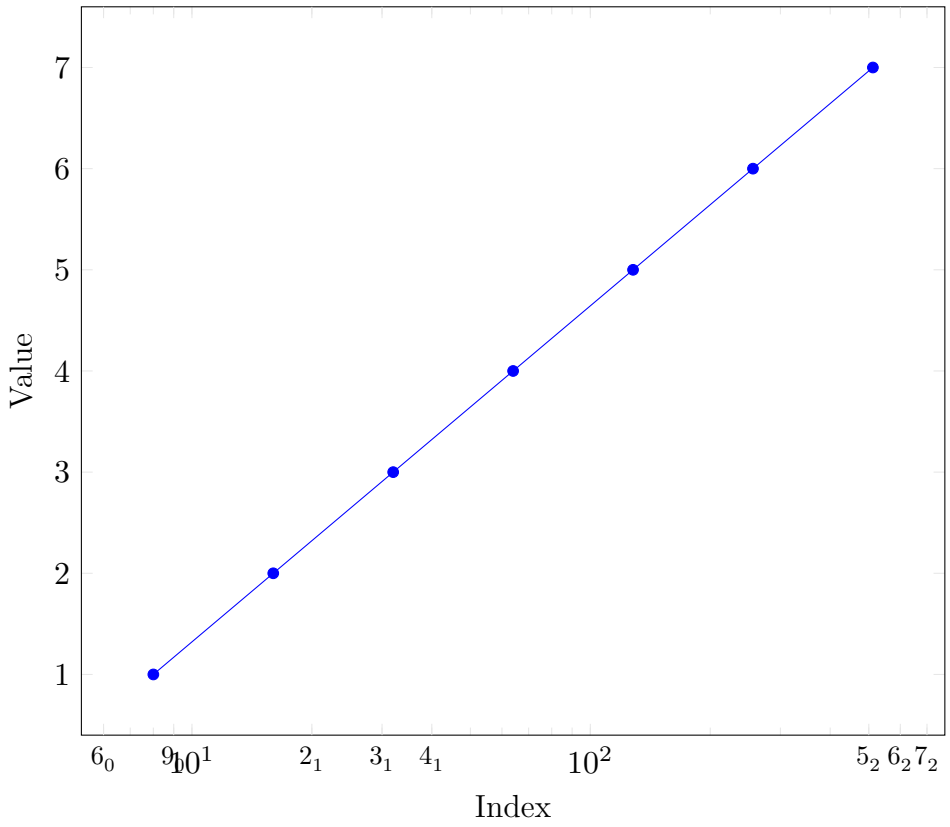


10.3 Semilogx plot



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},


Value
1
2
3
4
5
6
7
Index
6_0
9_0
10^1
2_1
3_1
4_1
10^2
5_2
6_2
7_2

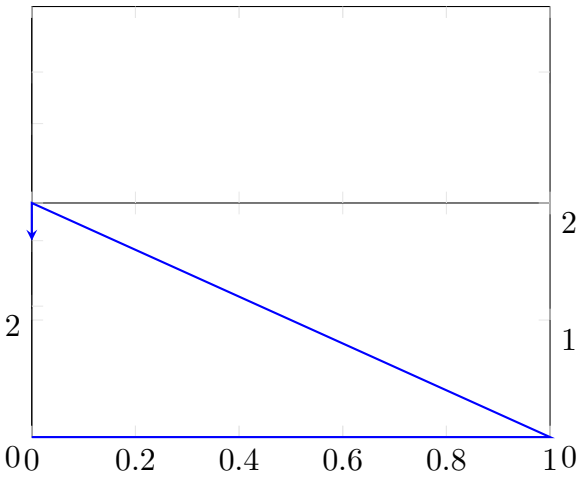
11 pgfplotstest.3d.tex

11.1 View

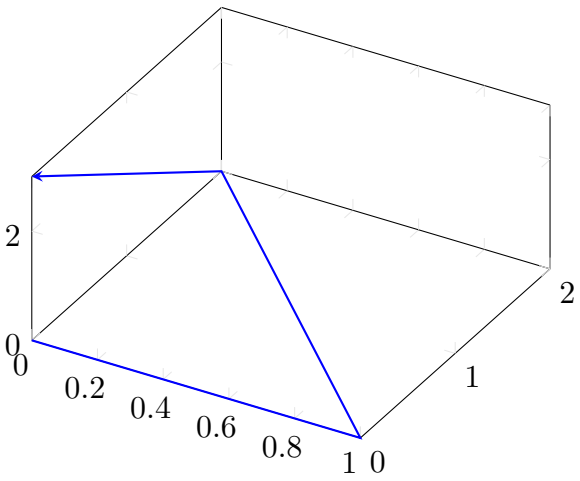
The following test plot has

11.1.1 Test von YAW

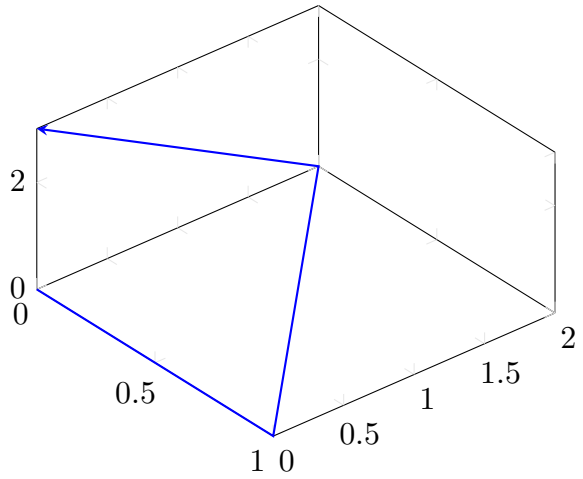
11.1.1.1 für {0}{50}:



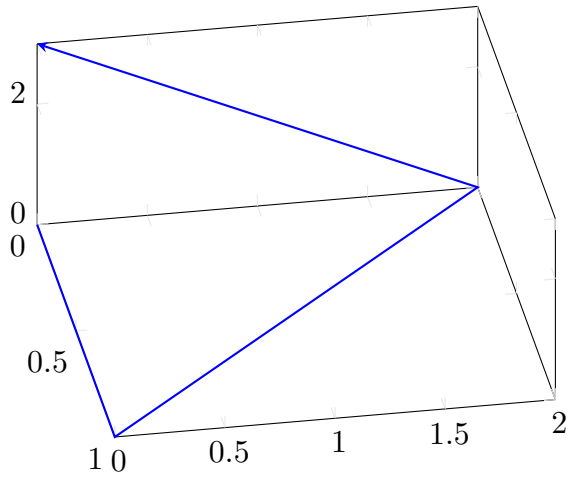
11.1.1.2 für {30}{50}:



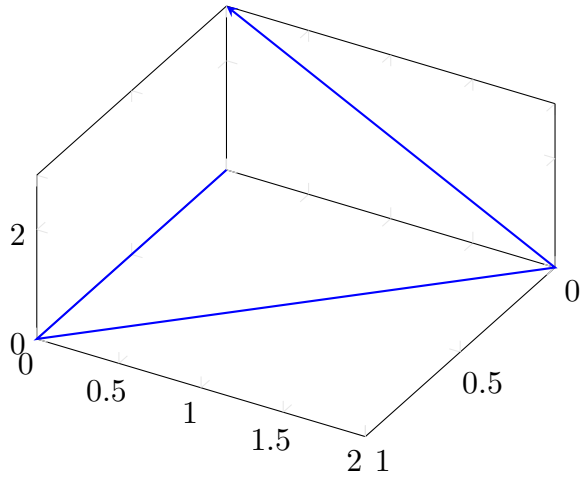
11.1.1.3 für {50}{50}:



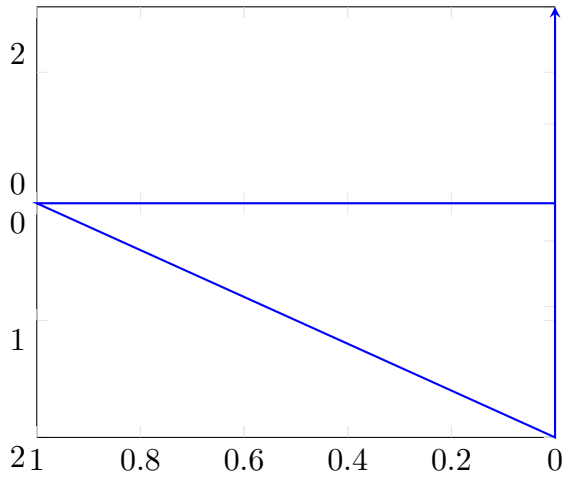
11.1.1.4 für {80}{50}:



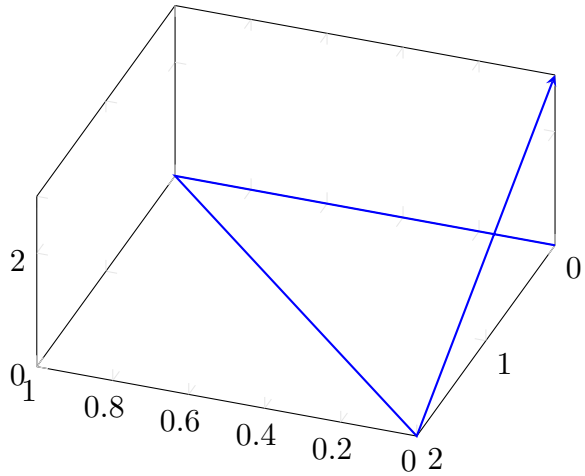
11.1.1.5 für {120}{50}:



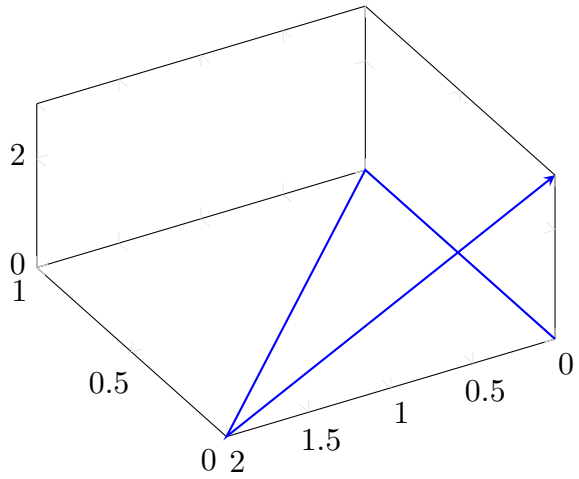
11.1.1.6 für {180}{50}:



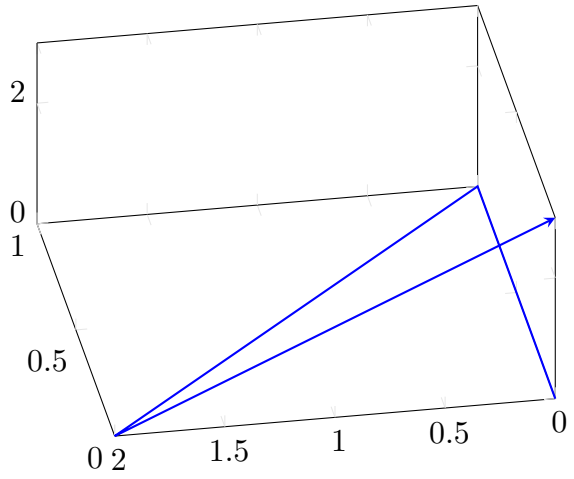
11.1.1.7 für {200}{50}:



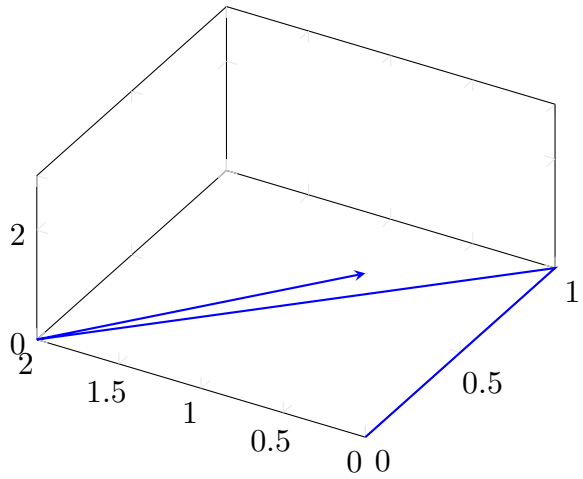
11.1.1.8 für {240}{50}:



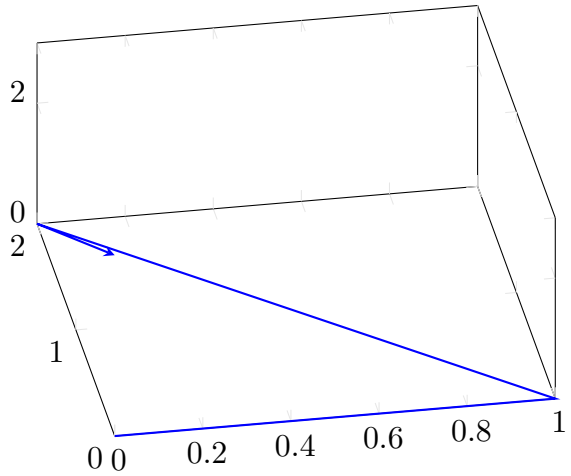
11.1.1.9 für {260}{50}:



11.1.1.10 für {300}{50}:

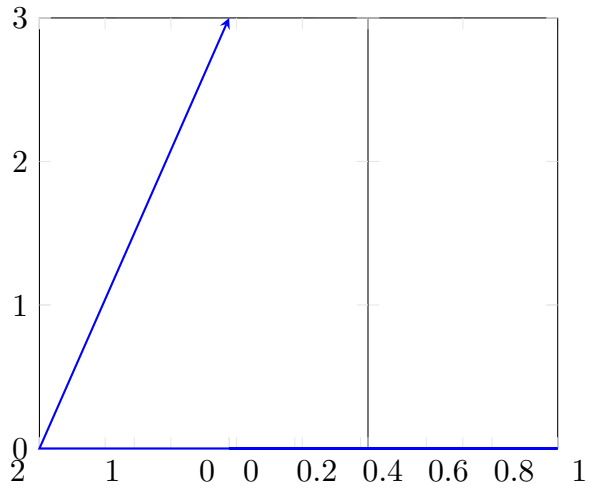


11.1.1.11 für {350}{50}:

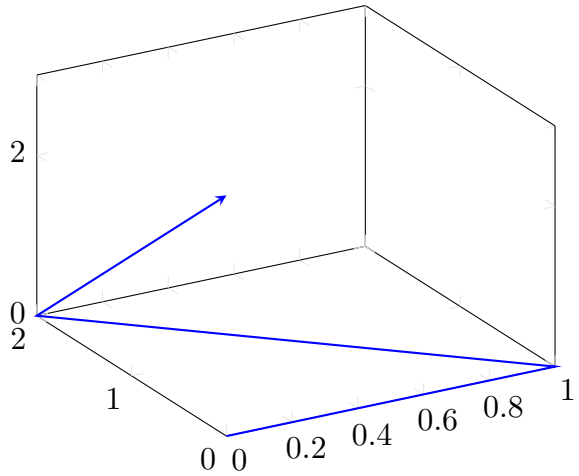


11.1.2 Test von PITCH

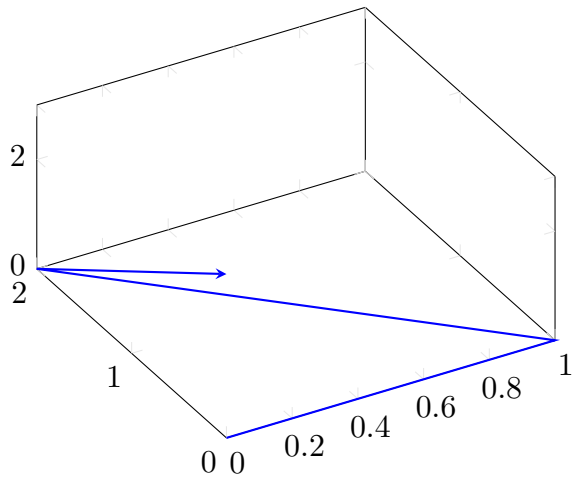
11.1.2.1 für {-30}{0}:



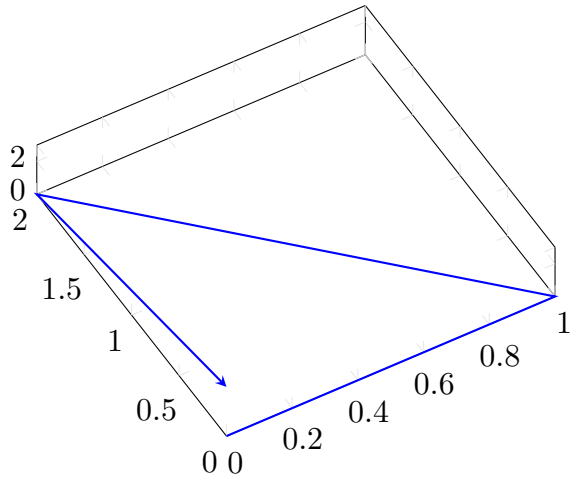
11.1.2.2 für {-30}{30}:



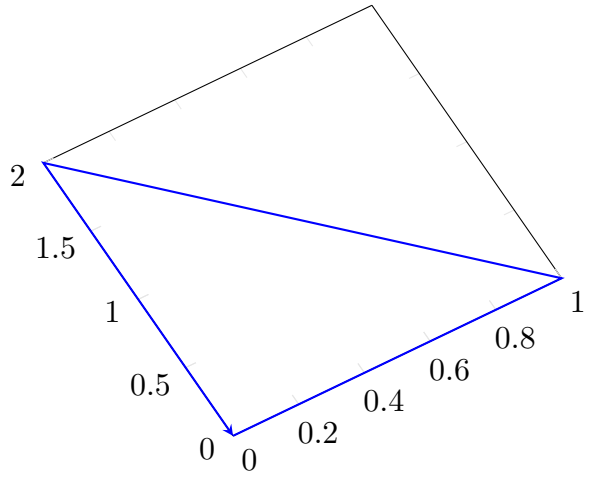
11.1.2.3 für {-30}{50}:



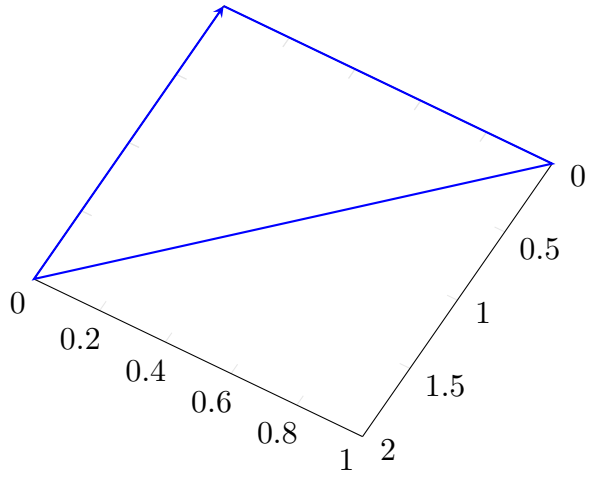
11.1.2.4 für {-30}{80}:



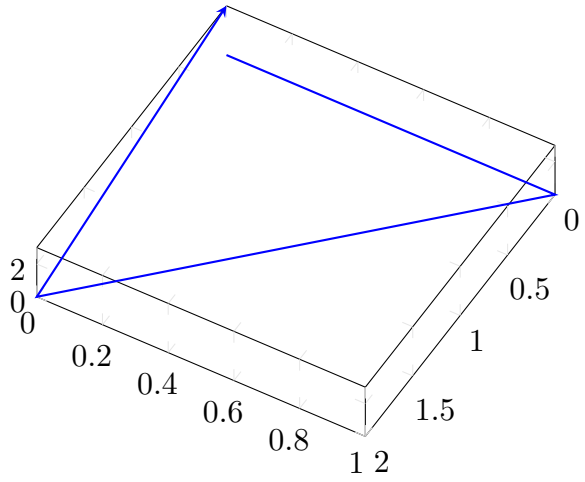
11.1.2.5 für {-30}{90}:



