

# Number Game with Random Digits

A cheating-proof way to practice  
basic operations

# About the game

- This game can be used to practice addition, subtraction, multiplication and also division
- In each case the goal should be to get either the maximum number or the minimum
- This game facilitates higher order thinking in math
- It needs at least 2 players – the more the merrier!!

# How to play

- Each player makes or gets the grid chosen by the facilitator  
(Sample grids are included in last two slides)
- Facilitator announces the goal i.e. maximum or minimum
- Facilitator dictates a digit (from 0, 1, 2, 3 ... 9)
- Each player must immediately write it in one of the boxes
- Once written, it can not be changed
- 0 can not be written as a leading digit
- Facilitator dictates more digits without repetition and players keep writing till the grid is filled

# How to play

- Once the grid is filled each player computes his/her corresponding answer
- Note that since the digits are randomized, copying/cheating from others does not help!!
- Cross check answers and then compare them to find the winner
- It is a good idea to compute the maximum/minimum that would have been possible with the given digits

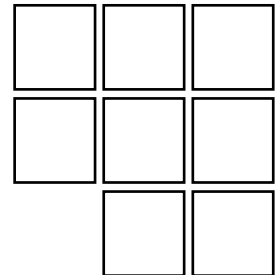
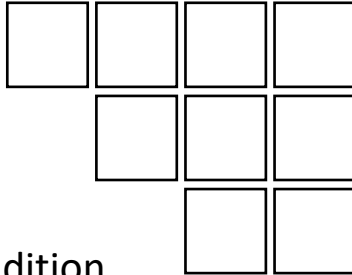
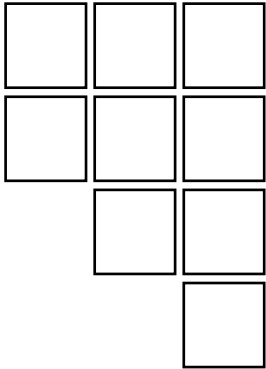
*It is possible that no player actually got the theoretical maximum/minimum*

# Grid possibilities

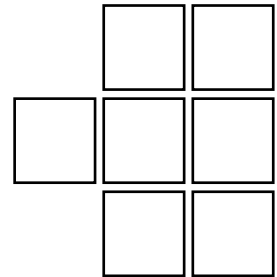
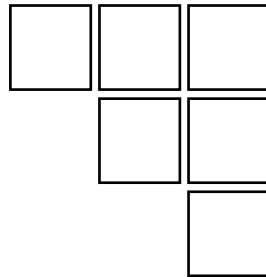
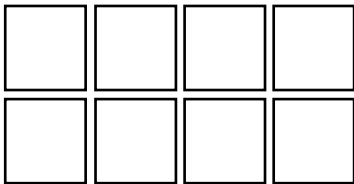
- Keep the total number of boxes at most 9 in any grid
- Ideally have 6-8 boxes in a grid
- Addition grids can have 2-4 rows of same or varying lengths
- Subtraction and multiplication grids can have 2 rows with 2-4 digits each
- In subtraction, a player might encounter negative answer – if that happens before introduction to integer, the player has to abstain from playing that round
- For division, the dividend can be 4-7 digits and the divisor 1-2 digits

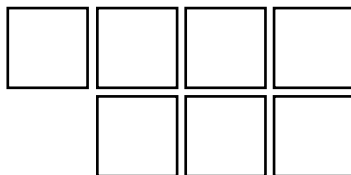
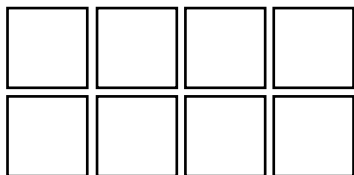
# Why not repeat?

- Using repeated digits may make the game too random to strategize
- The ulterior motive is to develop higher order thinking while strategizing
- If it is too random, this purpose gets defeated



Addition





Subtraction and  
Multiplication

