Introduction to LaTeX
Exercise Sheet 1 (Group 5)

Clifford Gilmore

17th March 2011

For the exercises the content text of the document is mostly up to you. If you can't think of anything to write then you can find random text from Lorem Ipsum at http://www.lipsum.com/

1. Create a LaTeX document with the following:
   (a) Document settings: article, 11pt, A4 size paper.
   (b) A short piece of text of your choosing.
2. Add two sections to your document each containing:
   (a) Two subsections which in turn each contain two paragraphs.
   (b) The text should contain the following words: l'Hôpital, \$100, \newpage, 15%, the elipsis character ... and LaTeX .

   Also add a table of contents.
3. Make a title for your document with the following values:
   (a) Today's date using the \today command
   (b) Your name for the author
   (c) Choose the title yourself
4. Make an enumerated list of your three favourite authors and a nested list of your two favourite books by each.
5. Reproduce the following text in your document (it does not have to be in an enumerated list):

(a) Pythagoras states for a right angled triangle with side lengths a, b, c, then $a^2 + b^2 = c^2$.

(b) Euler's identity states that

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

(c)

$$\lim_{n\to\infty} \sum_{k=1}^{n} \frac{1}{k^2} = \frac{\pi^2}{6} \tag{1}$$

(d) Pascal's rule is

$$\binom{n}{k} = \binom{n-1}{k} + \binom{n-1}{k-1} \tag{2}$$

(you will need the amsmath package for this)

(e)

$$\int_0^{\frac{\pi}{2}} \cos x \mathrm{d}x$$

6. Create a paragraph that refers to one of your above equations.