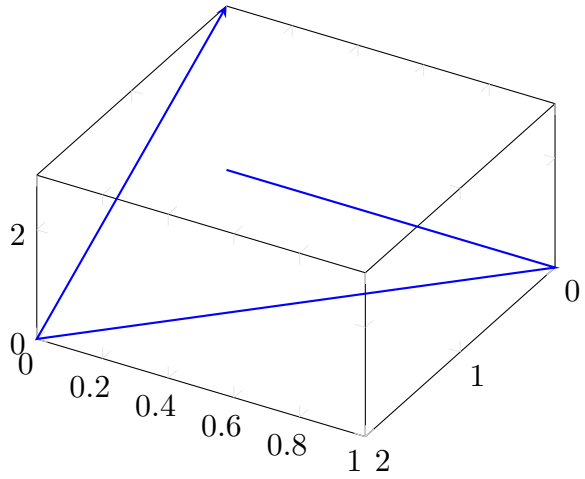
11.1.2.6 für {-30}{-90}:



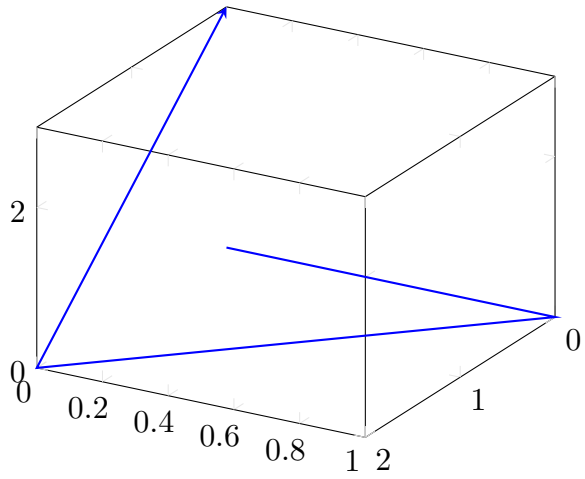
11.1.2.7 für {-30}{-80}:



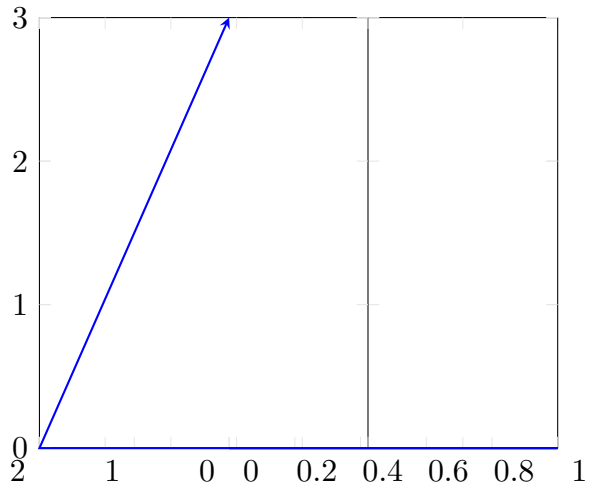
11.1.2.8 für {-30}{-50}:



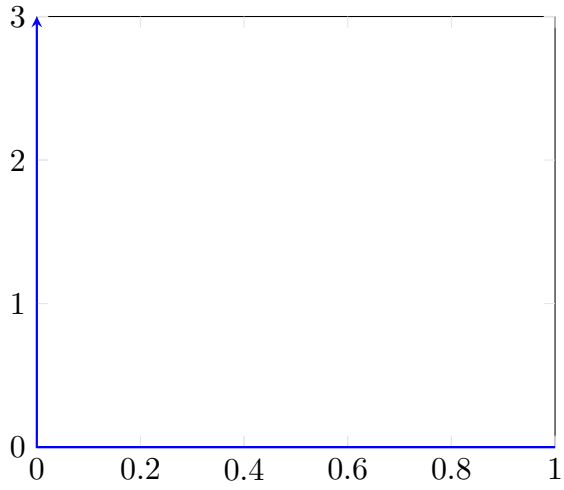
11.1.2.9 für {-30}{-30}:



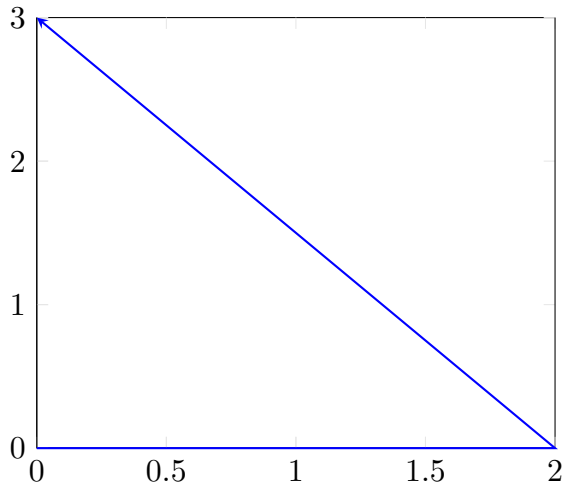
11.1.2.10 für {-30}{0}:



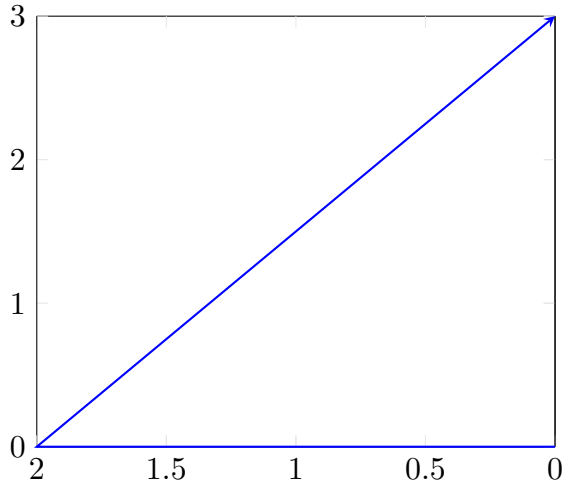
11.1.2.11 Special case view=0,0



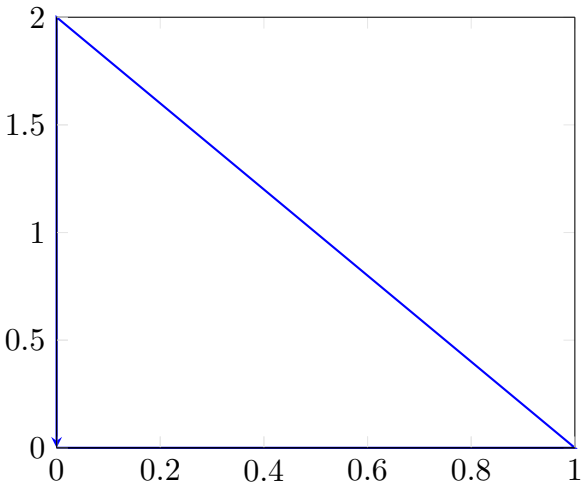
11.1.2.12 Special case view=90,0



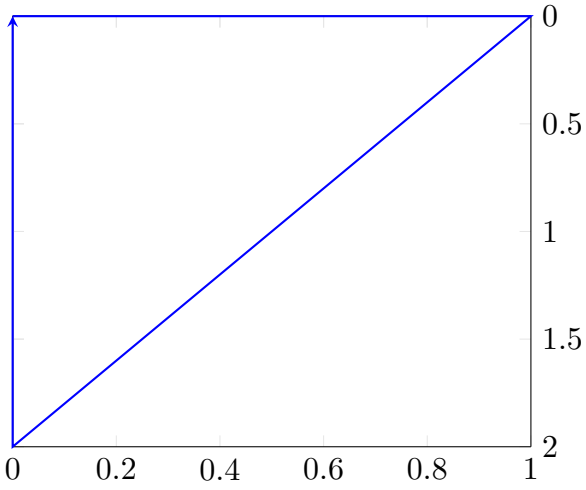
11.1.2.13 Special case view=-90,0



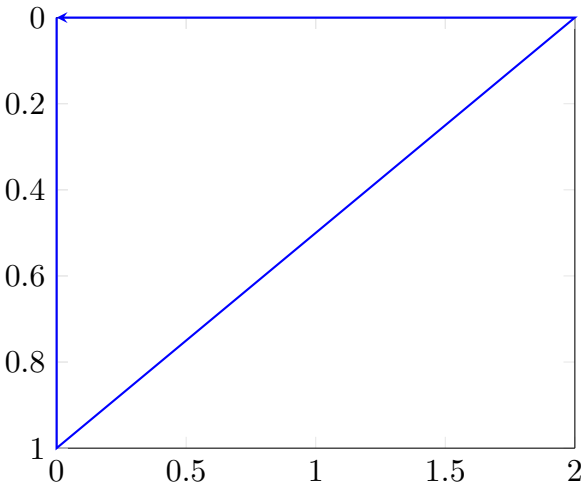
11.1.2.14 Special case view=0,90



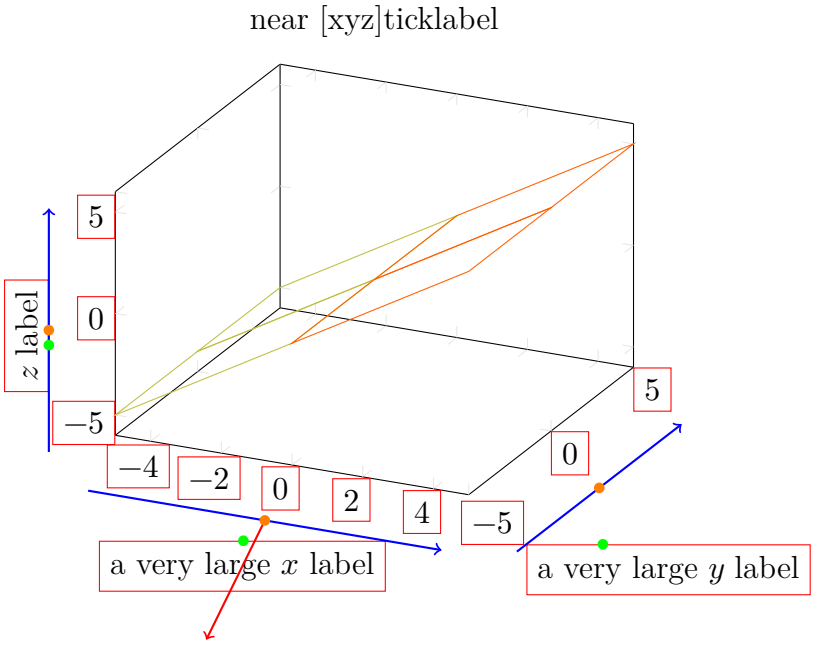
11.1.2.15 Special case view=0,-90



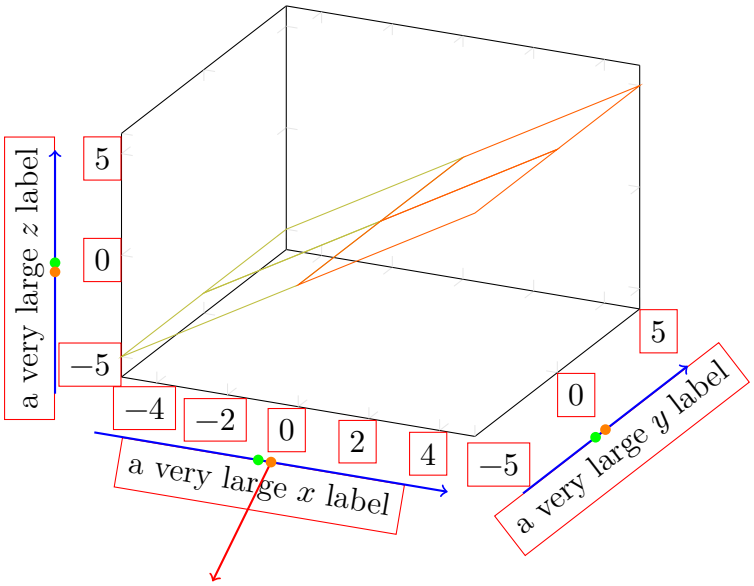
11.1.2.16 Special case view=90,90



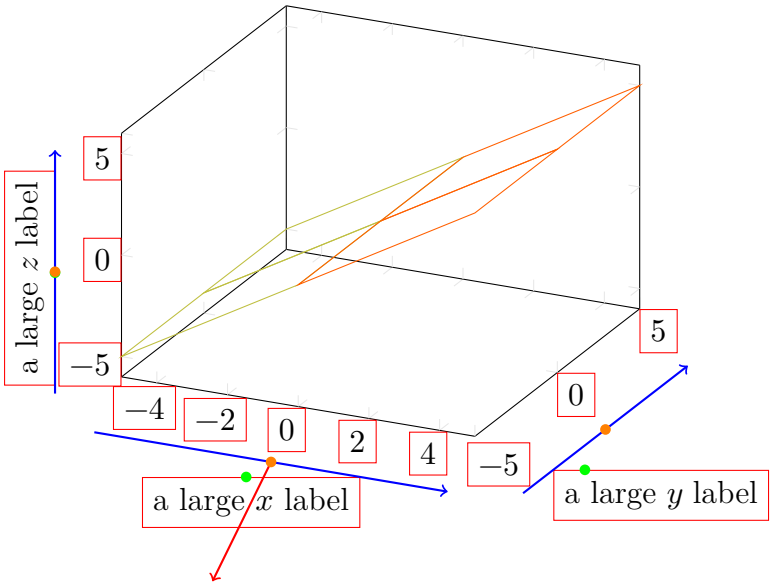
11.2 Tests and Debugging of near ticklabel anchors

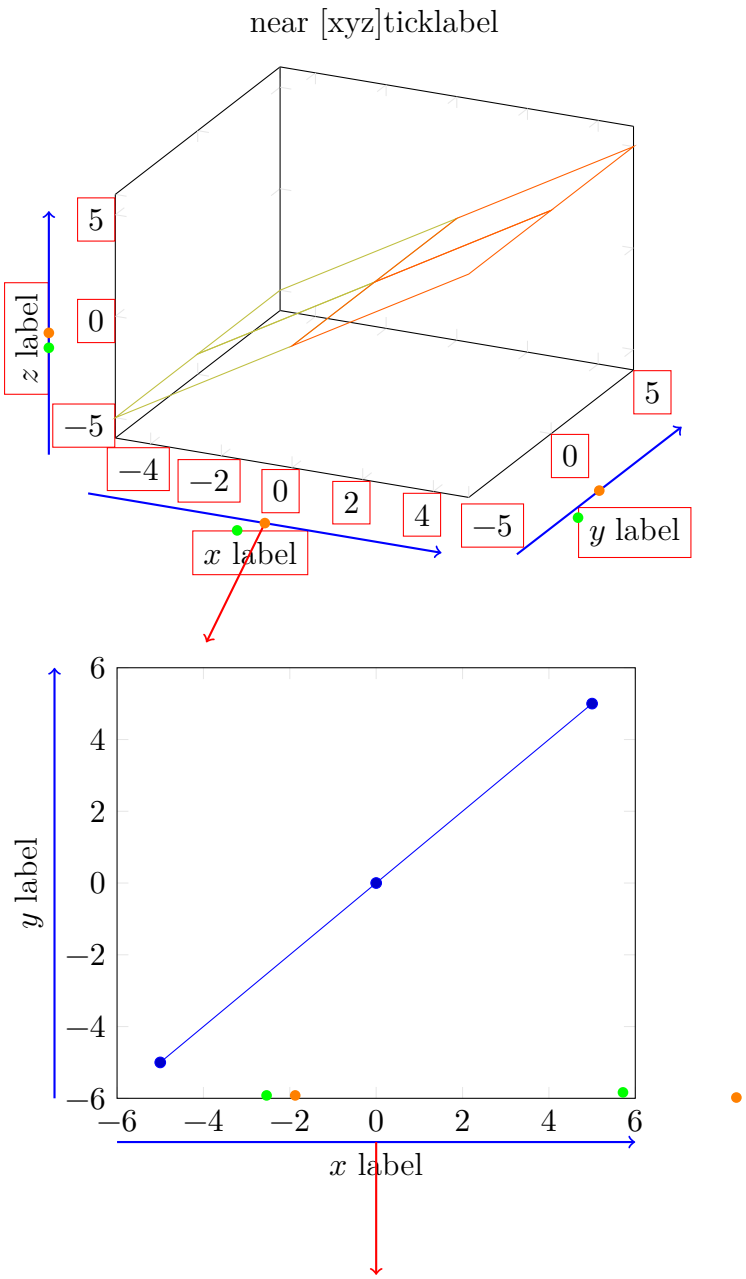


near [xyz]ticklabel

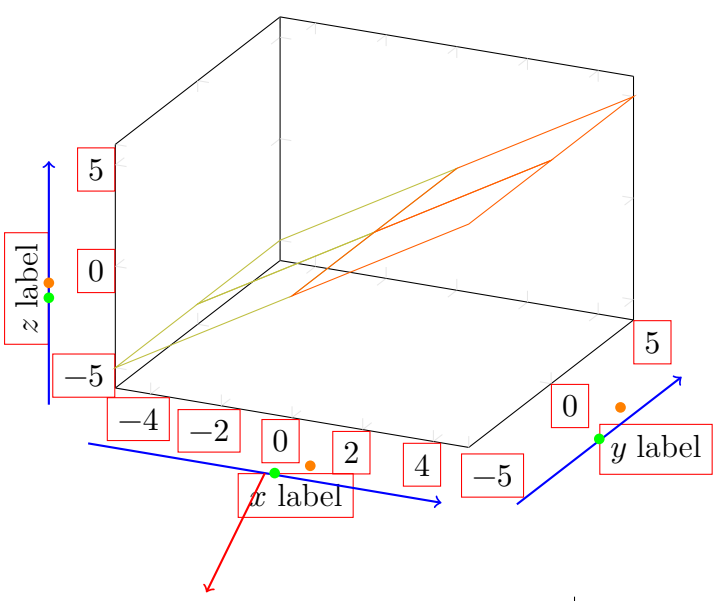


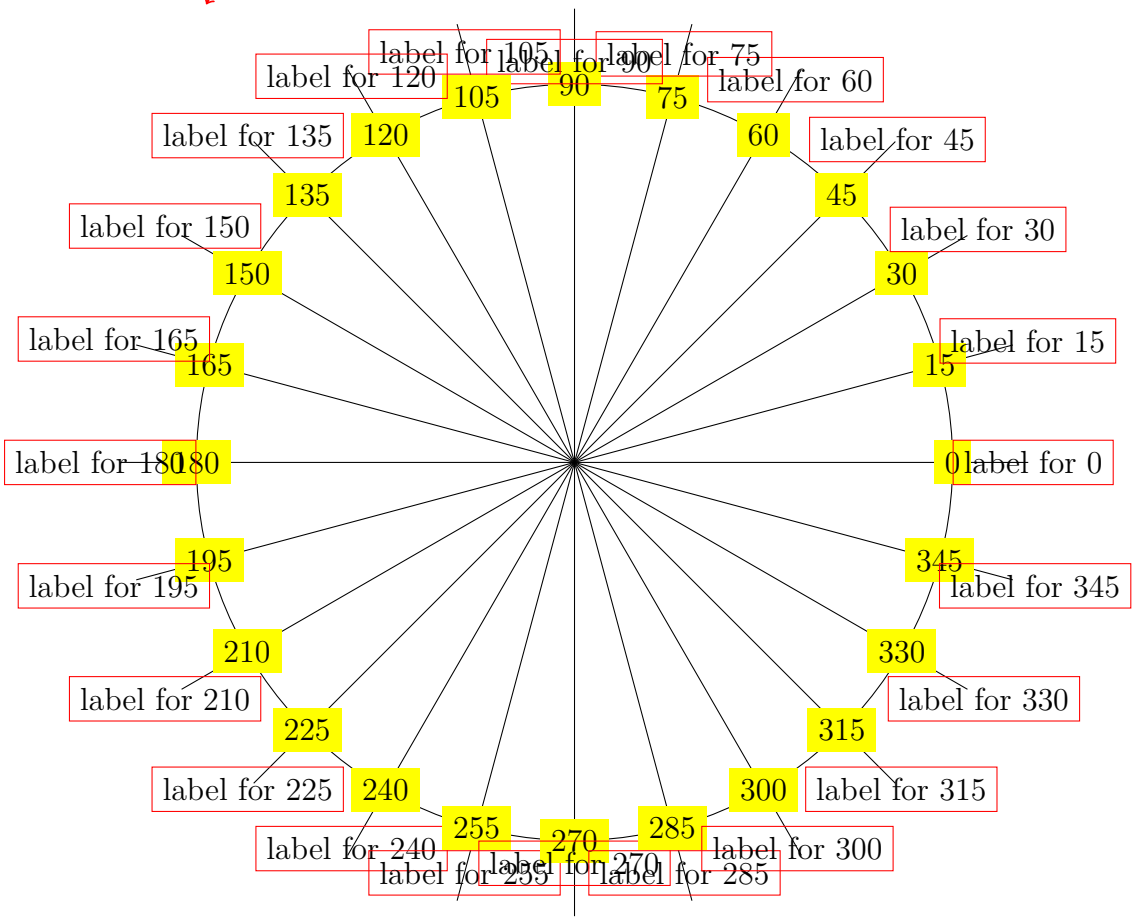
near [xyz]ticklabel




near [xyz]ticklabel
5
0
−5
z label
−4
−2
0
2
4
−5
0
5
x label
y label
6
4
2
0
−2
−4
−6
−6
−4
−2
0
2
4
6
y label
x label

