Kurtis is creating a game for a math fair. They attach $n$ circles, each with radius 1 metre, onto a square wall with side length $n$ metres, where $n$ is a positive integer, so that none of the circles overlap. Participants will throw a dart at the wall and if the dart lands on a circle, they win a prize. Kurtis wants the probability of winning the game to be at least $\frac{1}{2}$.

If they assume that each dart hits the wall at a single random point, then what is the largest possible value of $n$?