

L^AT_EX Assignment 6

1 Instructions

Exercise 1. Use TikZ to complete at least two of the following tasks. The goal is to create attractive graphics which communicate technical ideas in a clear and concise manner.

1. Draw the graph of the function \sqrt{x} on $[0, 4]$, complete with grid lines and labeled axes. Fill in the area underneath the curve on $[1, 3]$, representing the area calculated by $\int_1^3 \sqrt{x} dx$. This can be done in a similar way as one of the examples in the sample `.tex` file.
2. Draw any one of the five representations of the Wagner graph as seen at

<http://mathworld.wolfram.com/WagnerGraph.html>

Do not make the vertices too small when drawing graph theory graphs; the node option `inner sep = X` for a length `X` can control the size of nodes.

3. The illustration defining the six trigonometric functions in the sample `.tex` file uses the angle $\theta = \pi/3$. Adapt this figure to show all six trigonometric functions when taking $\theta = -\pi/4$ instead.
4. Draw any one of the 35 Young tableaux containing the integers $1, \dots, 7$ shown in the middle of the web page

<http://mathworld.wolfram.com/YoungTableau.html>