

**GRADE 6 - GRADE 7 - GRADE 8**

# **MY FUN ACTIVITIES**



## **RULES**

The "Fun activities" part is a part that will not be corrected in class. This part includes sudokus and logic puzzles.

You work on his exercises alone when you have finished your work for the day.

The solutions are at the end of the book.

**Have fun !**

**Exercise #1 :**



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

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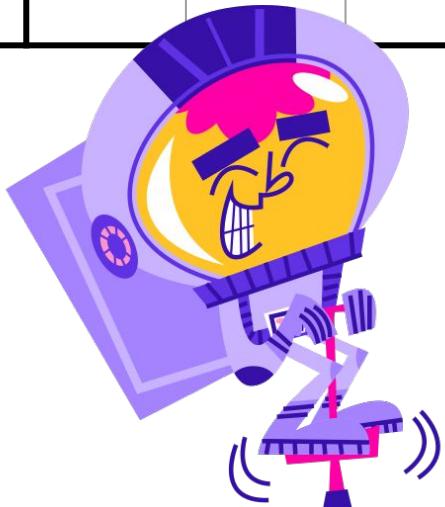


**Exercise #2 :**



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

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Exercise #3 :



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

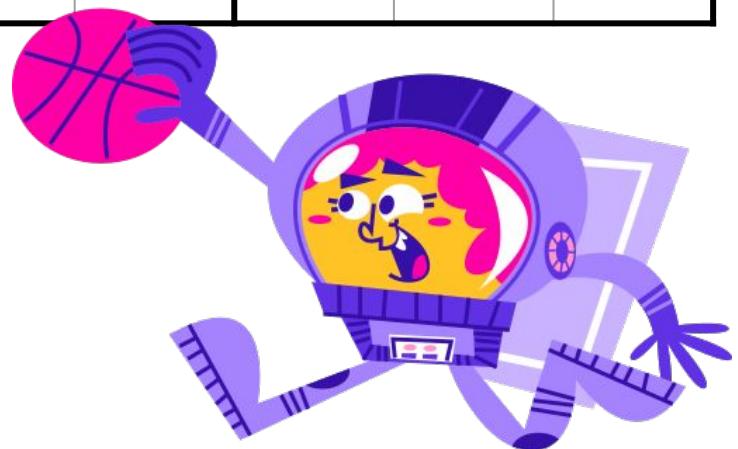
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**Exercise #4 :**

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

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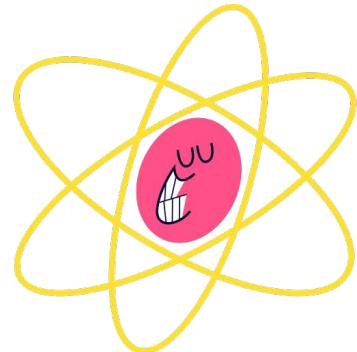


**Exercise #5 :**



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

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**Exercise #6 :**



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

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Exercise #7 :



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

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**Exercise #8 :**

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

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**Exercise #9 :**



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

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Exercise #10 :



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

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Exercise #11 :

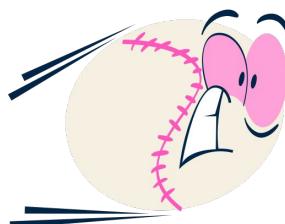


|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
|   | 7 |   | 9 |   | 2 | 1 |   |   |
|   |   |   |   | 4 |   |   |   |   |
|   | 5 | 2 |   | 3 | 8 |   |   |   |
| 5 |   | 1 |   |   |   |   |   | 6 |
|   |   | 3 |   |   |   |   | 4 |   |
| 7 |   |   |   |   |   | 8 |   | 2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

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Exercise #12 :



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

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Exercise #13 :



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

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**Exercise #14 :**

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

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Exercise #15 :



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

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Exercise #16 :



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

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Exercise #17 :



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

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HIGH FIVE!

