

## Rules for Seniors

1. You may work in groups of 2 or by yourself. (Based on the number students)
2. On your submission, write, your team number, problem number and the answer.
3. If you write something that is a weird combination of T or F. I will assume you did not submit an answer.
4. You may not use any computing devices other than your brain.
5. You are eliminated after 2 incorrect answers.
6. The last team to remain wins.
7. The team that gets the most incorrect answers is the grand loser.
8. Top 3 teams and last place team gets a prize.

## Sample Problems for Seniors

1. (1 min) TRUE or FALSE: The coefficients of  $(x+y)^n$  corresponds to the elements in Pascal's Triangle.
2. (2 min) Let  $n \geq 2$ . TRUE or FALSE: There does not exist three positive integers  $a, b, c$  that satisfies  $a^n + b^n = c^n$ .
3. (3min )TRUE or FALSE: Any two parallelogram with same side lengths have the same area.