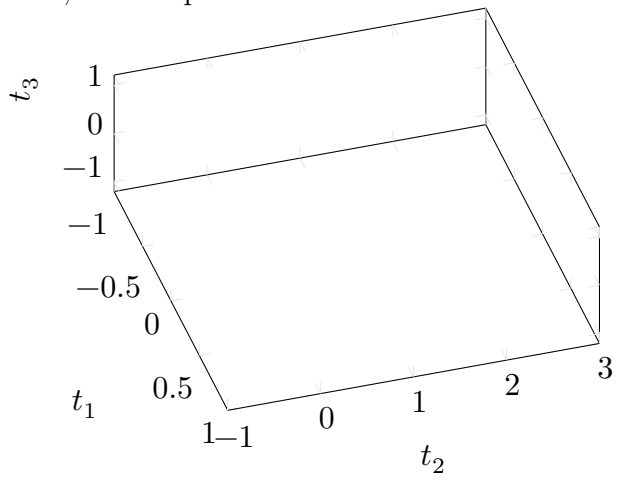
near [xyz]ticklabelSTAR

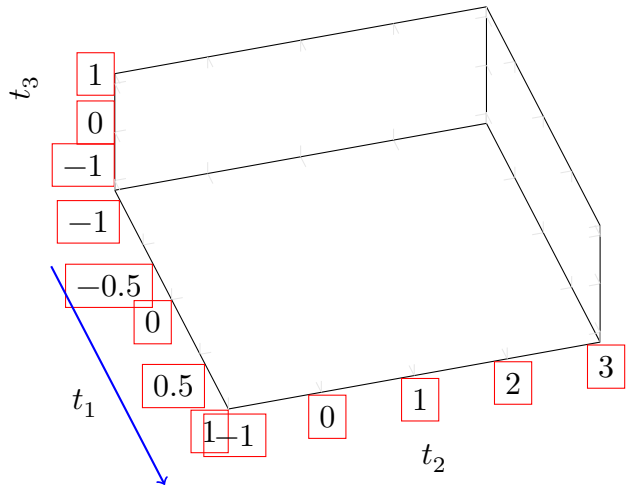




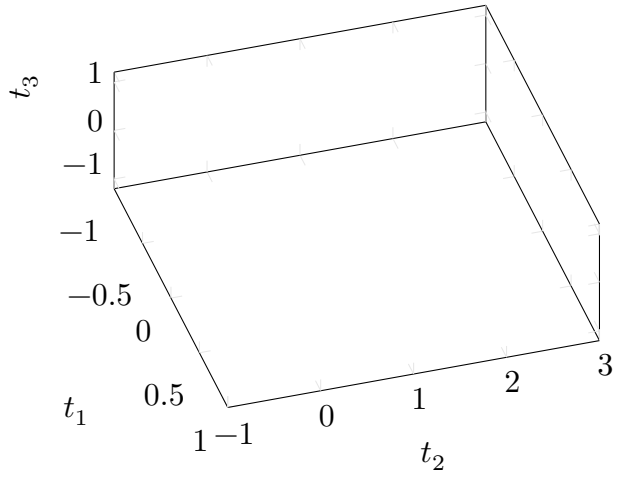
11.2.1 Placement of ticklabels

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



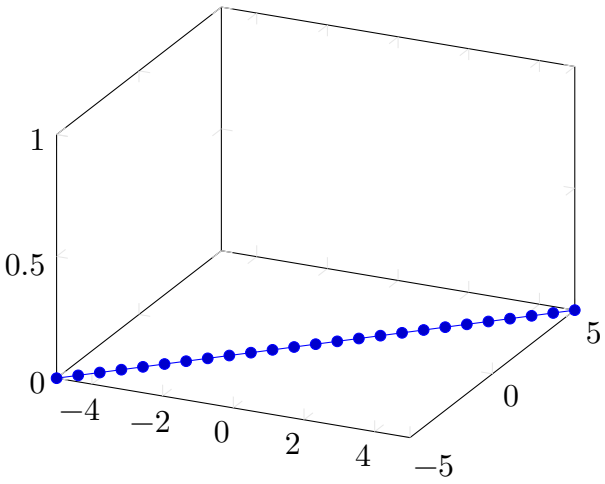


11.2.1.1 mit xticklabel shift=5pt

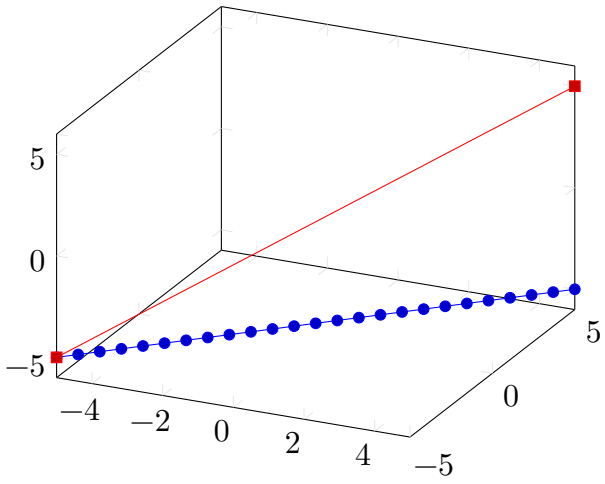


11.3 Sanity checking

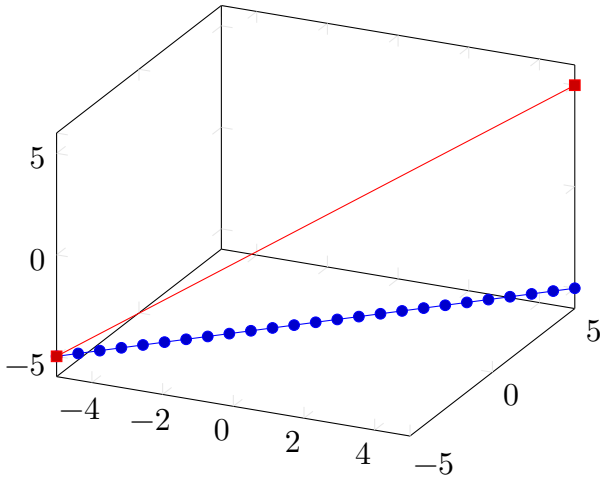
11.3.1 addplot in 3D axis



11.3.2 addplot and addplot3 in an axis



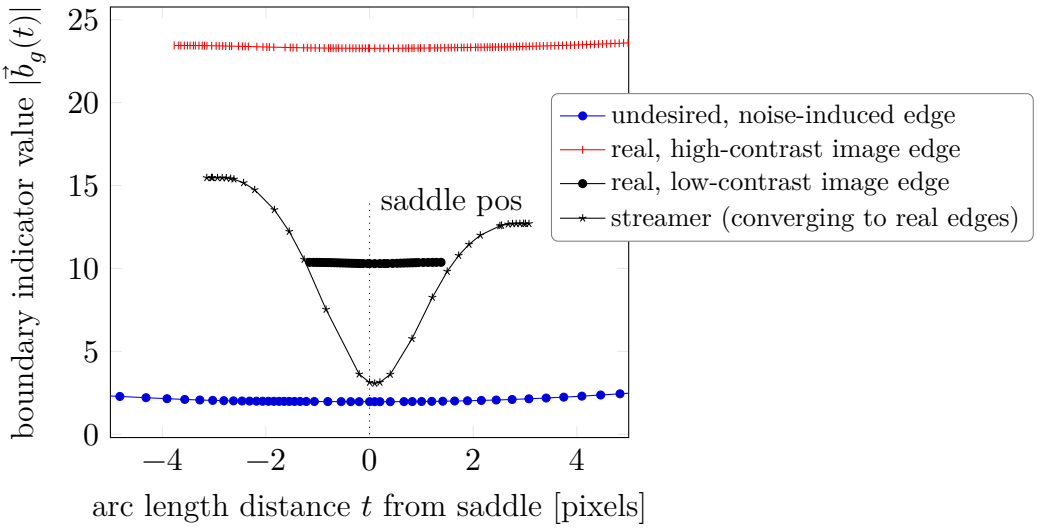
11.3.3 addplot and addplot3 in an axis



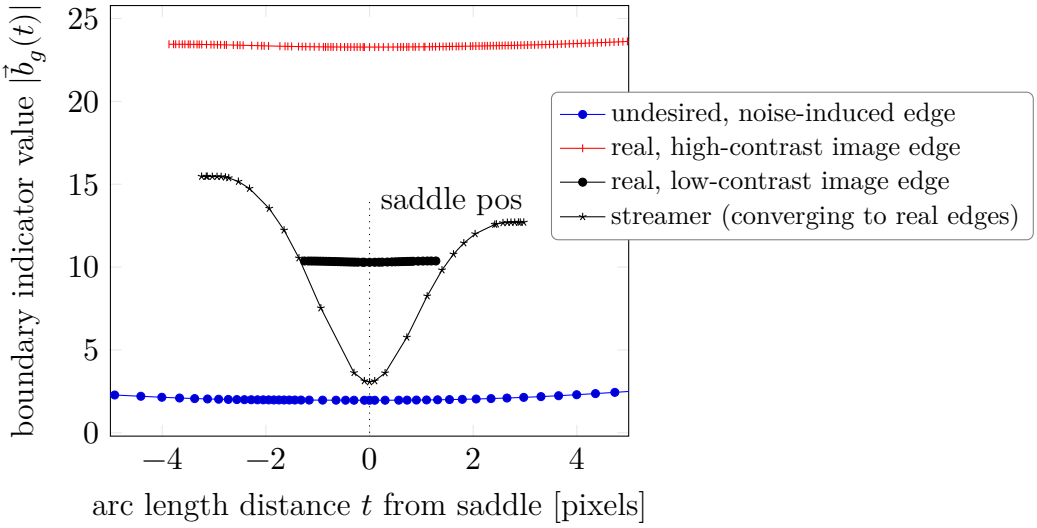
12 pgfplotstest.hansmeine_app.tex

12.1 Application example of Hans Meine

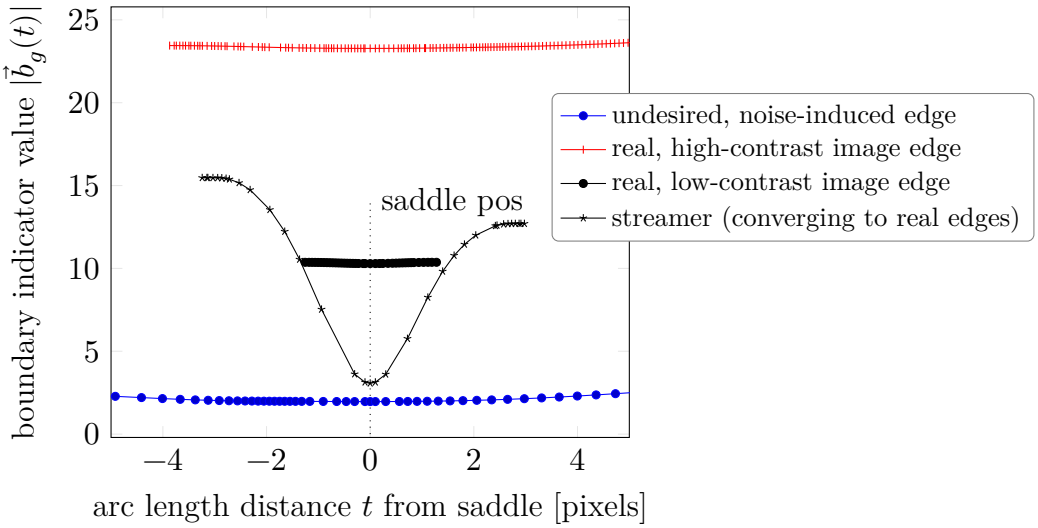
This example has been copied with permission from
http://kogs-www.informatik.uni-hamburg.de/ meine/tikz/plots.
Please note that the first plot's input data as it is found in the url above is slightly shifted compared to the other plots.



12.1.1 With plot file



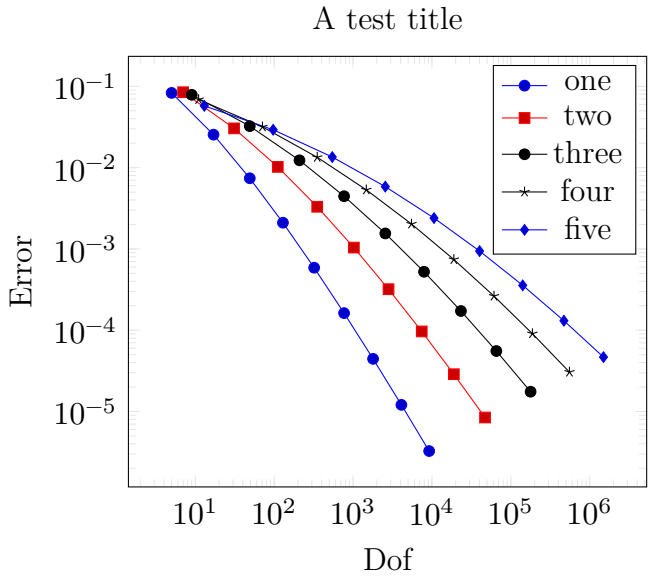
12.1.2 With plot file and restricted bounding box



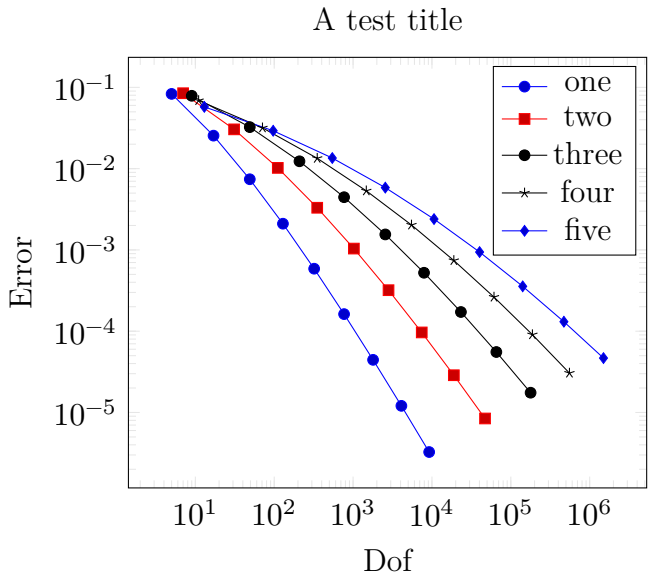
13 pgfplotstest.legend.tex

13.1 Legends

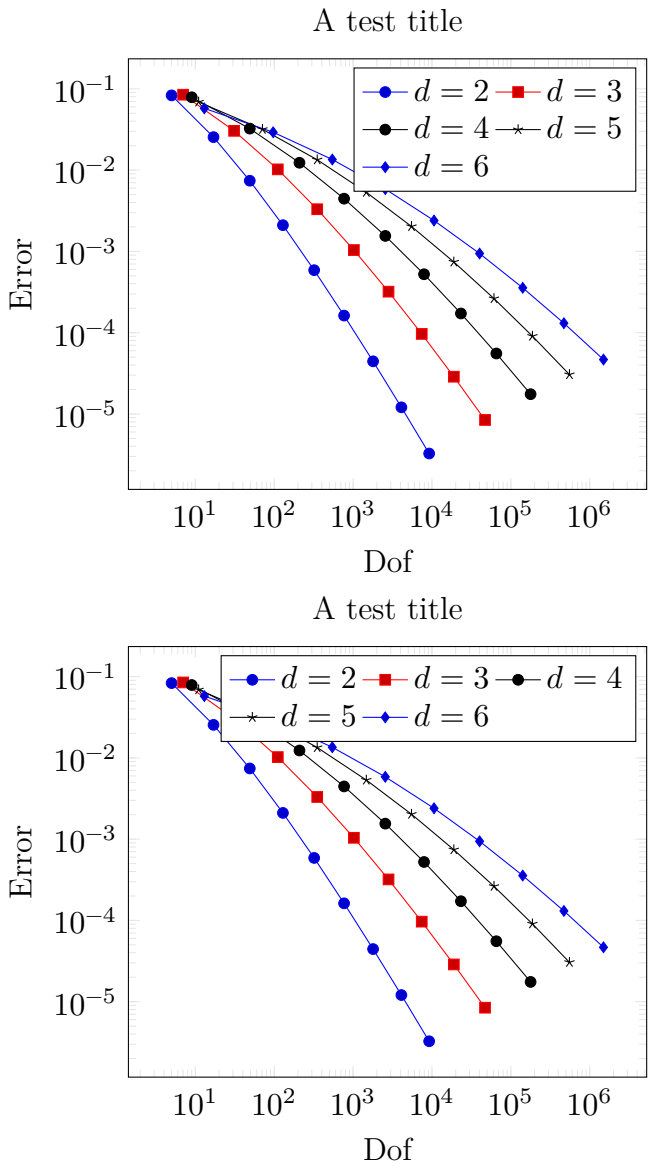
13.1.1 Old-format legends with two backslashes as separator