**Exercise #18 :**



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

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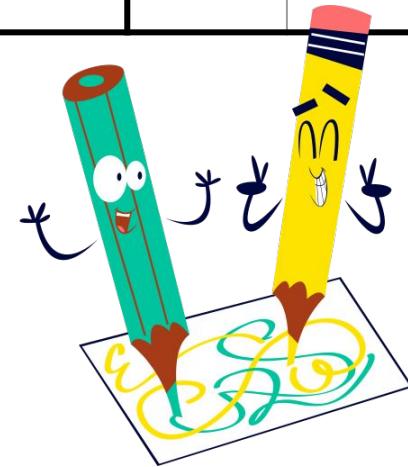


Exercise #19 :



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

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**Exercise #20 :**



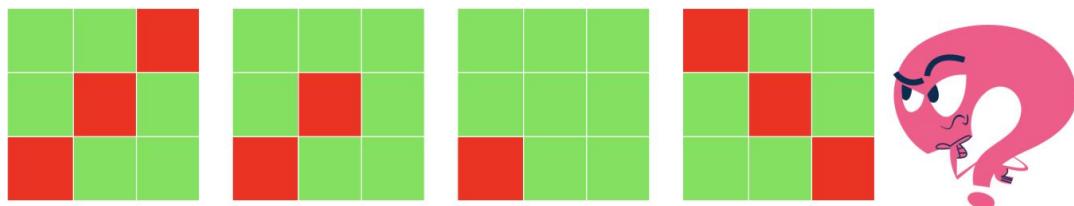
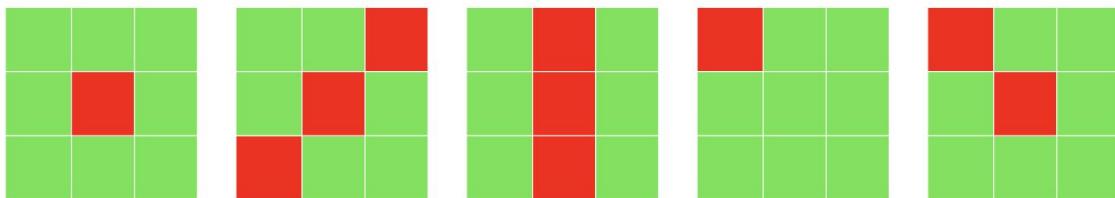
|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
|   |   | 2 | 8 |   | 6 |   |   |   |
|   | 7 | 6 |   |   |   | 5 |   |   |
|   |   |   | 1 |   |   |   |   | 6 |
| 2 |   |   |   | 5 | 8 | 9 |   | 1 |
| 8 |   |   |   |   |   |   |   | 5 |
| 9 |   | 5 | 4 | 2 |   |   |   | 3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

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**Exercise #21 :**

Complete this logical sequence.



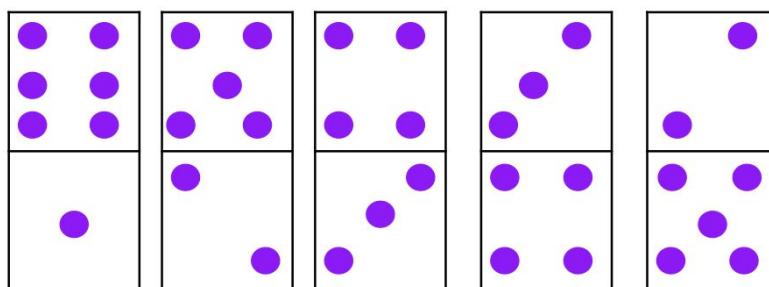
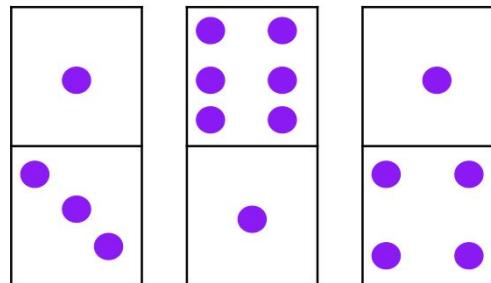
**Exercise #22 :**

Complete this logical sequence by finding the three letters that come after this one :

O T T F F S S \_ \_ \_

### Exercise #23 :

Complete this logical sequence.

