1. Open the excel file...
N.B. This file contains a macro called BirthdaySort that makes the whole thing work. While opening this file you will receive a message like this:


You must enable the macro or this thing will not work.
2. After the file loads, you will need to create a button that executes the Macro. Click on Tools and then Customize. Click the Commands tab. Scroll down to Macros. The following should appear:

3. Drag the Smiley button up to one of the tool bars and close the dialogue box.
4. Click the smiley button. You will be asked to assign a macro to the button. Highlight birthdaysort and click OK.
5. You are now ready to use this file.

## How it works

This spreadsheet contains about 3500 names and birthdays of some famous, some not so famous, and some infamous people. These are contained in the first two columns.

The third column contains a random number. BirthdaySort reassigns all 3500 random numbers and then sorts the list by those random numbers-(Excel reassigns the random numbers again after it sorts the list, so don't expect the list to be in order.)

Birthday Sort then takes the top 23 names and sorts them by their birthdays from Jan. 1 to Dec. 31. It will highlight the top 23 rows and any birthdays that are identical. This is the equivalent of picking 23 people at random and looking to see if any of them share a birthday.

The process can be applied again and again and by so doing you can empirically show that approximately $50 \%$ of the time at least two people in a randomly chosen group of 23 will share a birthday.

Have some fun and add your name and birthday to the list—maybe even your students'.

