## 2014-15 University of Utah Undergraduate Problem Solving Contest

## Problem 3

Due November 26, 2014

Prove that every year has at least one Friday the  $13^{th}$ . Also, what is the maximum number of Friday the  $13^{th}$ 's a given year can have?

In the spirit of UPSC, you should not use the internet or look up the solution in a book. Please include your **name**, **student ID number**, **and email address** on your solution. Grading will proceed more quickly if your final answer is written clearly at the beginning of the first page of your solution, followed by your work and justification.