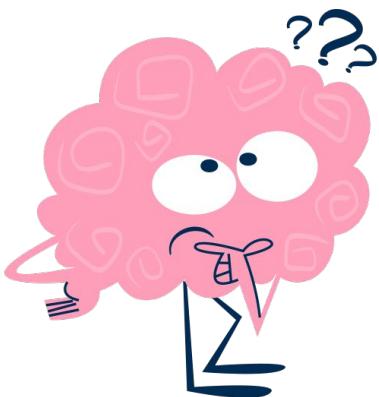


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### Exercise #24 :

Complete this logical sequence.

1, 3, 6, 10, 15, ?, ?



**Exercise #25 :**

Replace the question marks with the signs - , ÷, x or + to solve the operation below :

$$((5 ? 5) ? 5) ? 5 = 30$$

**Exercise #26 :**

Replace one box of each of the calculations with another red one.

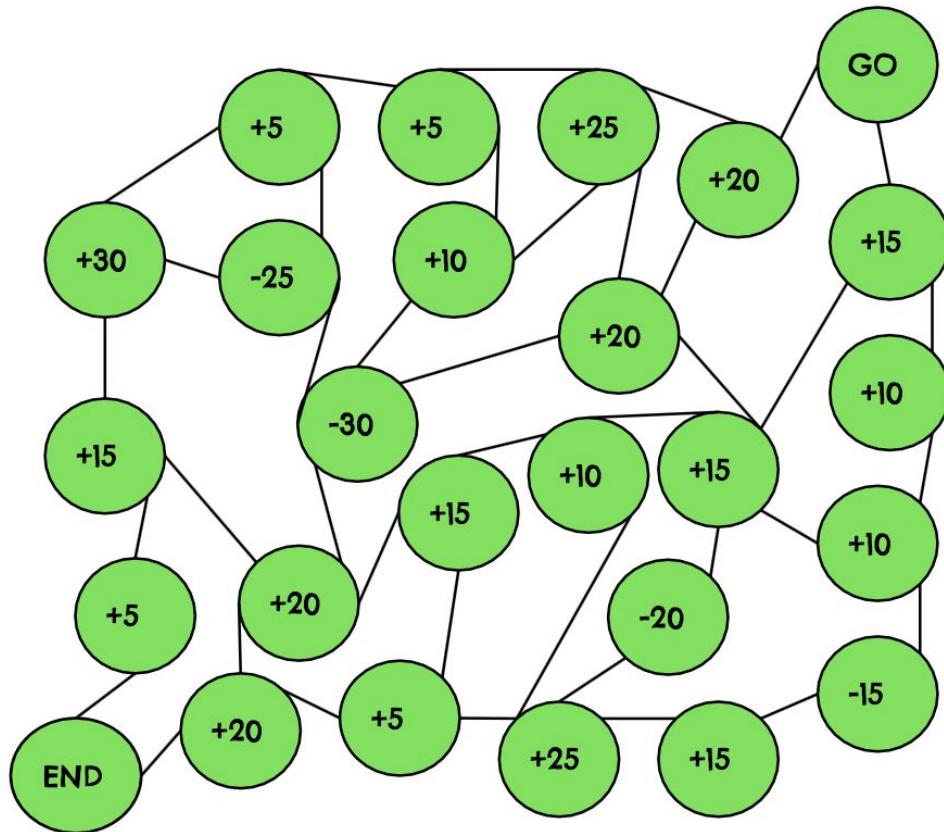
|   |   |   |   |   |
|---|---|---|---|---|
| 1 | 7 | + | - | - |
|---|---|---|---|---|