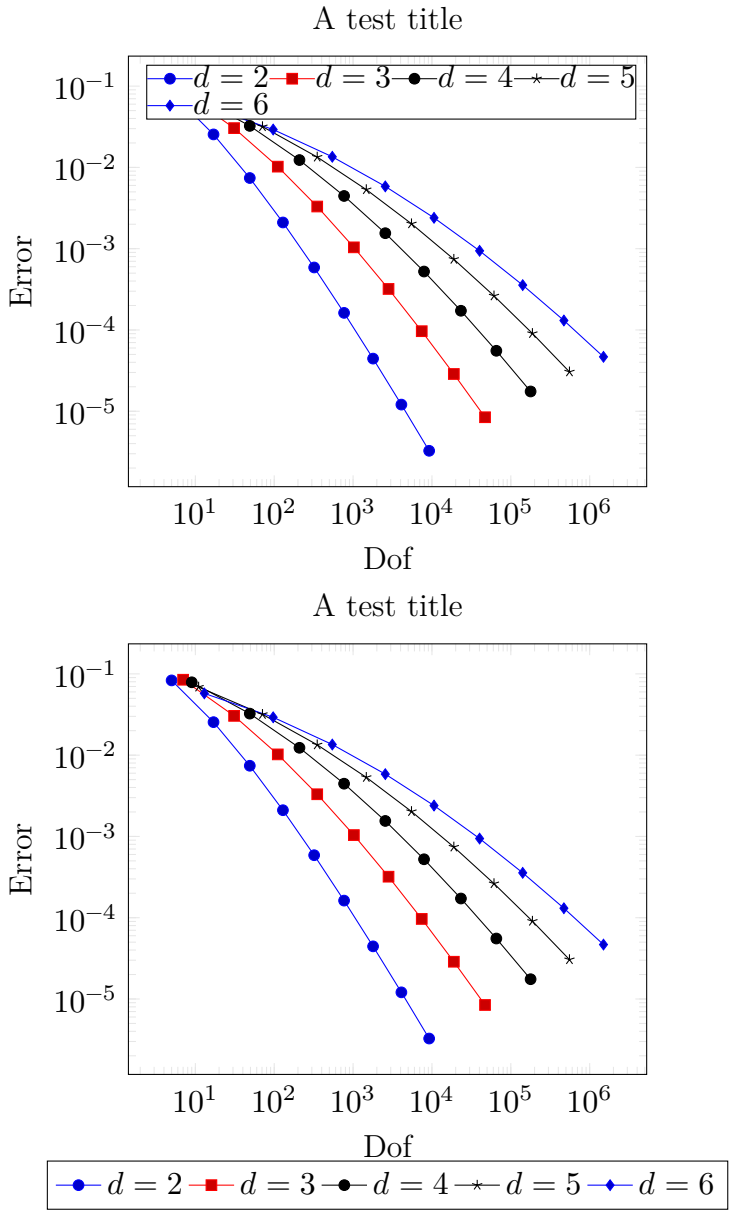


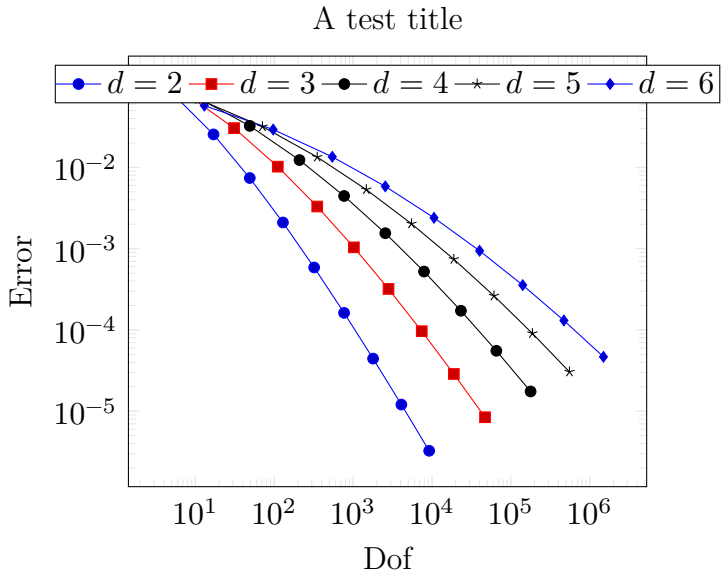
13.1.2 Using comma-separated-legends



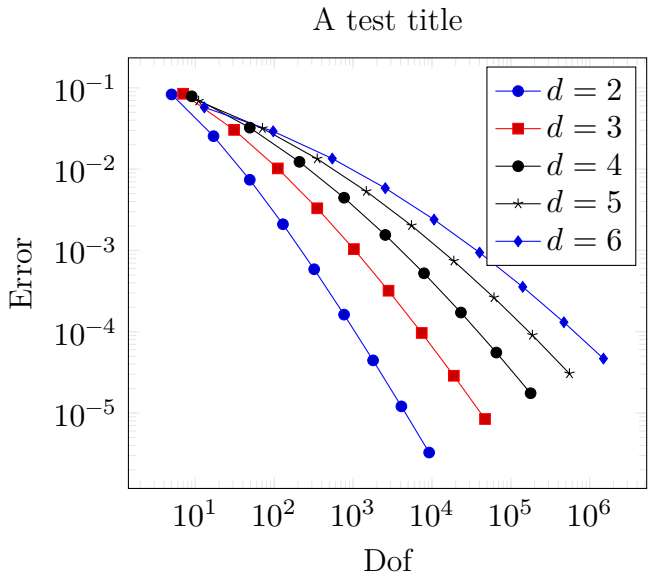
13.1.3 testing legend columns

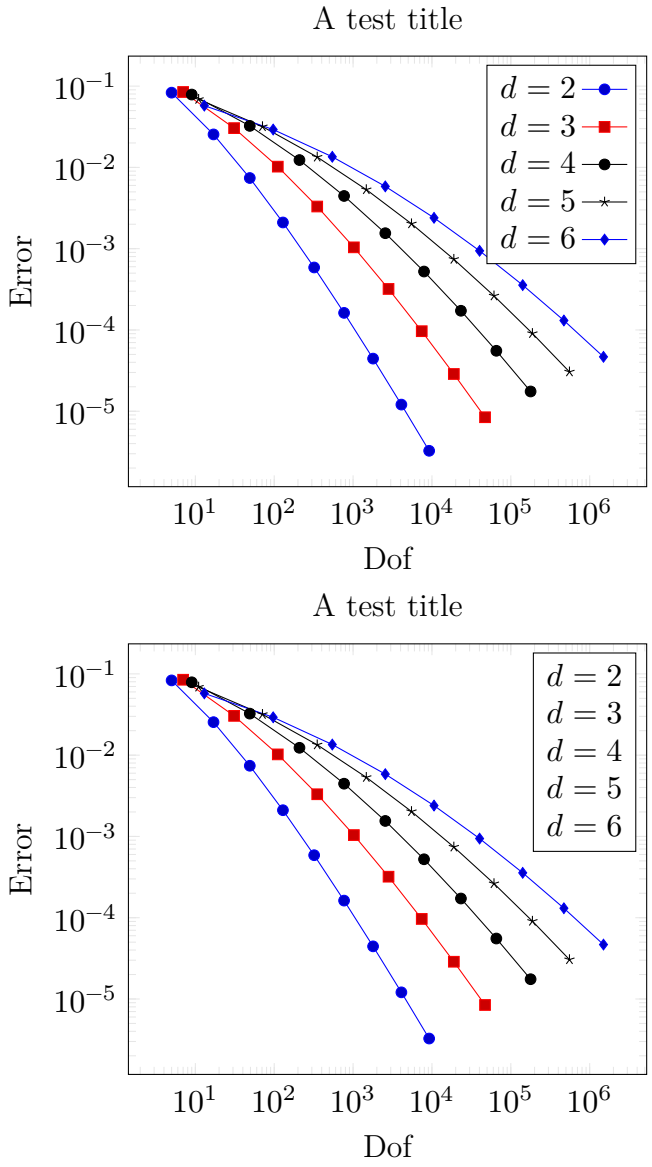



A test title
$d = 2$ $d = 3$ $d = 4$ $d = 5$
$d = 6$
Error
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6}
Dof
A test title
Error
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6}
Dof
$d = 2$ $d = 3$ $d = 4$ $d = 5$ $d = 6$



13.1.4 ``legend plot pos'' options




A test title
Error
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{1}
10^{2}
10^{3}
10^{4}
10^{5}
10^{6}
Dof
$d = 2$
$d = 3$
$d = 4$
$d = 5$
$d = 6$

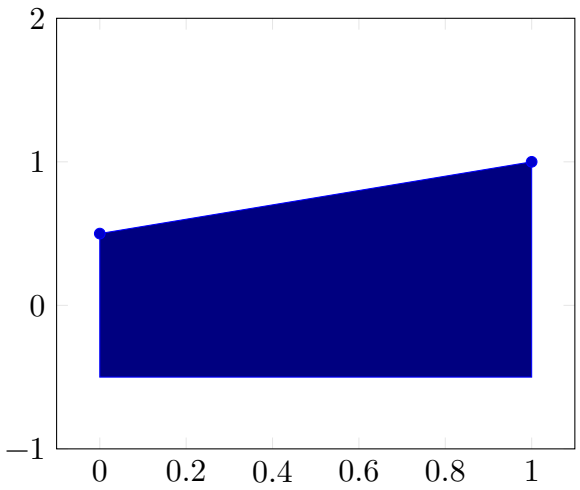
A test title
Error
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{1}
10^{2}
10^{3}
10^{4}
10^{5}
10^{6}
Dof
$d = 2$
$d = 3$
$d = 4$
$d = 5$
$d = 6$

14 pgfplotstest.misc.tex

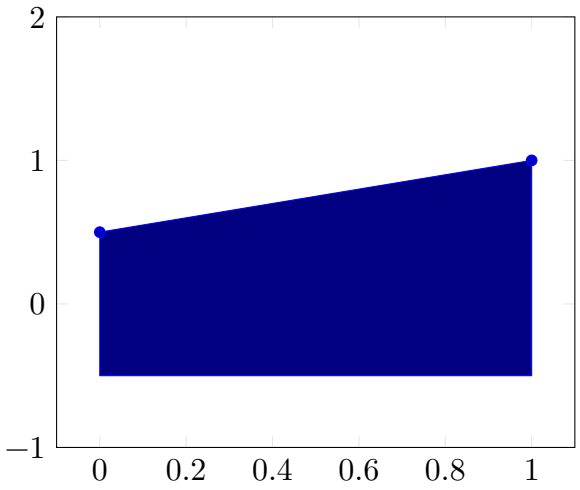
14.1 Paths after addplot

14.1.1 plot coordinates

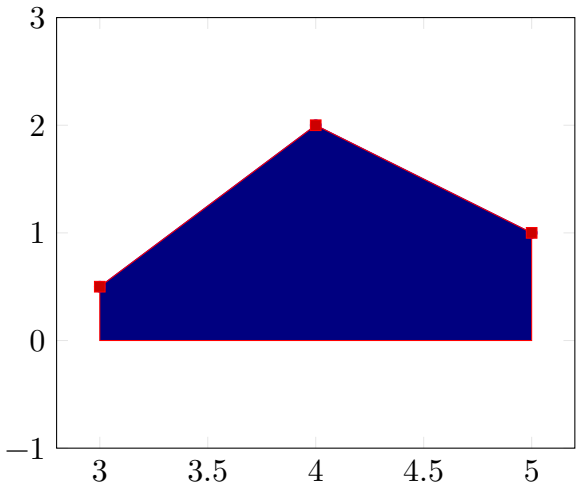
14.1.1.1 without space after 'coordinates'



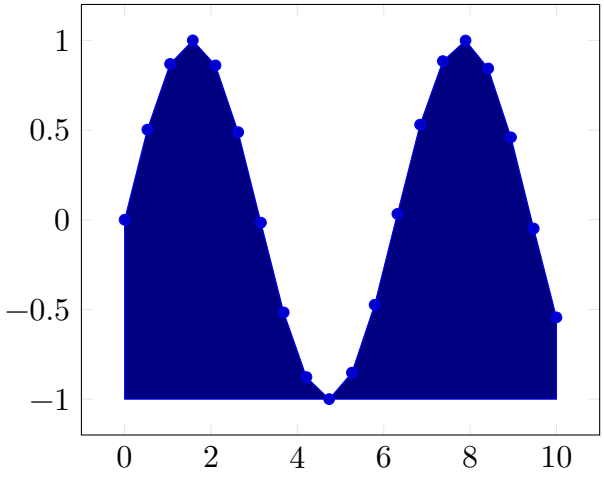
14.1.1.2 with space after 'coordinates'



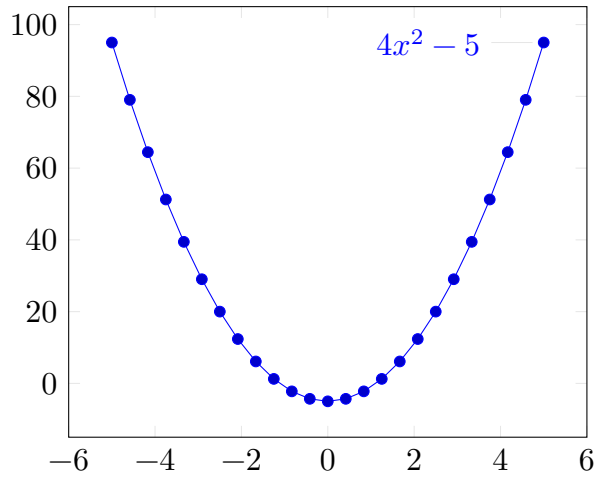
14.1.1.3 using closedcycle path



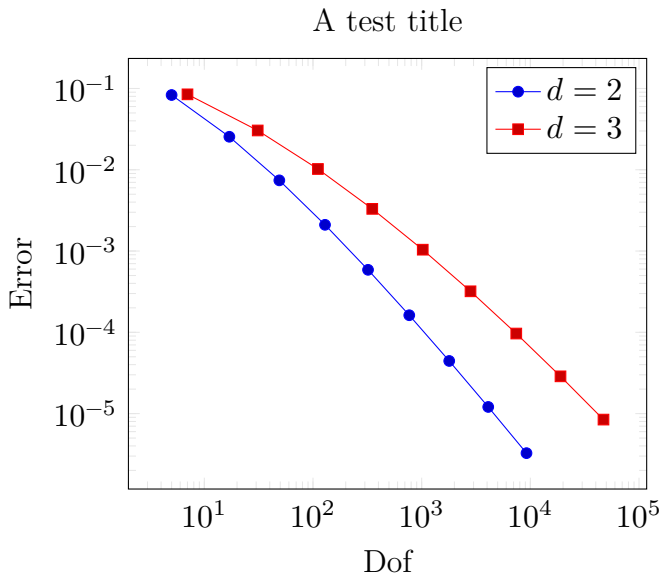
14.1.2 plot table



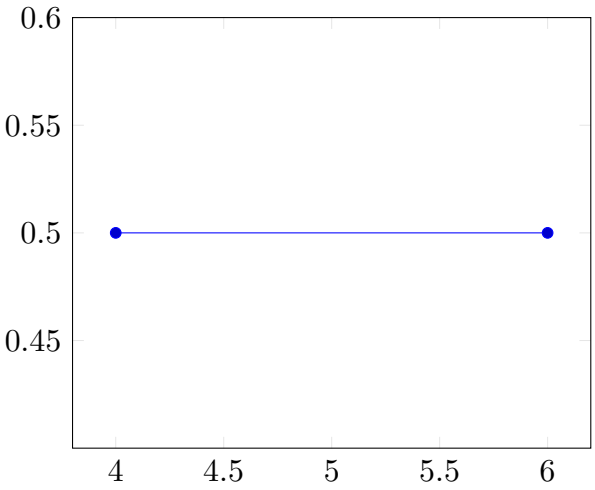
14.1.3 plot function

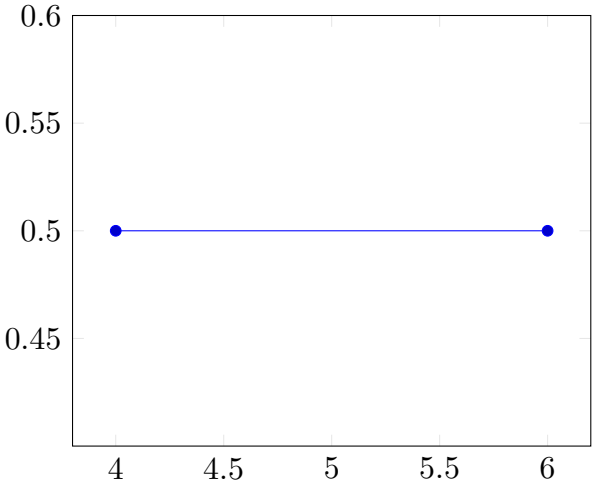


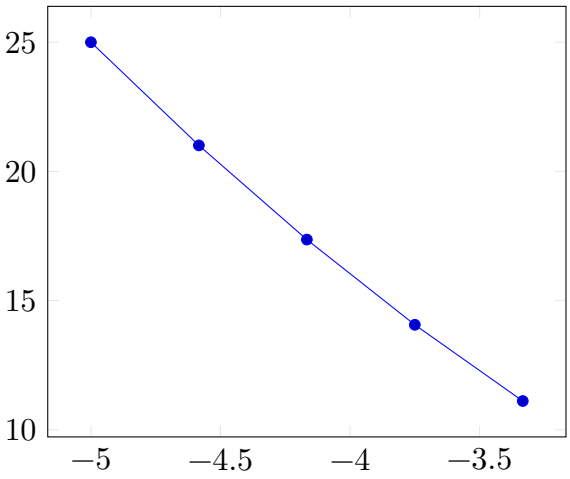
14.2 Title-option



14.3 Filter test

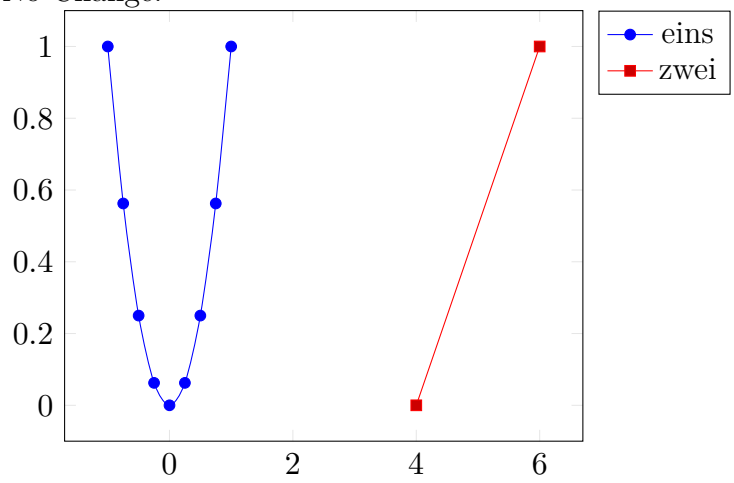




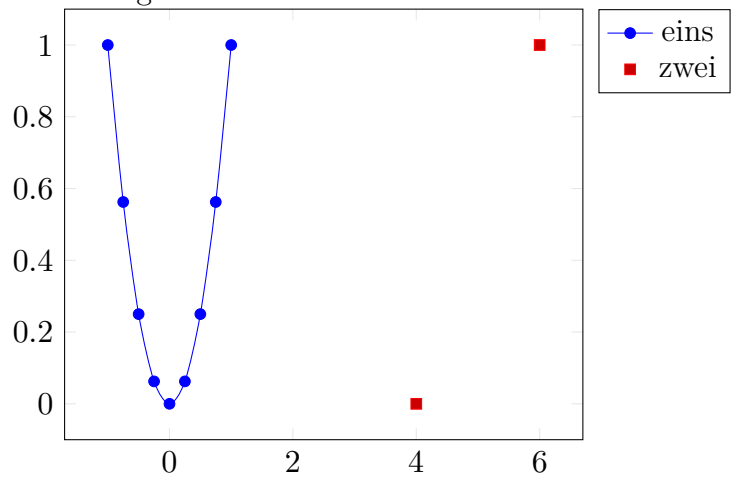


14.4 Test for addplot+[...]

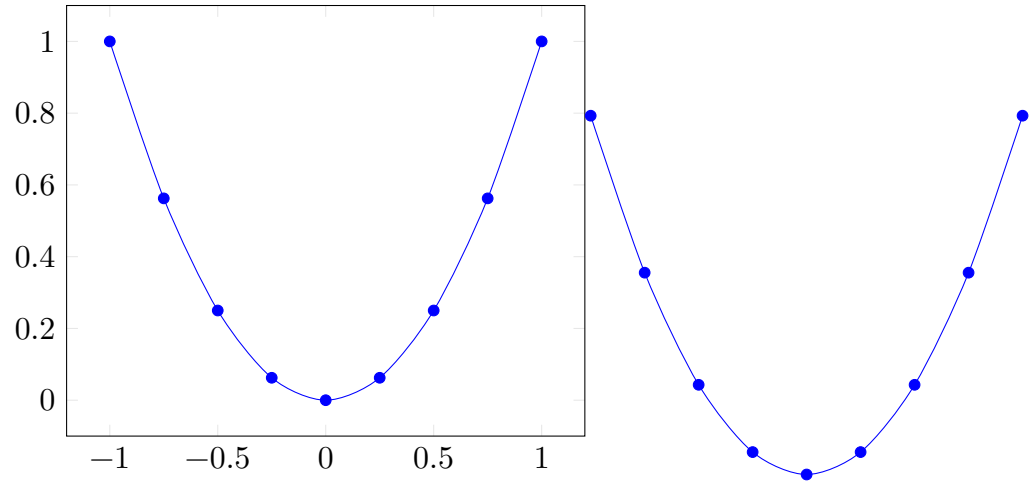
No Change:



with change:

