Topics in Modern Computer Science Spring 2016
Assignment 11: LaTeX
– Given May. 6., Due May. 13. –

Problem 11.1 (A LaTeX with Title)
Write a document with a title, the date of today, and yourself as an author (with Jacobs   10pt
University as the affiliation) It should look like this:

> # The Evolution of Abstract Nonsense
>
> General Computer Scientist
> Jacobs University Bremen
> `gc.scientist@jacobs-university.de`
>
> 23. July 2011

Problem 11.2 (A LaTeX Document with Sections and Table of Content)
Extend the document from Problem 11.1 with a couple of sections and subsections of your   30pt
choice via the \section macro for sections and (correspondingly) \subsection for subsections.
Cross-reference various of the sections using the \label and \ref macros.

Hint: When you use the hyperref package (use \usepackage{hyperref} at the very end of the
preamble), then the references become hyper-references (clickable in the PDF). Try this on your
document!

Problem 11.3 (Simple Math Formulae)

20pt

The solutions of the quadratic equation $ax^2 + bx + c = 0$ are $\dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$.

Write this in LaTeX

Problem 11.4 (A more complex Math Formula)

20pt

> The Taylor series of $\sqrt{1+x}$ about $x = 0$ converges for $|x| \le 1$ and is given by
>
> $$\sqrt{1+x} = \sum_{n=0}^{\infty} \frac{(-1)^n 2n!}{(1-2n)(n!)^2(4^n)} x^n = 1 + \frac{1}{2}x - \frac{1}{8}x^2 + \frac{1}{16}x^3 - \frac{5}{128}x^4 + \ldots$$

Write this in LaTeX, but note that the last multi-equation is in "display style" (i.e. centered
and with bigger fonts).