|   |   |   |   |   |   |   |   |   |       |
|---|---|---|---|---|---|---|---|---|-------|
|   |   | 1 | 1 | 0 | + | 8 | 9 | = | 200   |
| 5 | 1 | + | 1 | 3 | + | 1 | 6 | 2 | = 200 |
|   |   | 1 | 1 | 8 | + | 1 | 9 | 1 | = 200 |
|   |   | 9 | 8 | + | 6 | x | 1 | 9 | = 200 |
| 2 | 4 | x | 9 | 1 | 2 | x | 8 | = | 200   |



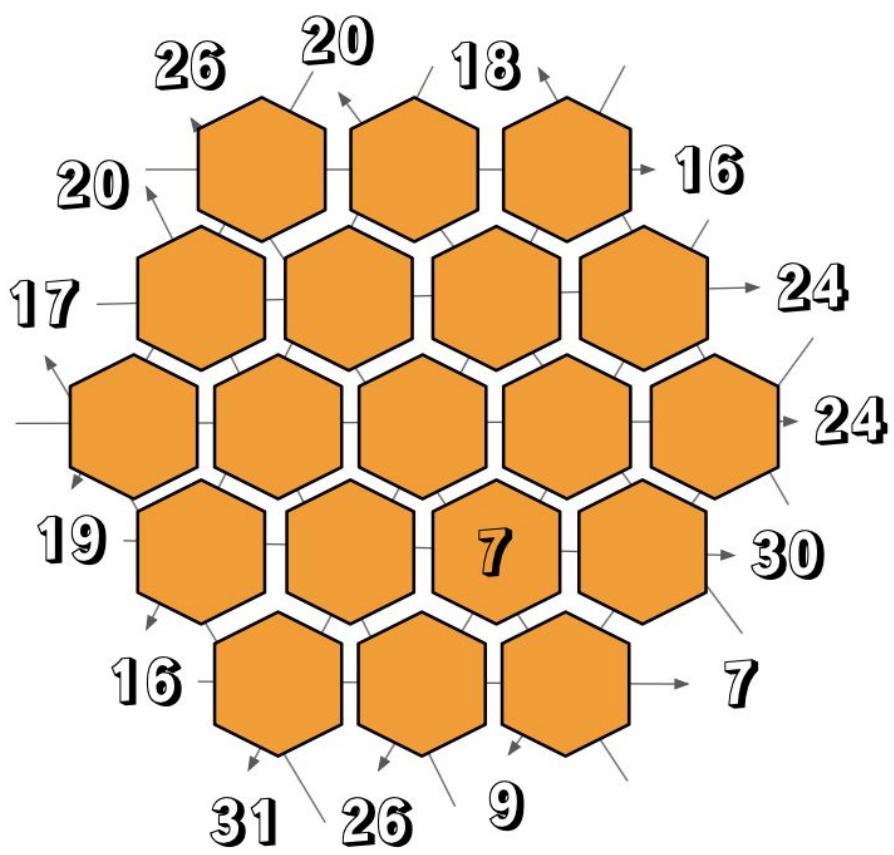
## **Exercise #27 :**

Go from go to end passing from one bubble to another. Add or deduct the values shown in the bubbles you pass through, but never pass through the same bubble more than once. I scored a total of 280 points. Can you do better?



