Birthday problem

Suppose we have k people in a room. Define event A as the event at least two people in the room share the same birthday. What is $P(A)$?

Assumptions:

- "same birthday" here means same month and day
- We don't have twins/triplets/etc.
- No one born on February 29 (leap year)
- Each day of the year is equally likely to be a birthday

Probability of at least one birthday match