Assignment 9

Math 351

1 Instructions

Upload all source files and the `.pdf` output file to PolyLearn on or before Sunday. An exemplary submission will earn LaTeXer of the week honors.

Exercise 1. Create a document such the following are true:

1. A custom font (web sites such as https://www.fontsquirrel.com/ have downloadable fonts) is used and called with the `fontspec` package. This requires the xelatex compiler; see last week's resume and letter `.tex` files for an example of calling custom fonts.

2. An interesting figure is created using TikZ and placed in the document using the `wrapfig` package.

3. A tabbing environment is used.

4. A minipage environment is invoked for side-by-side type.

5. Three of the following mathematical typesetting challenges are reproduced:

   (a) $$\sum_{\substack{x+y+z=n \\ x,y,z\geq 0}} xyz$$

   (b) $$\overbrace{\alpha+\beta+\gamma+\delta}^{\text{this equals 3}}+\underbrace{a+b+c+d}_{\text{this equals 4}}$$

   (c) $$|x| = \begin{cases} -x & \text{if } x < 0, \\ x & \text{if } x \geq 0. \end{cases}$$

   (d) $$\oint_C (L\,dx + M\,dy) = \iint_D \left(\frac{\partial M}{\partial x} - \frac{\partial L}{\partial y}\right) dx\,dy$$

   (e) $$\iint_\Sigma \nabla \times \mathbf{F} \cdot d\mathbf{\Sigma} = \oint_{\partial\Sigma} \mathbf{F} \cdot d\mathbf{r}$$

   (f) $x^n + y^n \stackrel{?}{=} z^n$ for $x, y, z \in \mathbb{Z}$.