# Mathematician: even though you won't win Powerball, you could improve chances of winning alone by the numbers you pick 

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Lottery officials have announced the Powerball jackpot has reached its second highest figure in history - $\$ 700$ million, to be exact.

Once again, jackpot dreamers are flocking to convenience stores and supermarkets in search of their golden ticket.

A Georgia Tech mathematician who calculates probability for a living has this message:
"You are not going to win the lottery."

Lew Lefton, a faculty member in Georgia Tech's School of Mathematics and associate dean for Information Technology in the College of Sciences, says it's not your fault. The fault lies in the numbers.

After considering the Powerball system of drawing five white balls out of a drum with 69 balls and one red ball out of a drum with 26 red balls, Lefton calculated more than 292,201,338 possible winning combinations.

To explain your odds, Lefton says if iPhone 7s were laid end to end around Interstate 285 in Atlanta, there would be about 745,000 phones in total.

If only one of those iPhones were blue and you were asked to pick it out, your chances of succeeding would be 400 times more likely than winning tonight's jackpot.
> "You should play anyway," Lefton says. "Two dollars is a great price for a dream."

There is a bit of a silver lining despite having no way to improve your odds.
"Play numbers higher than 31," Lefton says.

It improves your chances of winning the jackpot and not having to share it.

Many people play birthday numbers, so choosing higher, less-popular numbers decreases the chances of sharing the pot.

Also, people statistically choose odd numbers more often. Choosing high, even numbers is your best bet, according to Lefton.

## Provided by Georgia Institute of Technology

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