Birthdays.m

function p = Birthdays(n)
% function p = Birthdays(n)
% % Let 'A' be the event that no two people
% % in a room with 'n' people have the same birthday.
% % p = Prob(A)
% initialize
p = 1;
% loop through and multiply the remaining terms
for k = 1:n-1
    p = p*(1-k/365);
end
return

The figure was made with the following commands:

```matlab
>> n = [1:100];
>> for k = 1:length(n), p(k) = Birthdays(n(k)); end
>> plot(n,p)
>> grid on
```