

Math 291  
Lab 2

**Intructions:** Use  $\LaTeX$  to typeset a document containing each component described below. Turn in your lab by emailing it to jamesju@mnstate.edu or by uploading it to the appropriate assignment folder on the course D2L page. You should email both your raw TeX (.tex) file and your compiled document (in either .ps or .pdf form).

You will be graded on both your raw TeX code and the accuracy of your compiled document.

**Don't forget to include a title block similar to the one you did for Lab 1.**

1. In the preamble of your document, put in commands that give your final document the following properties:

- Make the document class “article”, the font size 11 point and the paper size “letter”.
- Include the packages: amsmath, amssymb, amsfonts, bm, latexsym, color
- Make the height of the text area of your pages 9.25 inches and the width of the text 6.5 inches.
- make the top margin 0.25 inches, the odd side margin 0.25 inches, and the even side margin 0.75 inches.

2. Typeset the following text [It is up to you to figure out the proper font to use for each part below. All fonts used were either mentioned in class, or have a shortcut button in TeXnicCenter].

- (a) **This typeface looks ANGRY!!!.**
- (b) *This typeface looks a bit hoity-toity...*
- (c) **This typeface looks old skool.**
- (d) *THIS TYPE FACE IS CURRRRVY.*

[I used the command `\,` , to put space between these words]

- (e) **THIS FONT IS COOL.**

3. Typeset each of the following expressions. You will need to hunt down some special symbols for most of these.

- (a)  $\Omega \Rightarrow \infty$
- (b)  $\beta_\gamma = \{V, E\}$
- (c)  $\forall x \in A \exists y \ni \neg B$
- (d)  $[(A \cup B) \cap C] \subseteq (A \cap B) \cup (A \cap C)$
- (e)  $(\vec{v} \times \vec{w}) \cdot \vec{u}$
- (f)  $\frac{\sqrt[3]{x^4 - y^5}}{\sum \epsilon_j}$
- (g)  $\int_0^1 \int_{x^3}^{5x-1} e^{2xy} dy dx$
- (h)  $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
- (i)  $\rightarrow \rightarrow \nearrow \searrow \swarrow \nwarrow |$
- (j)  $\leq \prec \triangleleft \triangleright \delta \nabla$