

## eva hackathon academy - entry challenge 2020

### RESERVE YOUR SEAT

**Submission Deadline:** Tuesday 11:59PM, 30-June-2020

**Question** Please fill in the yellow boxes while adhering to the following rules: (Try to answer as much challenges as you can!)

**Submission:** Submit answers as .zip folder to <https://forms.gle/ADq69etmwXRQg3Kf7> 1) Print screen of results (jpg, png, excel)

2) Send code in any language

3) Write comment // in code, stating Challenge number 1, 2 .....

**Example**  
(very easy)

2	7	6
9		

=4+5+6

**Answer to exam** 15

2	7	6
9	5	1
4	3	8

15 = 2+7+6

15 = 9+5+1

15 = 4+3+8

15 15 15 15

=2+9+4

=7+5+3

=6+1+8

=2+5+8

**Challenge 1**  
(very easy)

12	17	10
11		

**Rules for Challenges #1 - #4**

All entries are unique (non-repeated)

Numbers must be positive integers

The sum of all entries in each row, column and BOTH diagonals must be the same

Boxes in gray, can not be moved, and their contents may not be changed

For Challenges #4,5,6, you MUST include Excel with equations or any coding language

**Challenge 2**  
(easy)

	7	16
15		
		11

**Challenge 3**  
(medium)

31		15
	41	

**Challenge 4**  
(medium-hard)

		18
	28	

**Rules for Challenge #5**

Follow Same Rule of Challenges 1-4

There are many possible solutions. We want the solutions which correspond to the smallest 3 sums.

**Challenge 5**  
(hard)

**a) 1st Smallest**

		18
	28	

**b) 2nd Smallest**

		18
	28	

**c) 3rd Smallest**

		18
	28	

**Challenge 6**  
(very hard)

113^2	2^2	94^2
82^2	74^2	97^2
46^2	127^2	58^2


**Rules for Challenge #6** (we will modify the rules slightly)

All entries are unique (non-repeated)

Entries must be PERFECT SQUARES (eg. 1,4,9,25)

The sum of all entries in each row, column and **ONE** diagonal must be the same

The sum must NOT be a square number

The smallest sum for a square that follows almost all these rules is 21609 = 147^2.

The square corresponding to it, is shown on the left,

(remember we want the smallest three sums which are not square numbers!)

**Question of Challenge 6:**

Find the three smallest sums and the three squares they correspond to

GOOD LUCK