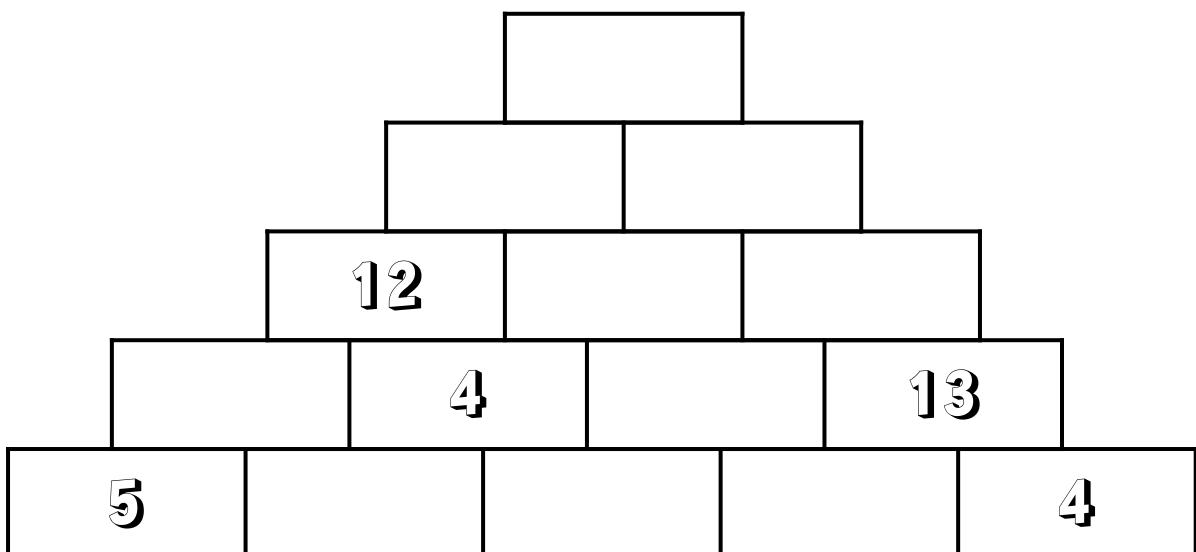
## Exercise #28 :

the numbers at the end of the arrows indicate the sum of all the digits of the corresponding alignment. Each alignment only has different numbers and no zeros.



**Exercise #29 :**

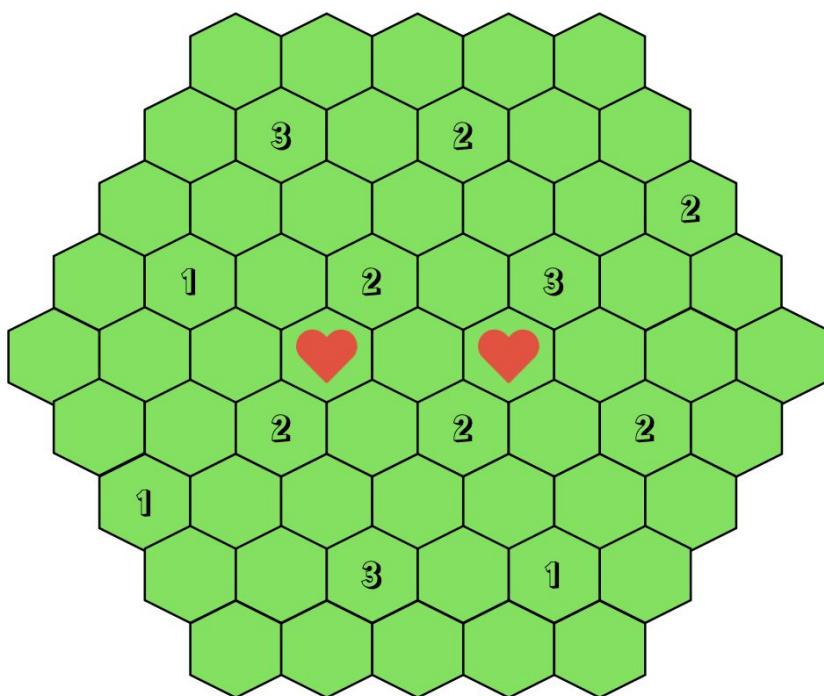
Complete this pyramid.



**Exercise #30 :**

In this grid, no heart rubs shoulders with another and each number indicates how many hearts touch the hexagon which contains it. The first two hearts are placed.

