# 'Wouldn't it be unlikely' - mathematician rates chances of winning Gold Lotto 

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Wouldn't it be nice to share in Gold Lotto's $\$ 19$ million Superdraw this Saturday - nice but almost impossible according to a University of Queensland mathematician.
Associate Professor Peter Adams has calculated the odds of winning the $\$ 19$ million jackpot are a massive $8,145,060$ to one against, for every game played.
Dr Adams said the "wouldn't it be nice" advertising campaign would be more accurate as "wouldn't it be unlikely".
"Eight million to one against is just too unlikely for most people to comprehend. To put it into context it would be like everyone in Brisbane, Sydney and Melbourne having one game, but only one person out of all those millions of people would be expected to win," he said.
"Or if you think about the Melbourne Cup - the odds of winning Gold Lotto are about the same as a 50 to one shot winning the race four years in a row."

The Powerball odds are even worse. Dr Adams has calculated that for each Powerball game played, the chance of actually winning the top prize is an astonishing one in 55 million.
"It is the statistical equivalent of placing a pin on a 42 km Olympic marathon course and having it land in exactly the right spot where the prize is - that's 55 million to one," he said.

Dr Adams said Australians would be better off putting their money into a high interest savings account.
"Most players lose all or most of their money," he said.
"On average, if you played many games over a long period, you would expect to lose about half your money.
"Gambling has an expected negative return (to cover taxes, profits and fees), whereas with a bank your expected return is always positive."

Dr Adams said punters should make informed decisions and should be aware that schemes and systems claiming to increase the chances of wining are false.
"There is nothing you can do to increase your chances of winning," he said.
"The numbers that came up last week have just the same chance, statistically, of coming up this week."

But Dr Adams does have some tips for those who are still determined to beat the odds.
"Given that every sequence of numbers is equally unlikely, you should pick numbers that nobody else will pick so that if you do win a prize, you are more likely to be the only winner, rather than having to share the prize," he said.
"So don't pick numbers one to 31 as these are birth dates, which people often think are lucky.
"Pick a pattern such as $32,33,34,35,36$ and 37 , as people tend to not

pick six numbers in a row."

Each year, approximately 39 new Golden Casket millionaires and multimillionaires are created across Queensland. Approximately 100 first division Lotto prizes are won each year.

## But Dr Adams said people should consider the sobering odds before playing.

"If you had 100 games a year for 1500 years, you would expect to win the jackpot only about once," he said.
"Interestingly you would have also spent twice the amount money that you would have won."

Source: UQ

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