

## First To 15

Select 1 student to play against you. They will select one of the numbers from 1 to 9 and circle it. You will then select one of the remaining numbers and put a square around that number. The student will circle a second number and then you will put a square around a second number. Continue this back and forth. This first person to reach a combination of numbers that **total 15** is the winner. Several rows of numbers are provided so you can play the game several times. Alternate who goes first after each game. Give the student a page of scratch paper to make computations on if they want to. You also take a piece of paper to use.

1 2 3 4 5 6 7 8 9

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After playing the game several times it will be clear that you win many more times than they do. In fact you should never lose.

HOW can you guarantee you never lose? Arrange the numbers 1 to 9 as shown below. The rows, columns and diagonals have all have 3 numbers that total 15. In fact, they contain ALL the possible combinations of 3 digits that total 15 for the digits 1 to 9.

As each of you select numbers on the number line you play TIC TAC TOE on a separate piece of paper. This allows you to see the patterns and select the best number each time much easier the the student can. The visual aid of the tic tac toe grid allow you to view the digits in a different and more efficient manner.

The best strategy if you go first is to chose a corner and try to get the opposite corner with your second choice.

Use this set of grids to play the game. Do not show the students you paper.

8	1	6	8	1	6	8	1	6	8	1	6
3	5	7	3	5	7	3	5	7	3	5	7
4	9	2	4	9	2	4	9	2	4	9	2

8	1	6	8	1	6	8	1	6	8	1	6
3	5	7	3	5	7	3	5	7	3	5	7
4	9	2	4	9	2	4	9	2	4	9	2