

# MATHEMATICS

Discuss the skills of creative thinking and methods of problem-solving. Go over ways in which participants can transfer their mathematical skills to their innovations.

## ASSIGNMENT

### Practice Problem by CEMC POTW 7

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  $n$ ?

**Solution :** <https://cemc.uwaterloo.ca/resources/potw/2023-24/English/POTWD-23-D-07-S.pdf>

## ADDITIONAL RESOURCES

- <https://courseware.cemc.uwaterloo.ca/40>