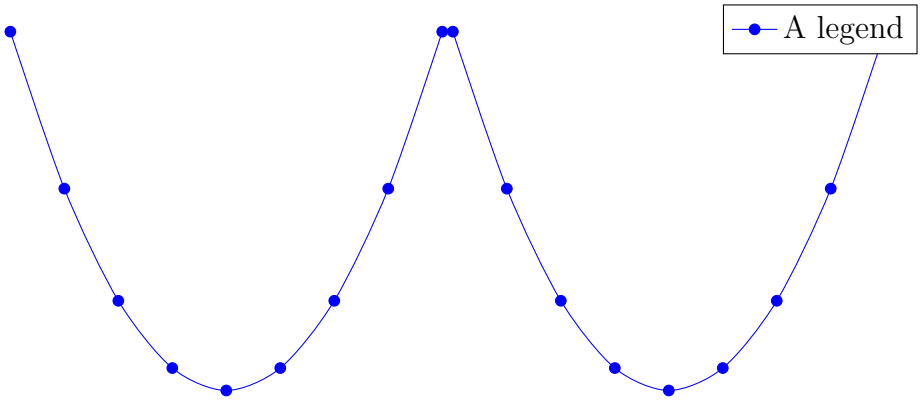


14.5 Hide axis test



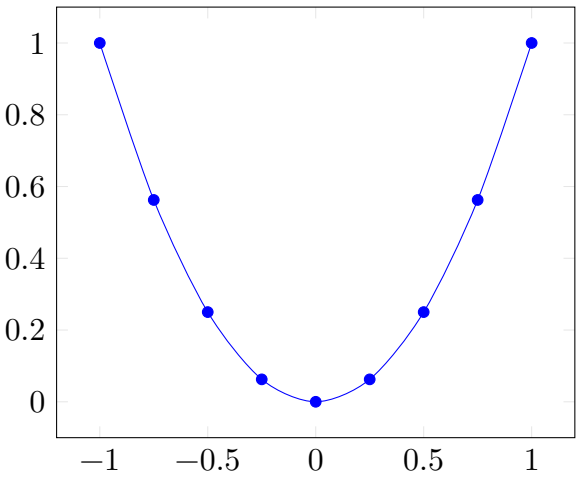
A plot with hidden axis

A plot with hidden axis

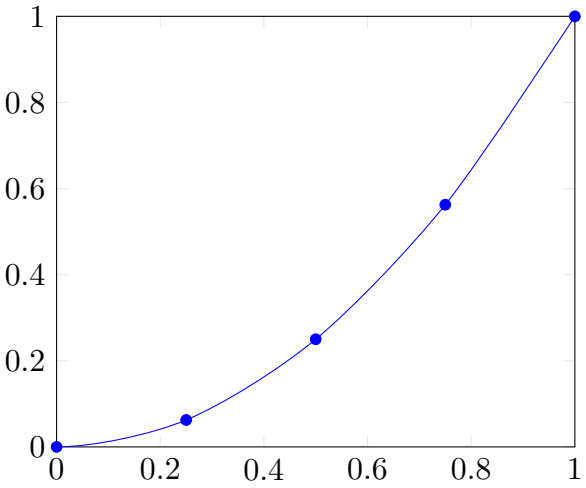


14.6 disabledatascaling / disablelogfilter

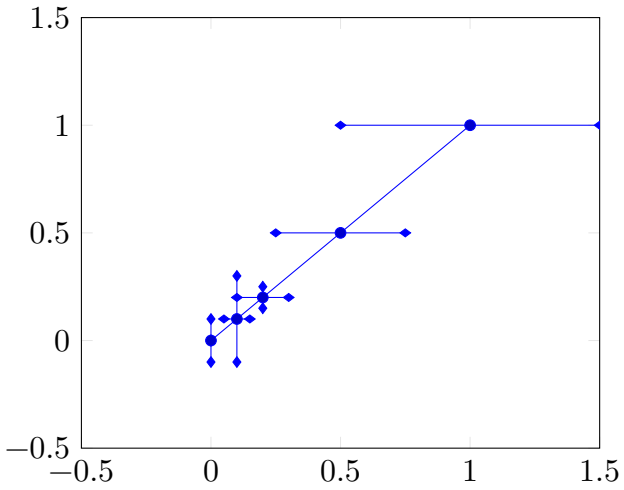
14.6.1 disabledatascaling



14.6.2 disabledatascaling + explicit limits



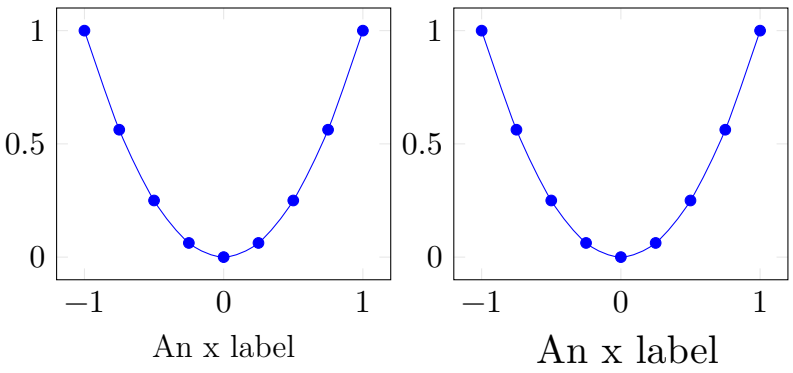
14.6.3 disabledatascaling + explicit limits + error bars



15 pgfplotstest.align.tex

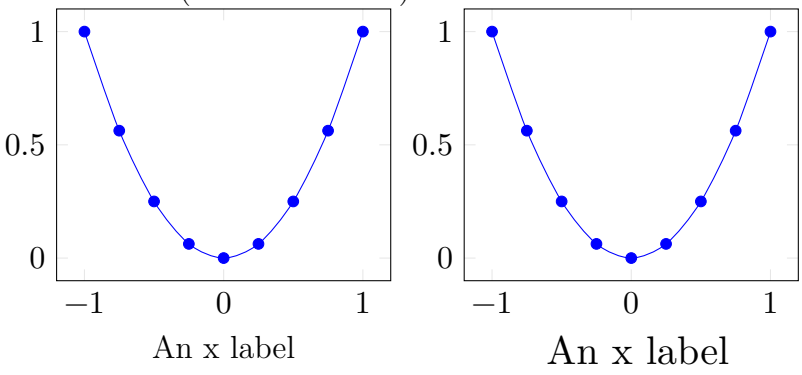
15.1 Anchors, alignment, baselines, sub nodes

15.1.1 Baseline alignment

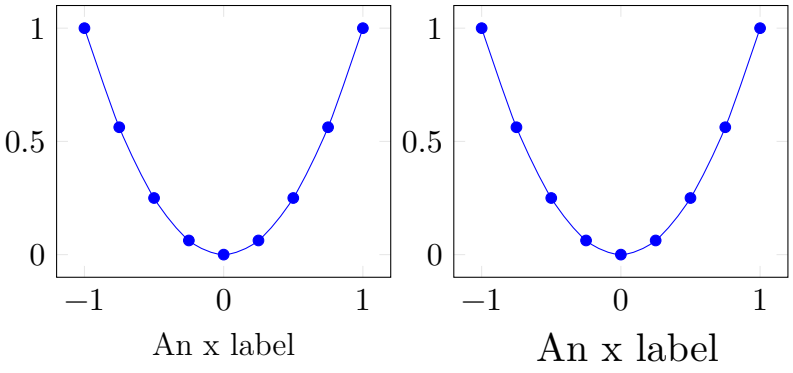


15.1.2 Baseline alignment and externalized graphics

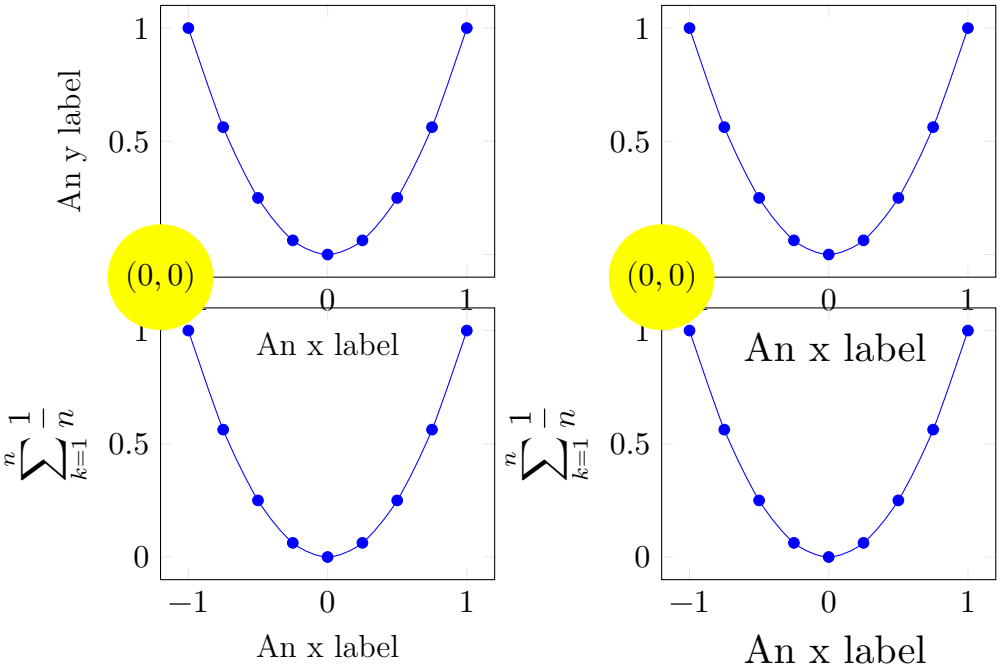
One needs `beginpgfgraphicnamed` around the complete paragraph, so this here doesn't work (see source code):



15.1.3 Baseline alignment and externalized graphics II

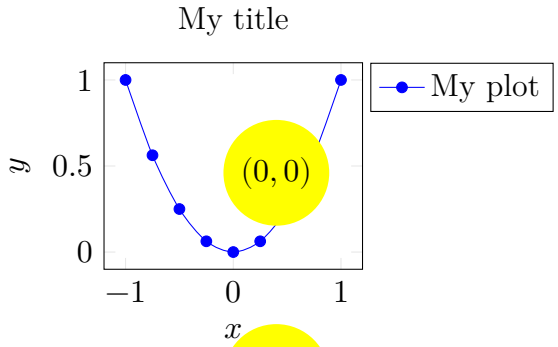


15.1.4 Horizontal and Vertical alignment

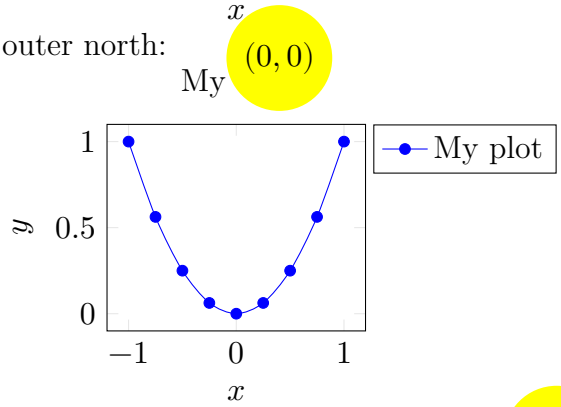


15.1.5 Anchortest

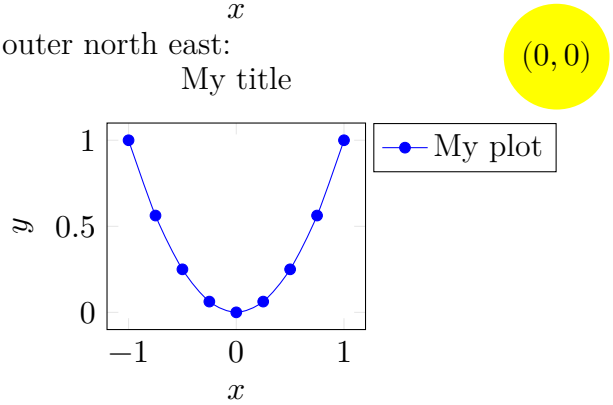
outer center:



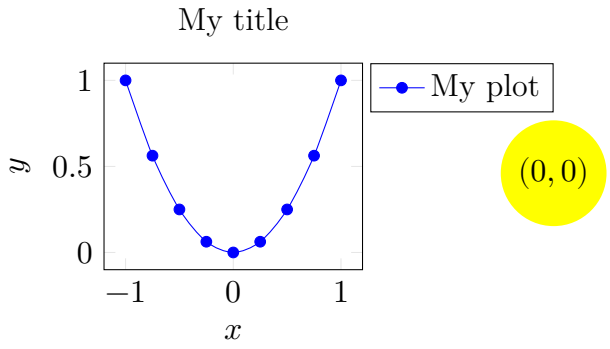
outer north:



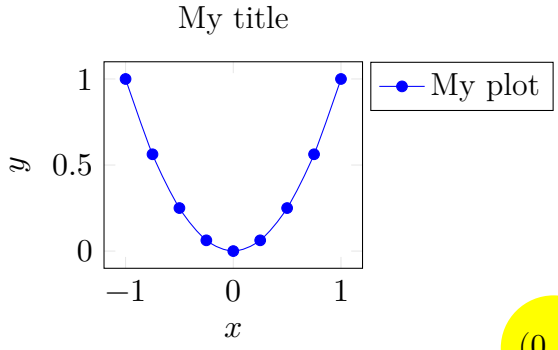
outer north east:



outer east:

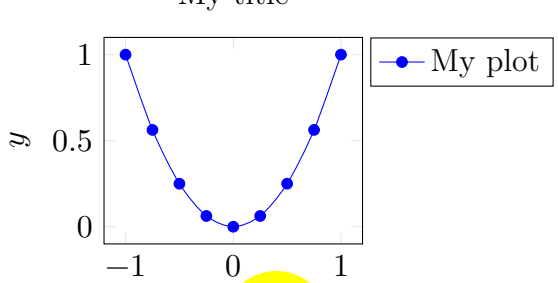


outer south east:



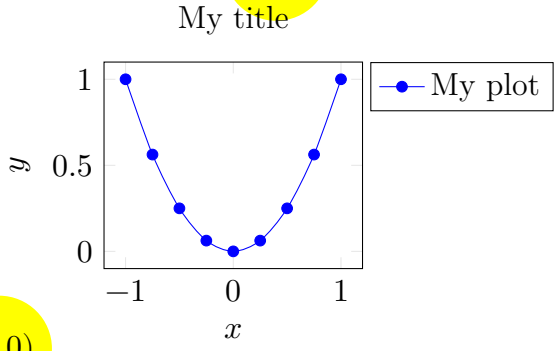
(0, 0)

outer south:



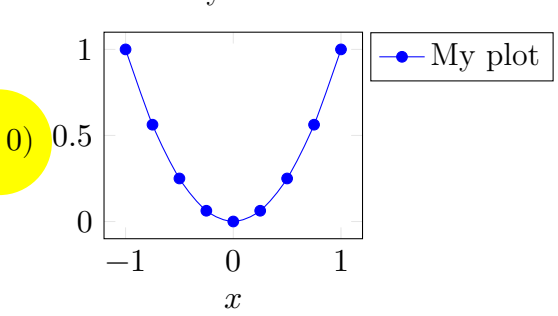
(0, 0)

outer south west:



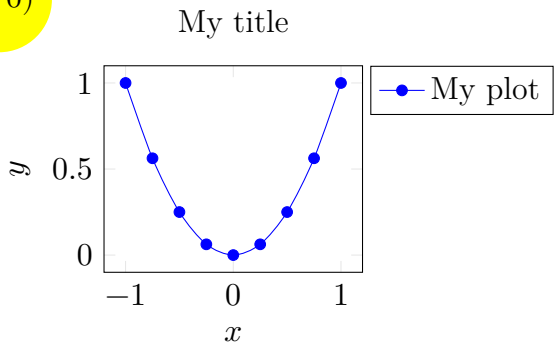
(0, 0)

outer west:

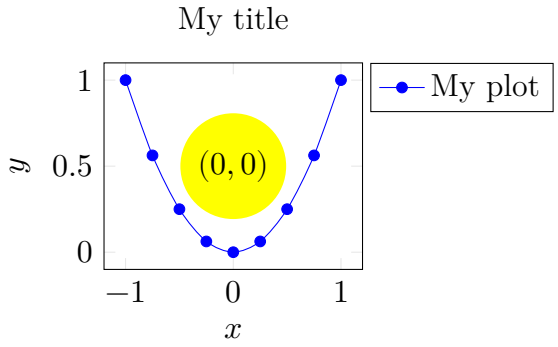


(0, 0)

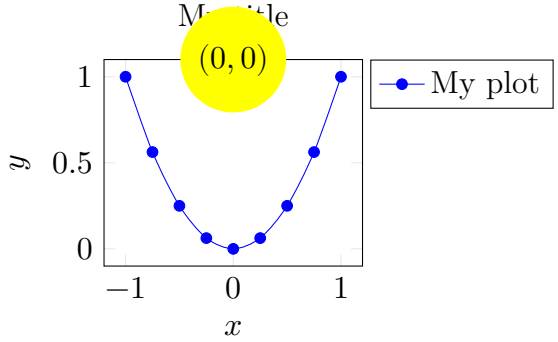
(0, 0) er north west:



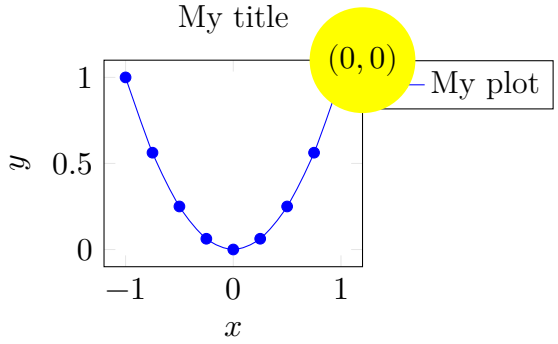
center:



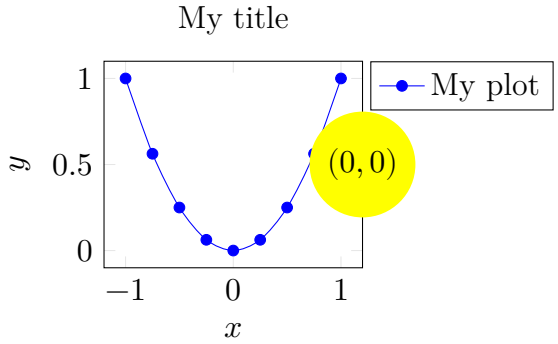
north:



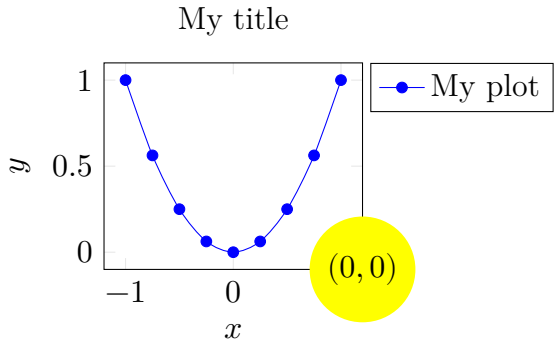
north east:



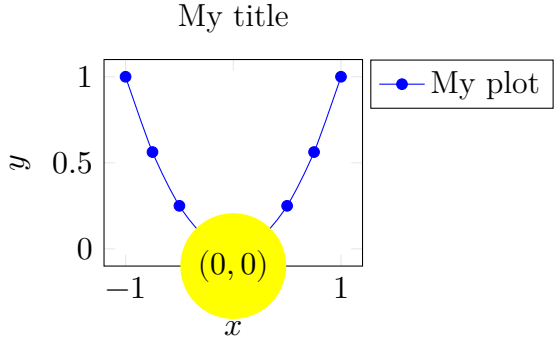
east:



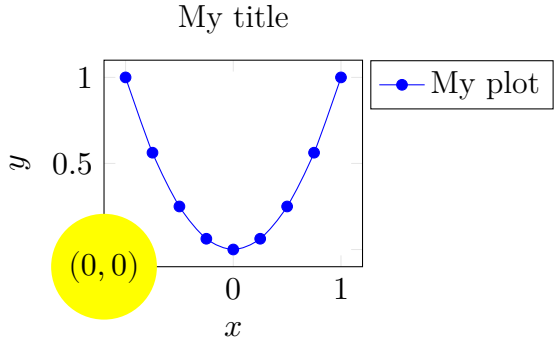
south east:



