Sample Homework
Bucky the Badger
1/23/15

1. This is me restating the first problem from the homework. Maybe the problem was for me to prove this theorem:

   Theorem 1. *This is what Theorem 1 says.*

   Proof. Here is my proof of Theorem 1. proof proof proof Now it's over. □

2. Maybe this problem mentions $M_{n\times n}(\mathbb{R})$. It took me a bunch of symbols to render that, so I defined some new commands in the preamble to make it easier next time. Now I'll use my command: $M_{n\times n}(\mathbb{R})$. You can't tell the difference between the two in the PDF, can you?

3. In this problem, I wanted this special equation to be on it's own line (or "displayed"):

   $$e^{i\pi} + 1 = 0. \tag{1}$$

   Now I'm going to make reference to equation (1).

4. This problem features a matrix! My favorite matrix is $I = \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$.

   By the way, $\operatorname{tr} I = 2$, okay?