

Problem Set 1 Solutions

ECS 189A — Spring 2011

Your Name Here!

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Problem 1

Here you'll put your solution to problem 1. A most *excellent* solution to problem 1. Make all of your solutions excellent and you will make me happy. Don't you want me to be happy?

Problem 2

To turn this file into a *dvi* file type `latex sample.tex`. The resulting `sample.dvi` can be looked at using a previewer such as *xdvi* (on UNIX) or *yap* (on Windows), and it can be printed out from those programs. To create a *pdf* file you can say `pdflatex sample.tex`.

When working under Windows I use *MiKTeX*, a free distribution of \LaTeX and associated programs. You can download it from various web sites; just google *miktex*. After downloading *MiKTeX* you can put its directory of executables in your path and use a command prompt (DOS window) to do things, editing your tex-files with a Windows-based version of *vi* or *emacs*. Alternatively, get your \LaTeX distribution under *cygwin*. Alternatively, get can install some a nice integrated \LaTeX environment—editor included—about which I know nothing.

Problem 3

One of the most important aspects of \LaTeX is its math mode. Mathematical symbols should look like a or X_5 or $Ctrl^i$; never write something like x in ordinary text mode, it looks terrible.

Problem 4

To produce an offset formula you can write things like

$$\begin{aligned} \text{Adv}_E^{\text{PRP}}(A) &= \Pr[K \xleftarrow{\$} \mathcal{K} : A^{E_K} \Rightarrow 1] - \Pr[\pi \xleftarrow{\$} \text{Perm}[n] : A^\pi \Rightarrow 1] \\ &\leq 1 \end{aligned}$$

Problem 5

I won't suggest that becoming good with \LaTeX is easy; it isn't. But essentially all computer science researchers use this program nowadays—and lots of other scientists and non-scientists do, too. If you bound for graduate school in computer science (or math or physics or \dots), you'll eventually

want to learn how to use this program well. (In addition, you'll eventually need to learn some drawing tool, such as `xfig`/`jfig`, whose output can be combined with that from `LATEX`.) There are numerous good books on `LATEX`. The most "standard" one is *LaTeX: A Document Preparation System* (2nd edition), by Leslie Lamport.