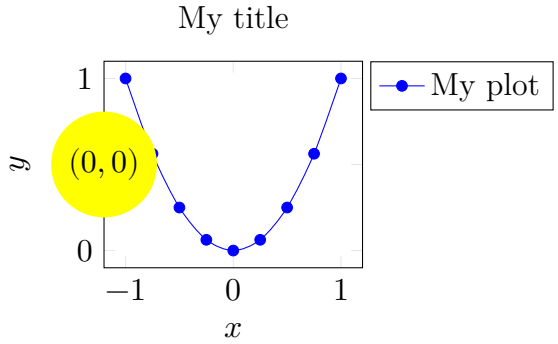
south:



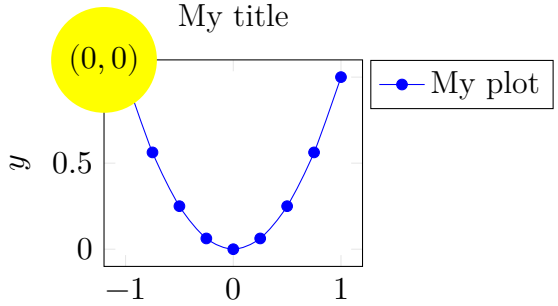
south west:



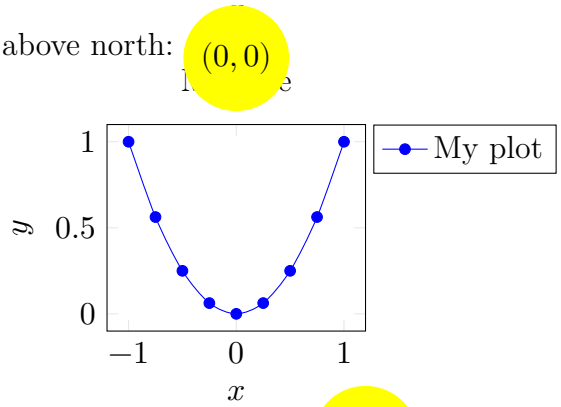
west:



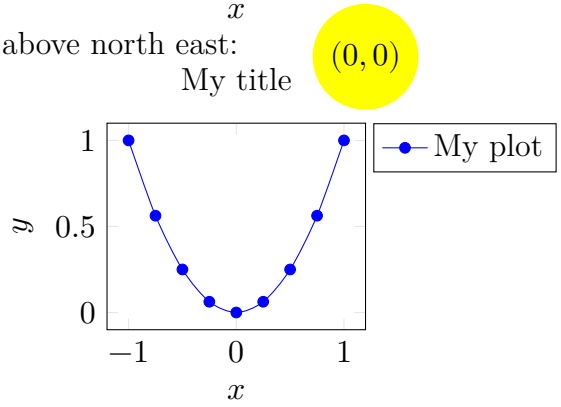
north west:



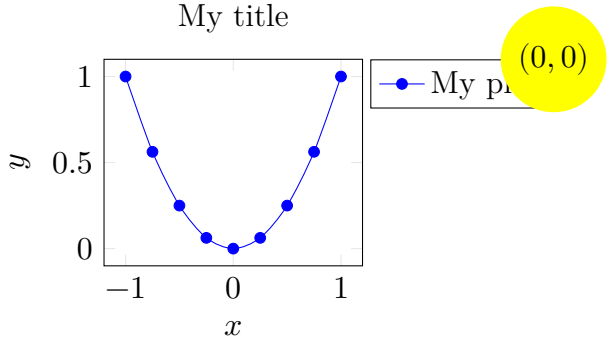
above north:



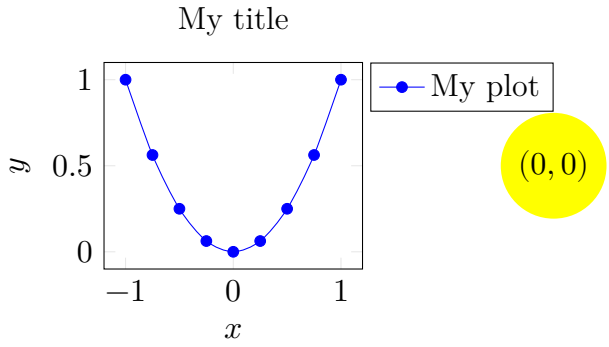
above north east:



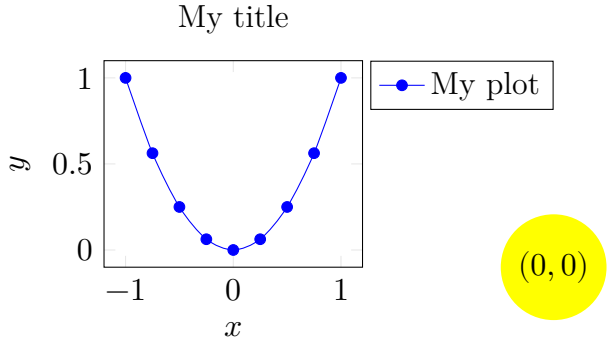
right of north east:



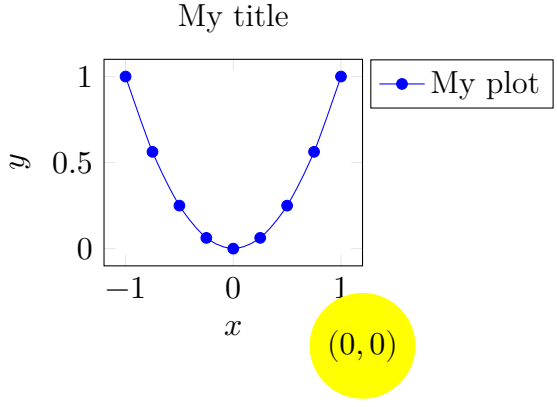
right of east:



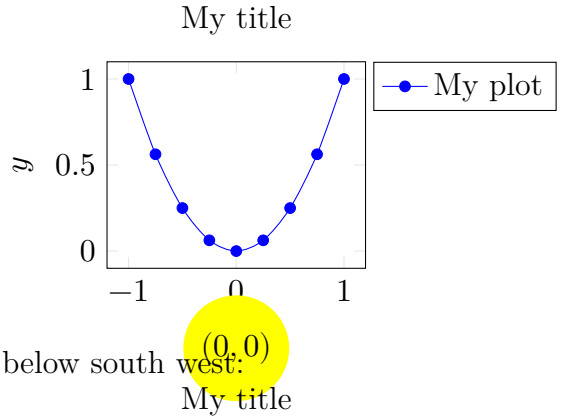
right of south east:



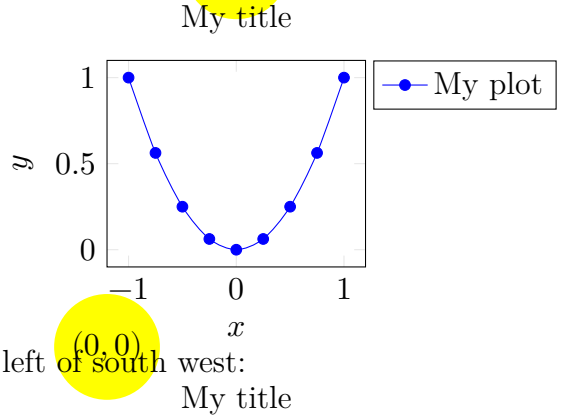
below south east:



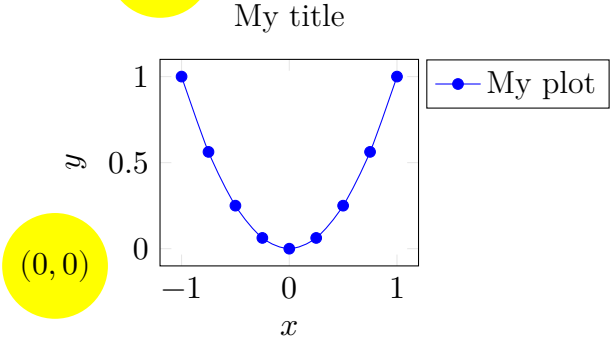
below south:



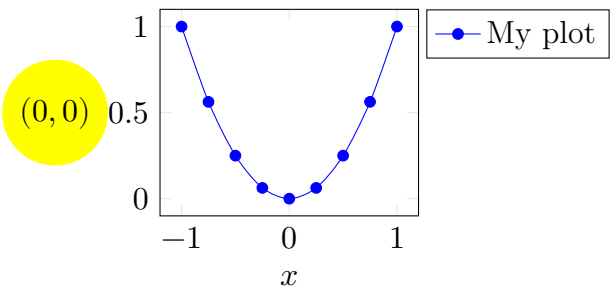
below south west:



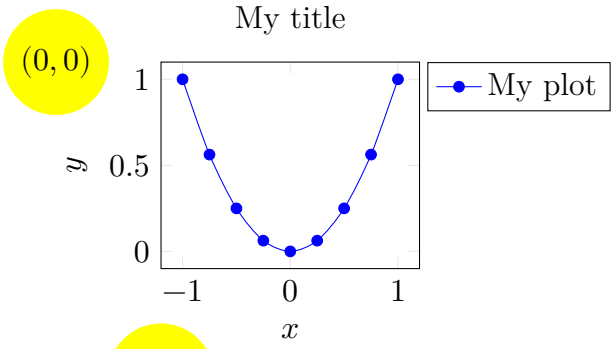
left of south west:



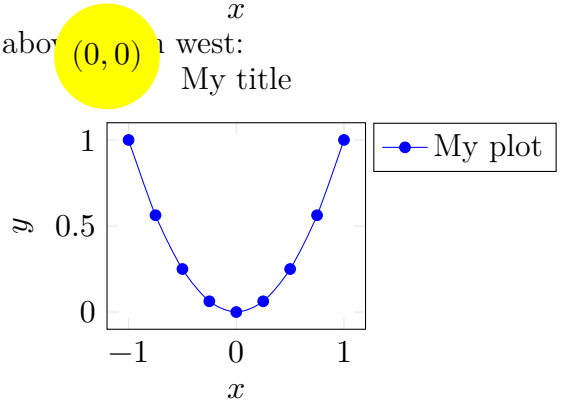
left of west:



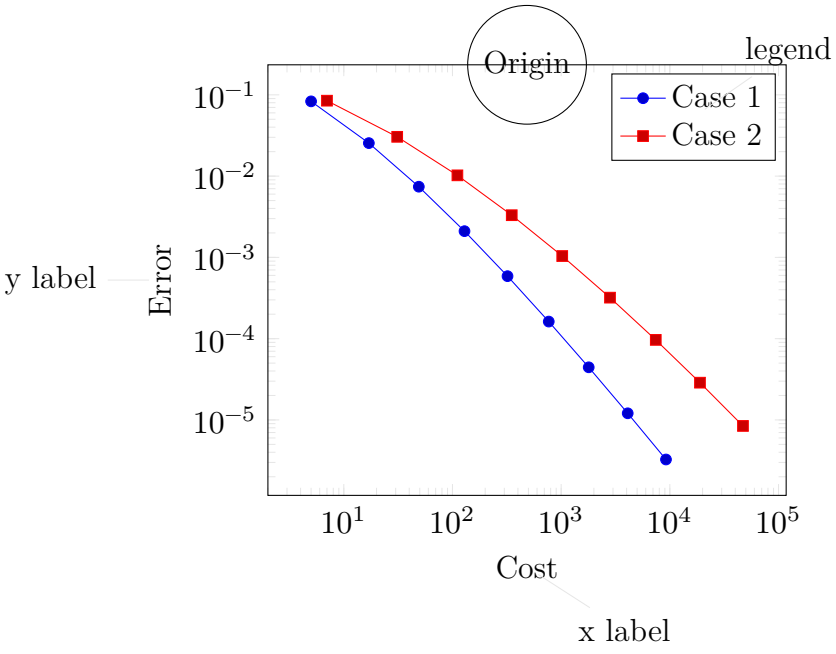
left of north west:



abo (0, 0) west:



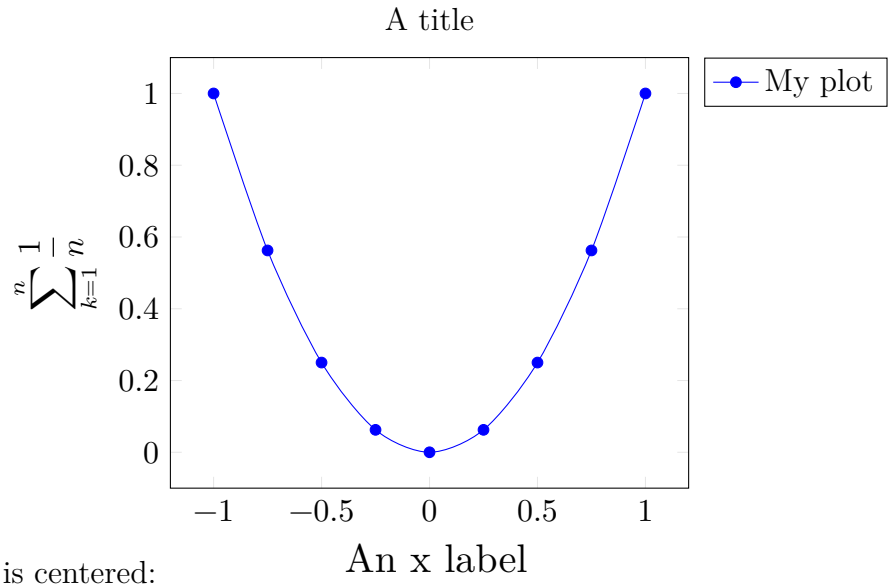
15.1.6 Accessing sub-nodes



15.1.7 Funny bounding boxes

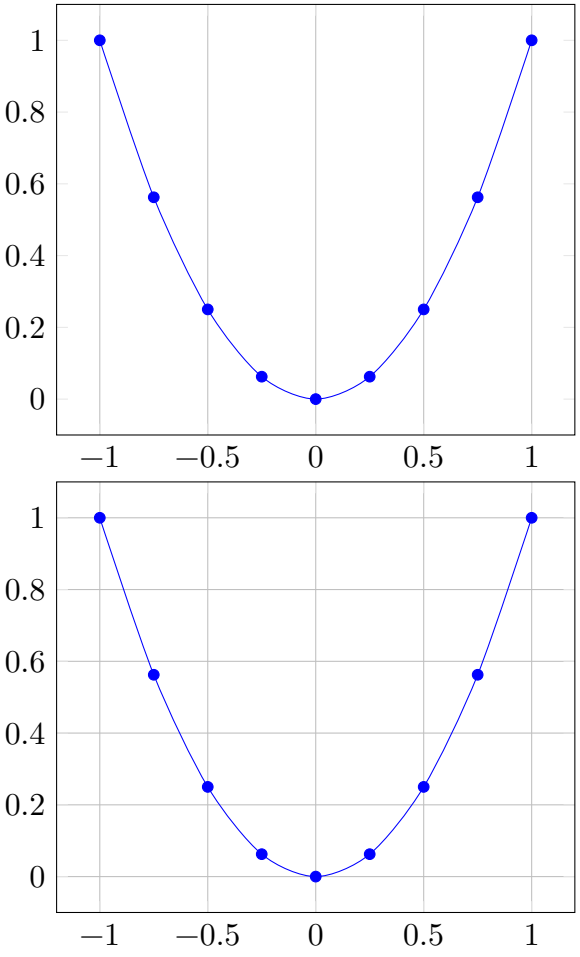
15.1.7.1 (my plot.below south west) rectangle (my plot.above north east)

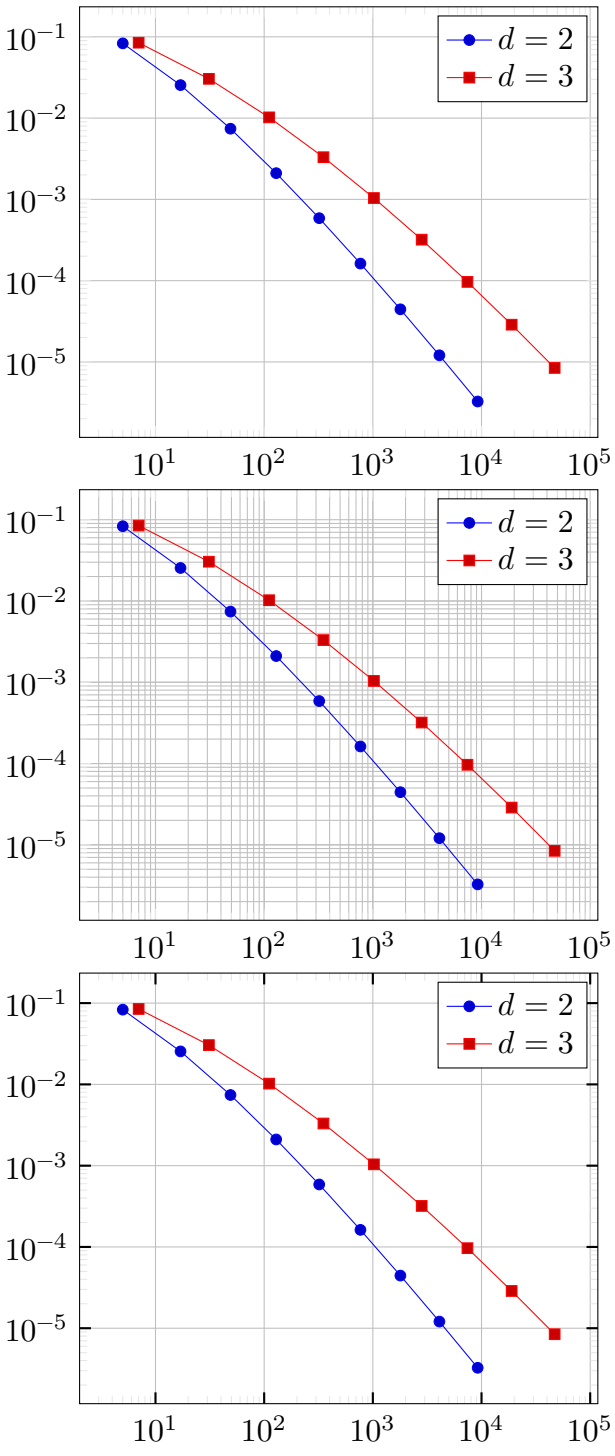
The following figure is centered:

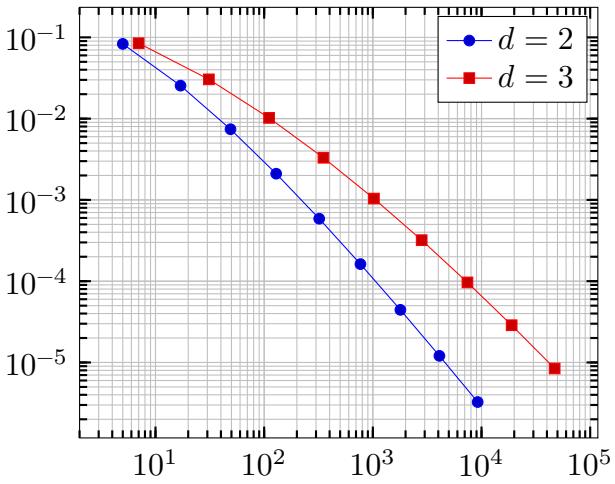


16 pgfplotstest.gridtick.tex

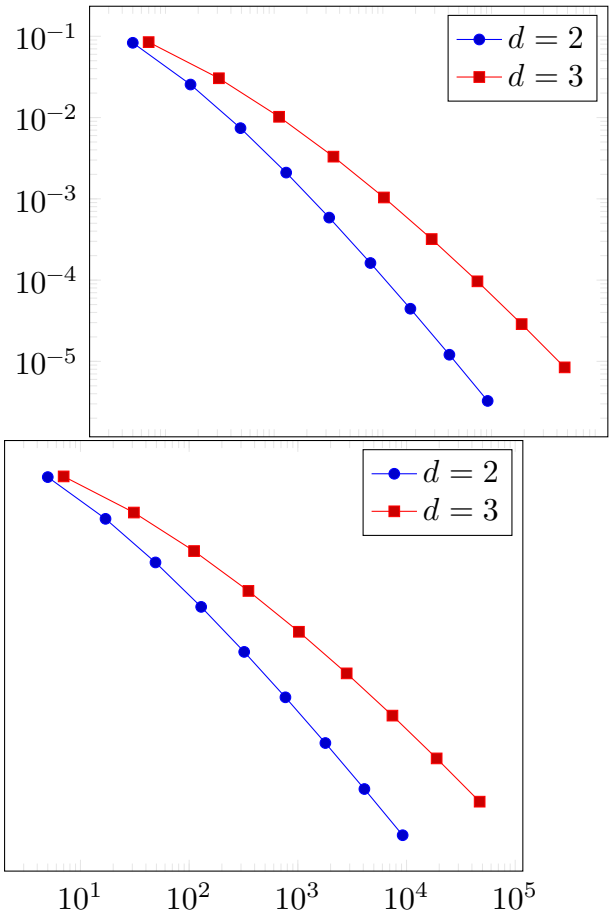
16.1 Grid lines test

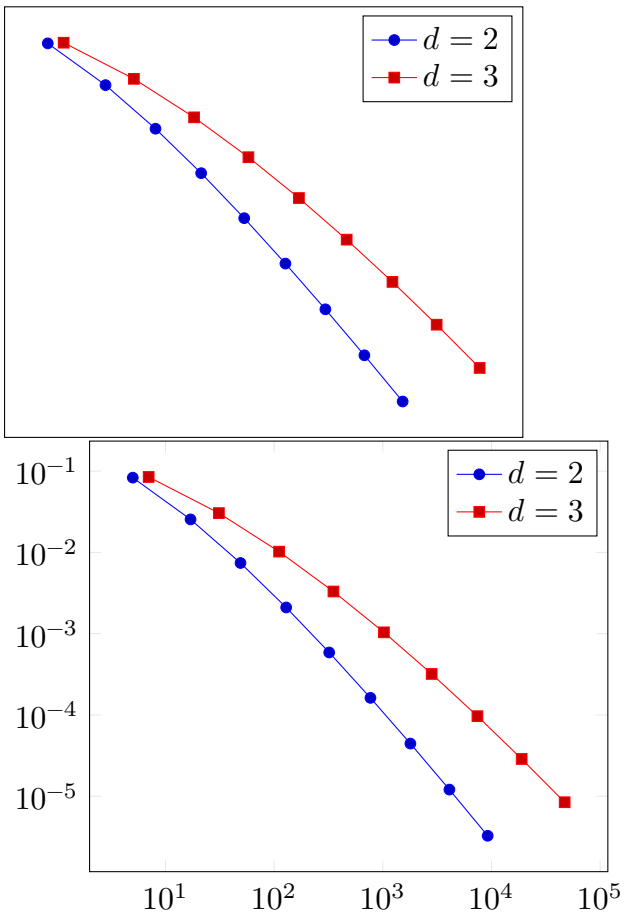



10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{1}
10^{2}
10^{3}
10^{4}
10^{5}
$d = 2$
$d = 3$

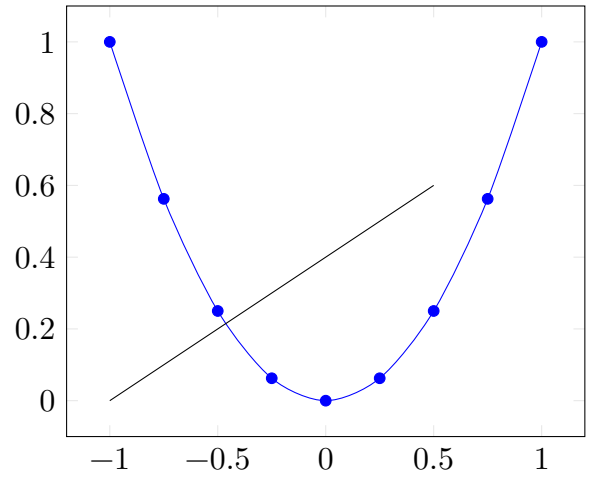


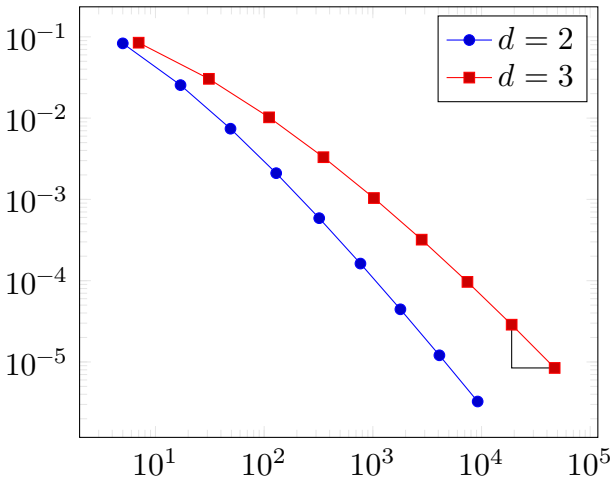
16.2 Tick lines test





16.3 TikZ-coordinate system ``axis''

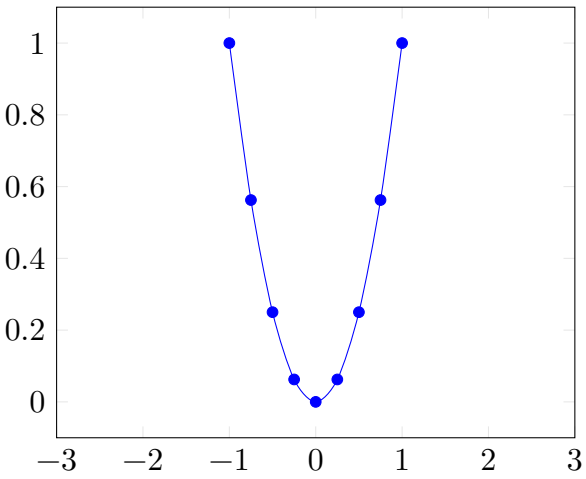



10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{1}
10^{2}
10^{3}
10^{4}
10^{5}
$d = 2$
$d = 3$

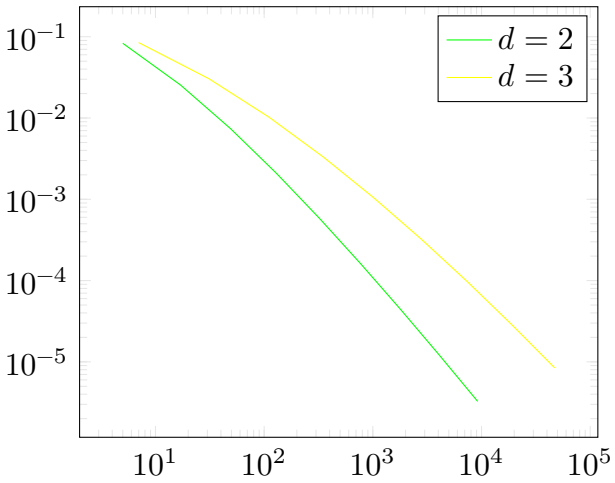
17 pgfplotstest.styles.tex

17.1 Style–tests

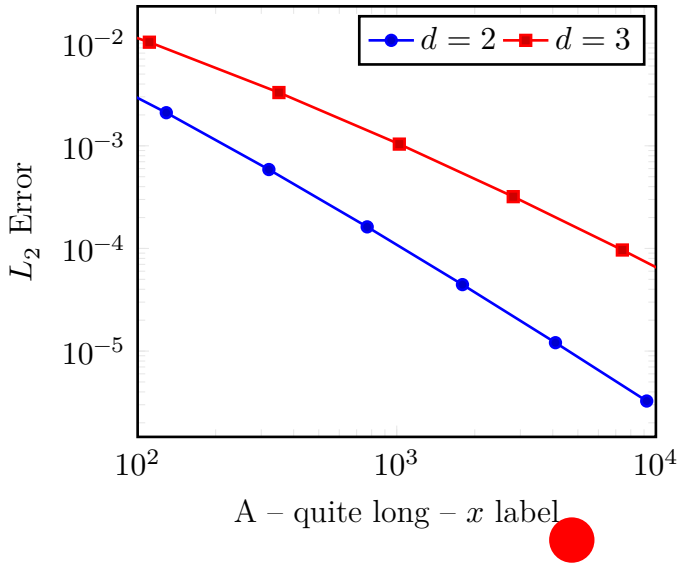
17.1.1 Limits in `every axis'; `cycle list' option and `cycle list name' option



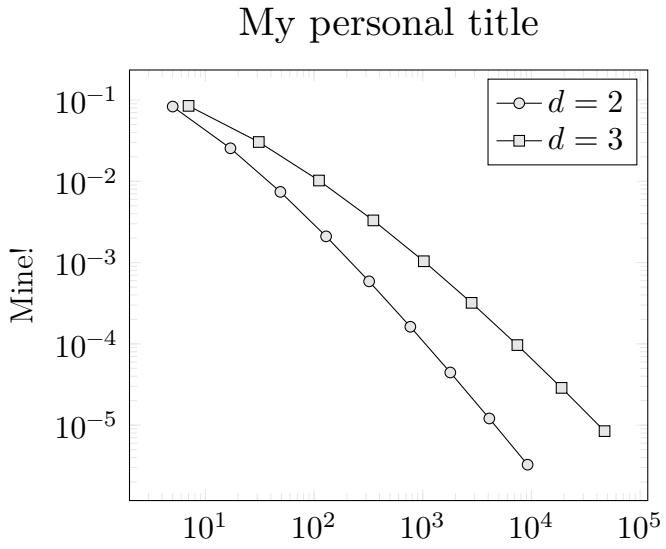
17.1.2 testing `every loglog axis' style



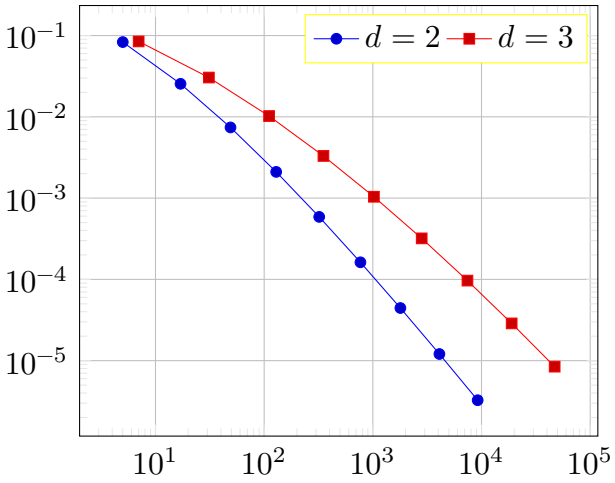
17.1.3 Using several `every ...' styles



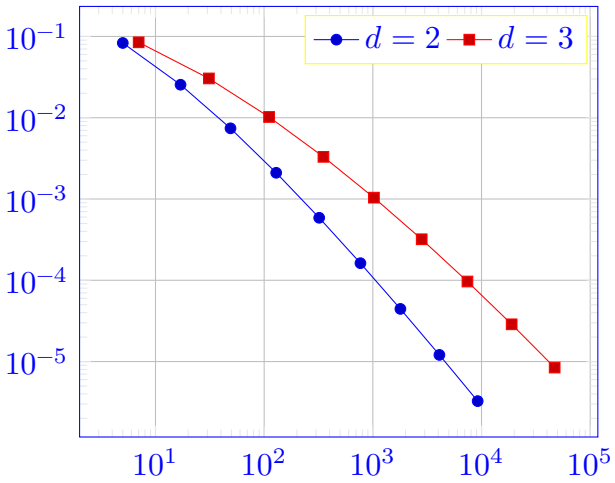
17.1.4 Using the `style=' option

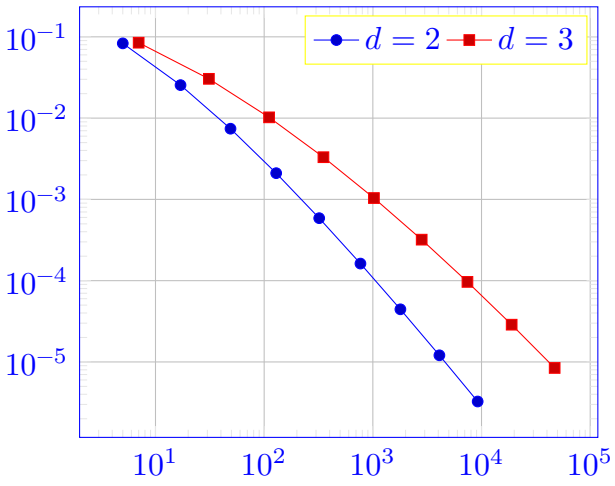


17.1.5 legend style, grid style, x label style etc. options

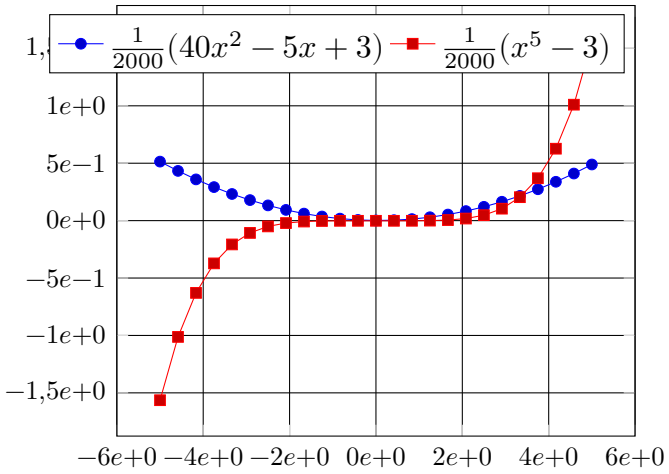


17.1.6 Providing TikZ-options to either tikzpicture or axis

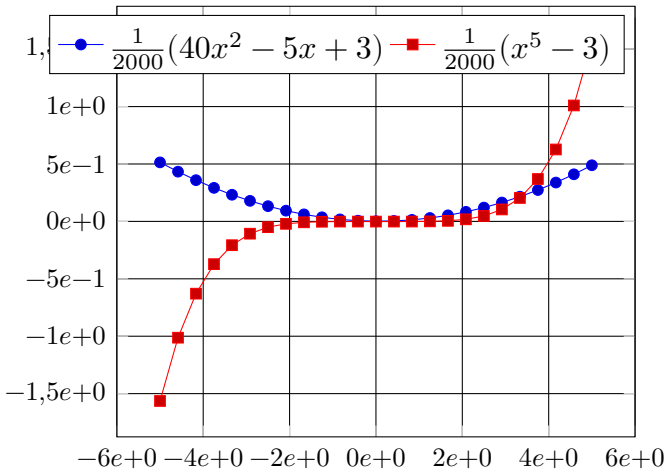



$d = 2$
$d = 3$
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{1}
10^{2}
10^{3}
10^{4}
10^{5}

17.1.7 Collecting many options together

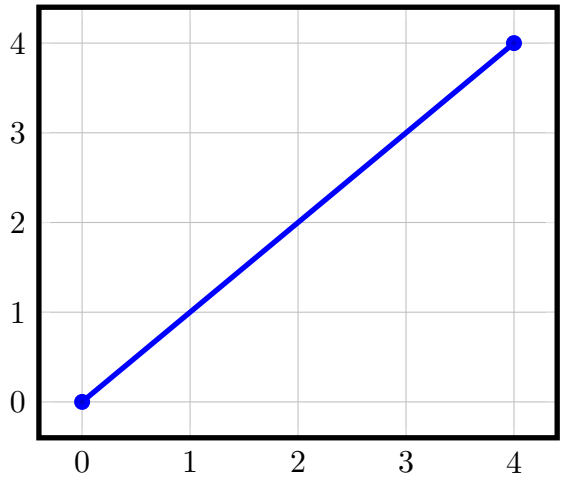


17.1.7.1 Putting the same options into a style...

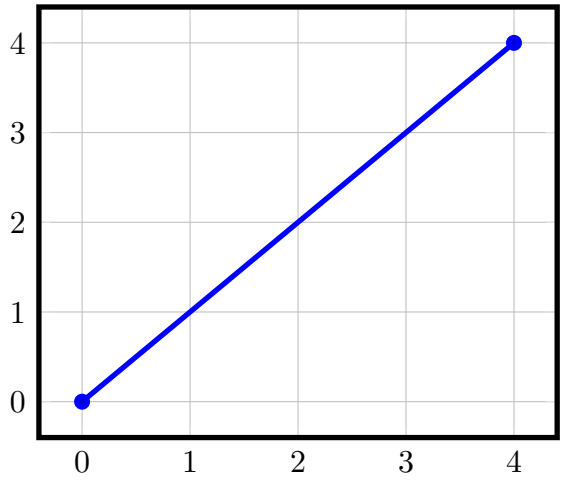


17.1.8 Line width

17.1.8.1 2pt global

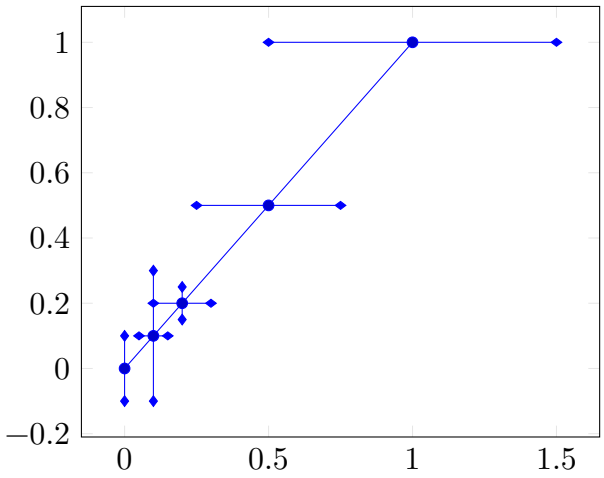


17.1.8.2 2pt in every axis

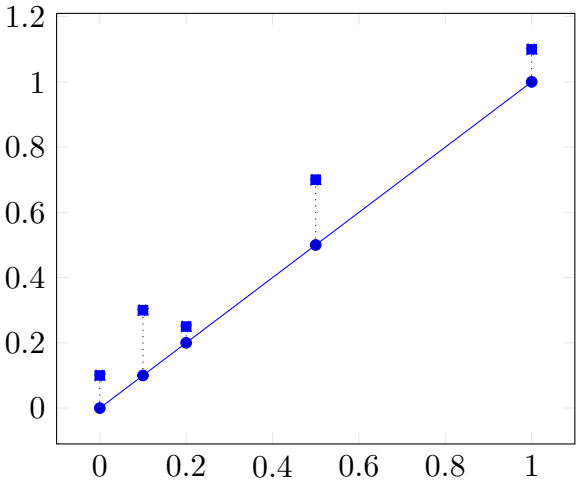


18 pgfplotstest.errorbars.tex

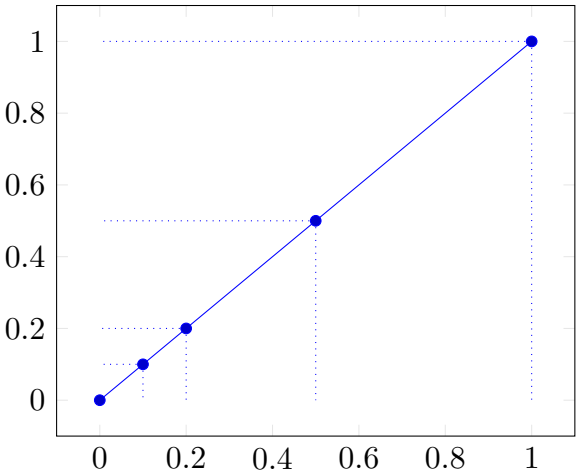
18.1 Errorbars



1 changing styles

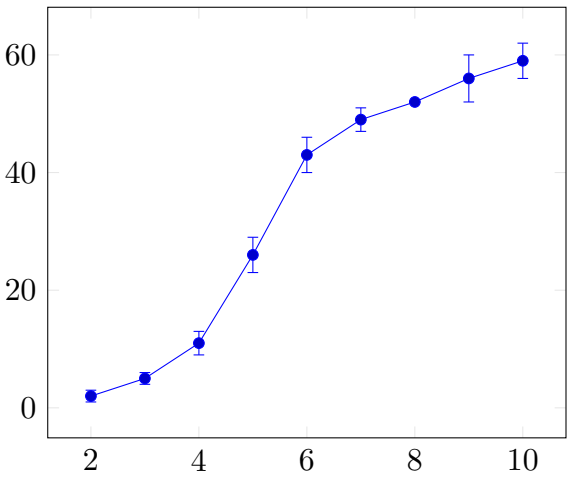


2 using 100% minus



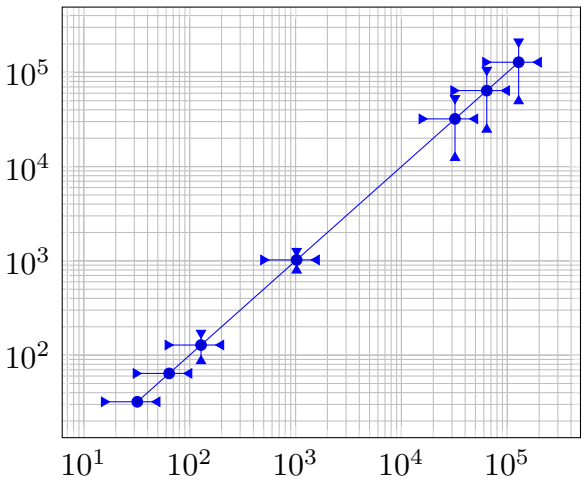
3 with plot table

maxlevel versus cgiter, table ??tbl:k

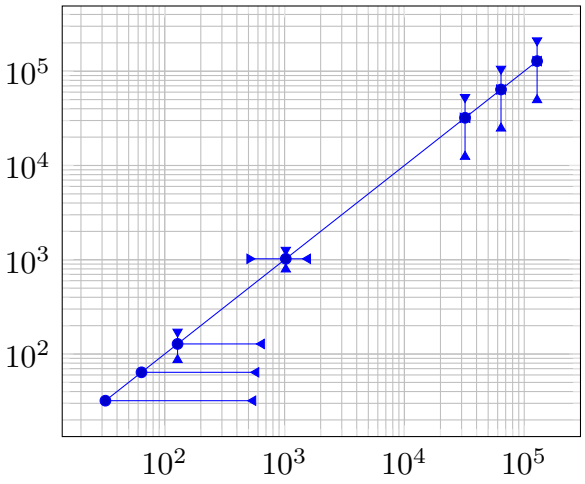


18.1.1 Log-plot

18.1.1.1 relative errors

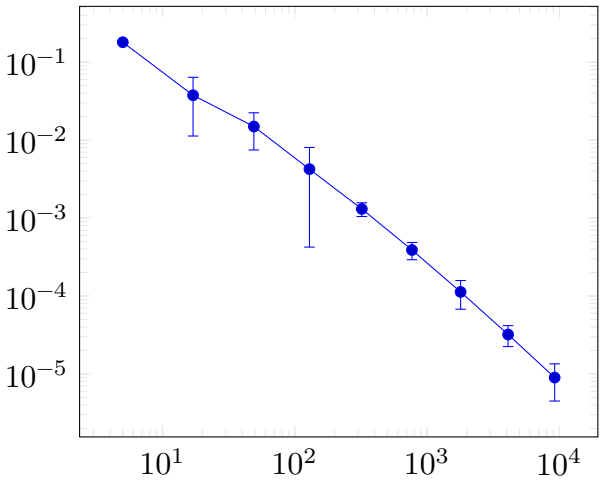


18.1.1.2 x fixed=500, y explicit relative



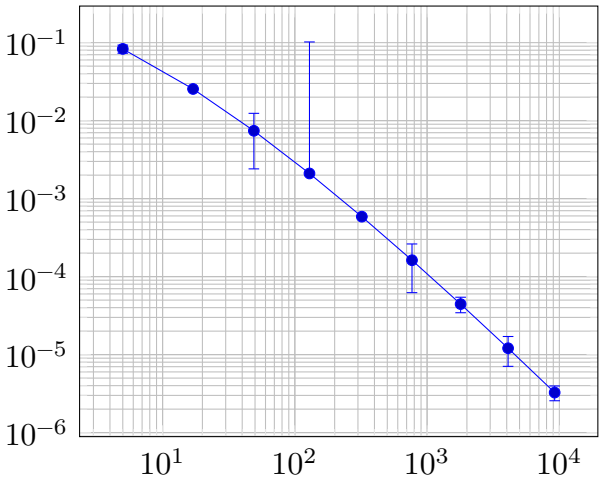
18.1.1.3 with plot table

dof versus Lmax, table ??tbl:k



18.1.1.4 with plot table absolute

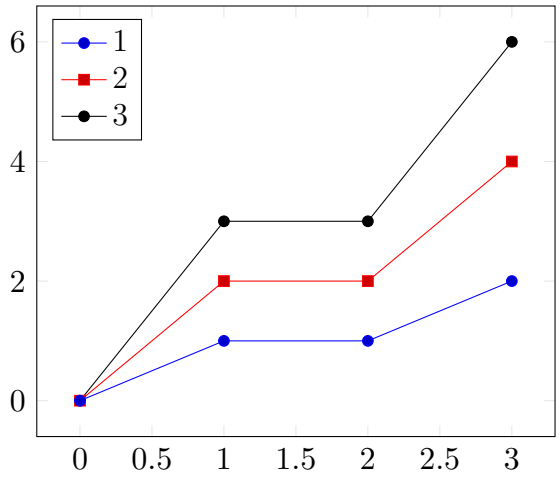
dof versus L2, table ??tbl:k



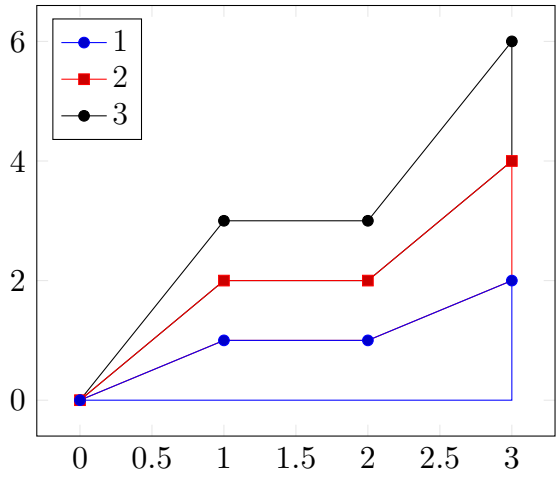
19 pgfplotstest.plottypes.tex

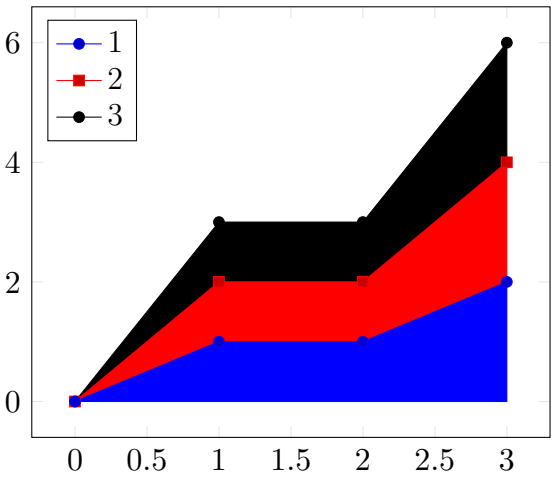
19.1 Stacked plots

19.1.1 stack y, sharp plot

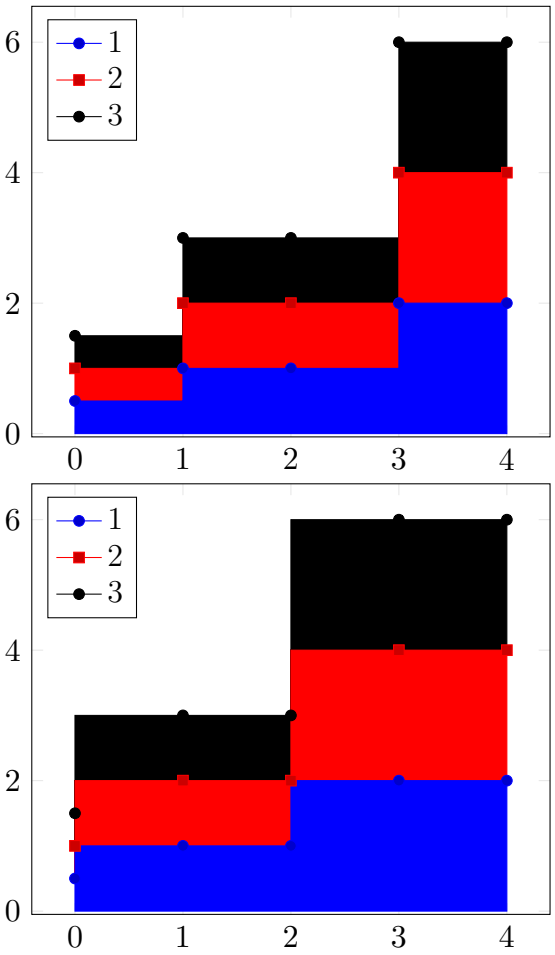


19.1.1.1 with closedcycle

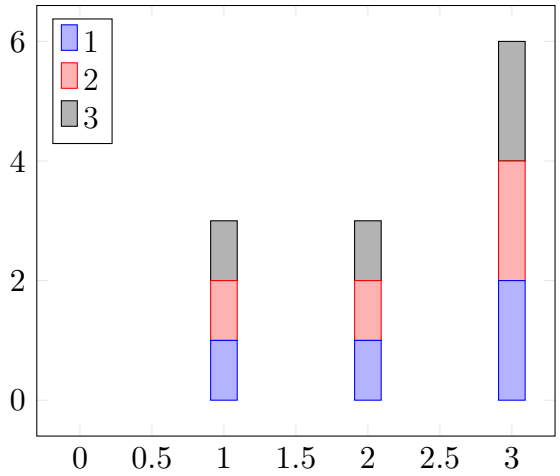




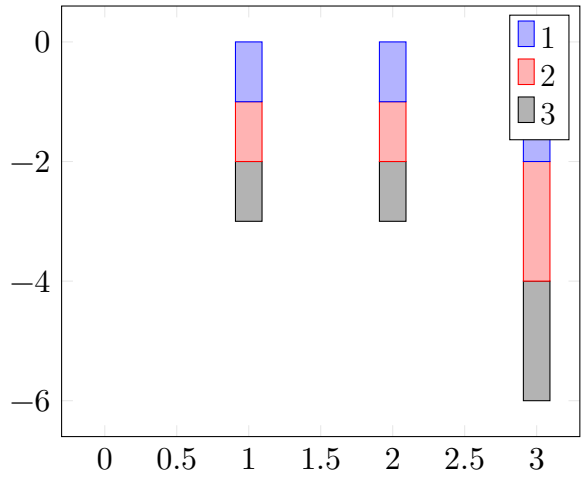
19.1.1.2 with closedcycle and const plots



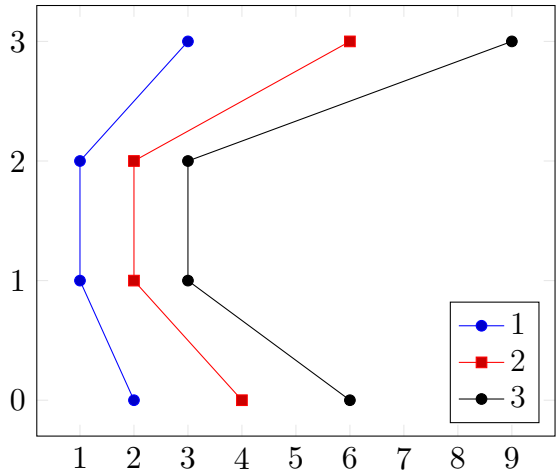
19.1.2 stack y, ybar



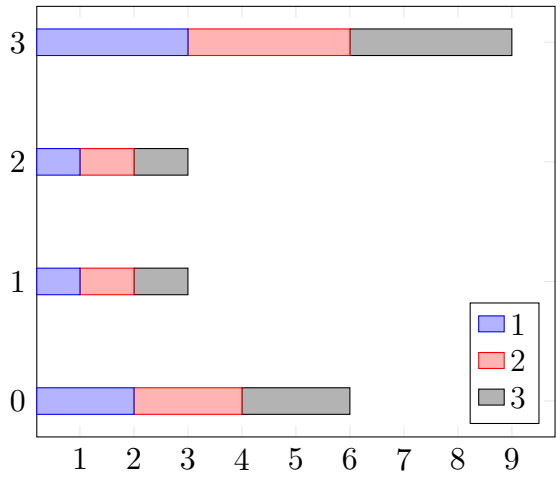
19.1.3 stack y, ybar, minus



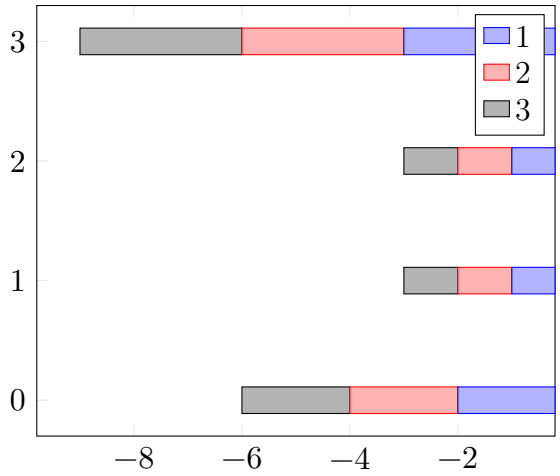
19.1.4 stack x, sharp plot [not useful]



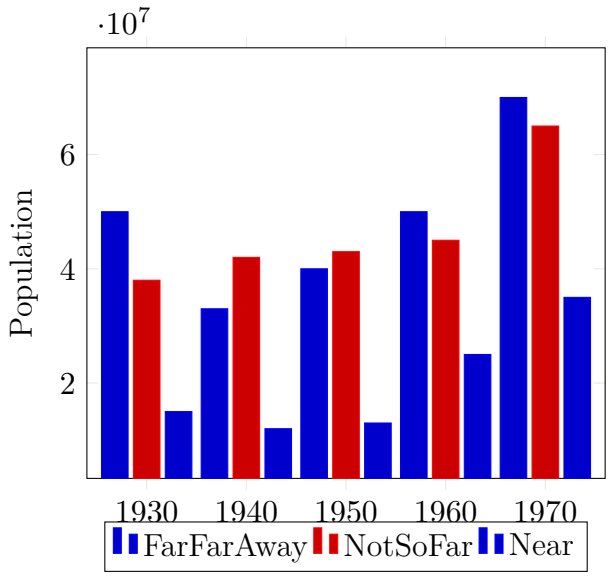
19.1.5 stack x, xbar



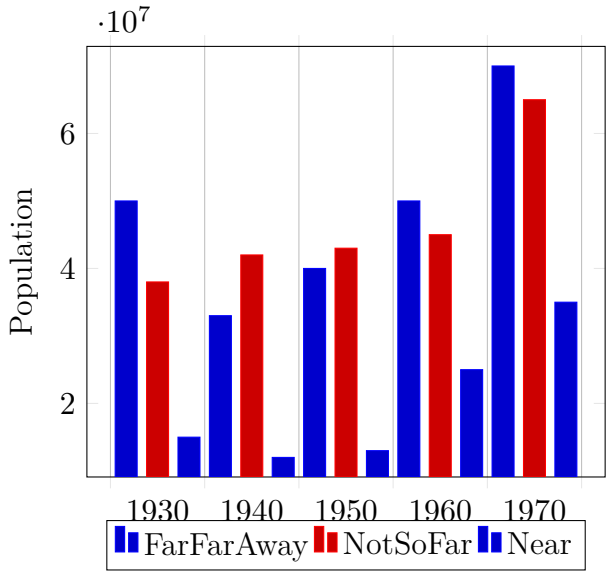
19.1.6 stack x, xbar, minus

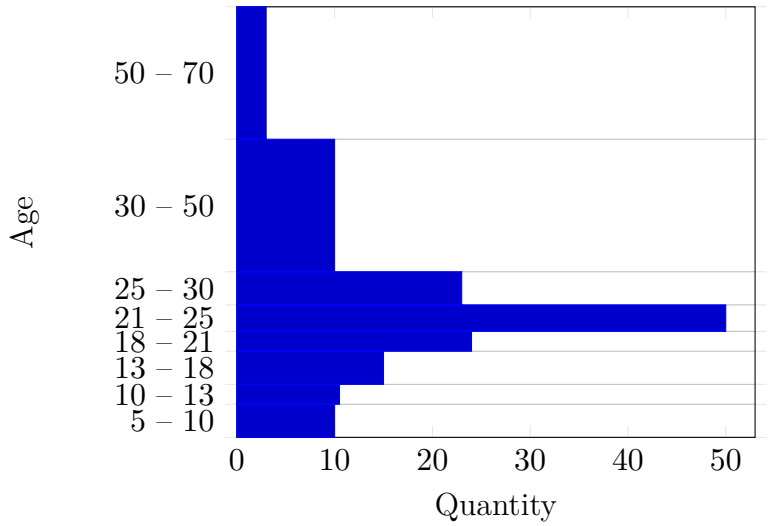


19.2 Bar diagrams

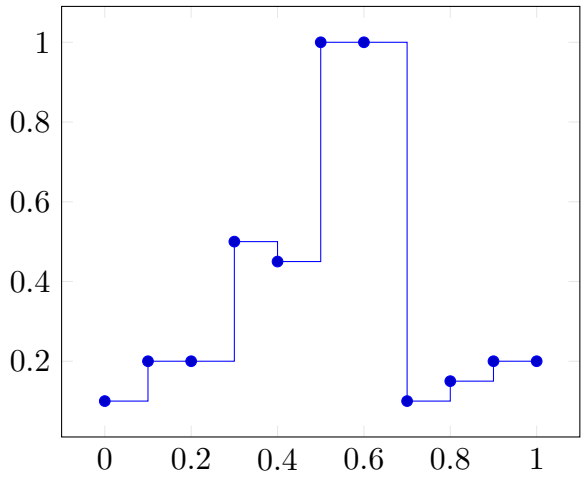


19.2.1 Interval bar handlers

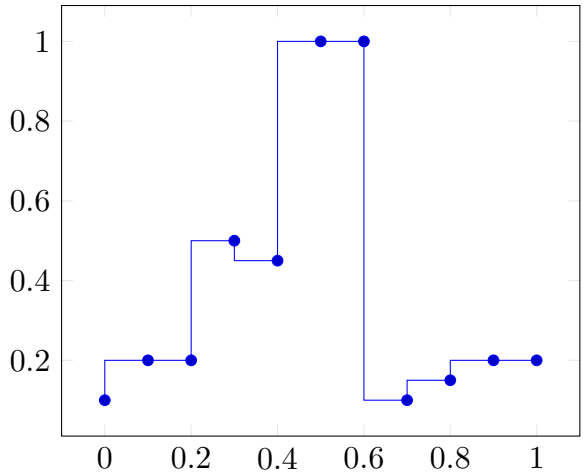




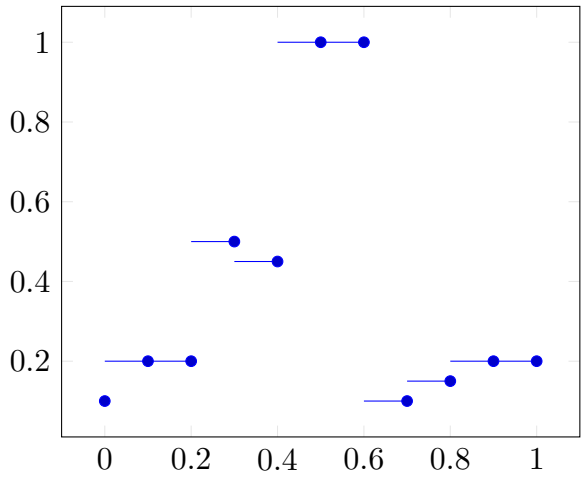
19.3 const plot



19.4 const plot mark right



19.5 jump mark right



19.6 jump mark left