Place the others.

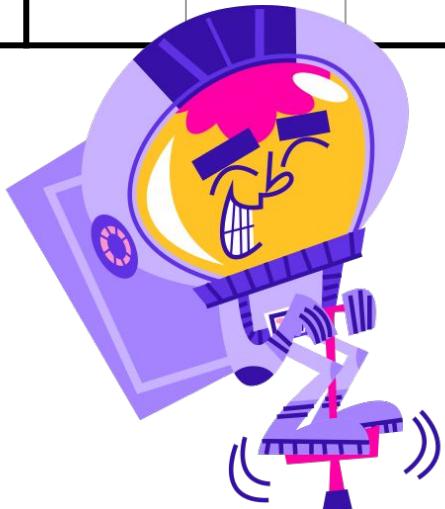


**Exercise #31 :**

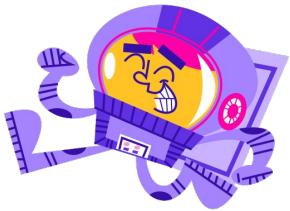


|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
|   |   |   | 4 | 6 |   | 1 |   | 3 |
|   | 7 |   |   |   | 5 |   |   |   |
| 9 | 6 |   |   |   |   |   |   |   |
| 8 |   |   | 3 |   |   |   | 5 | 2 |
|   |   |   | 1 |   | 2 |   |   |   |
| 3 | 5 |   |   |   | 6 |   |   | 7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

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Exercise #32 :



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

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**Exercise #33 :**



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

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**Exercise #34 :**

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

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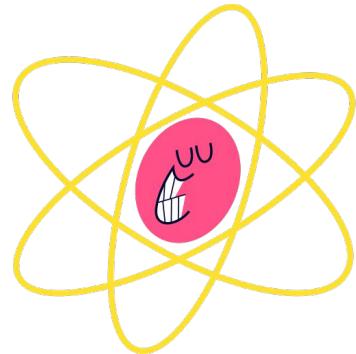


**Exercise #35 :**



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

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**Exercise #36 :**



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

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Exercise #37 :



|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| 3 |   |   |   |   | 2 | 4 |
|   |   |   |   | 8 | 3 | 6 |
|   |   |   | 5 |   | 8 |   |
|   | 2 | 9 |   | 3 |   |   |
| 6 |   | 2 |   | 5 |   | 8 |
|   |   | 4 |   | 6 | 1 |   |
|   | 4 |   | 3 |   |   |   |
| 5 | 8 |   | 1 |   |   |   |
| 2 | 6 |   |   |   |   | 3 |

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**Exercise #38 :**

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

MEDIUM



Exercise #39 :



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

MEDIUM



Exercise #40 :



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

MEDIUM



Exercise #41 :

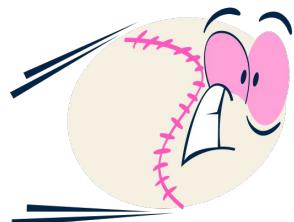


|   |   |   |   |   |   |   |     |
|---|---|---|---|---|---|---|-----|
|   | 6 |   |   | 3 | 9 | 7 |     |
|   |   | 2 |   |   |   |   |     |
|   | 8 |   |   | 4 |   |   | 2   |
| 9 | 7 |   | 4 |   |   |   | 8   |
|   |   | 6 |   | 9 |   | 1 |     |
| 1 |   |   |   |   | 6 |   | 9 5 |
| 2 |   |   |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

MEDIUM



**Exercise #42 :**



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

MEDIUM



Exercise #43 :



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

MEDIUM



**Exercise #44 :**

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

MEDIUM



Exercise #45 :



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

MEDIUM



**Exercise #46 :**



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

MEDIUM



**Exercise #47 :**



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

MEDIUM



HIGH FIVE!

Exercise #48 :



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

MEDIUM

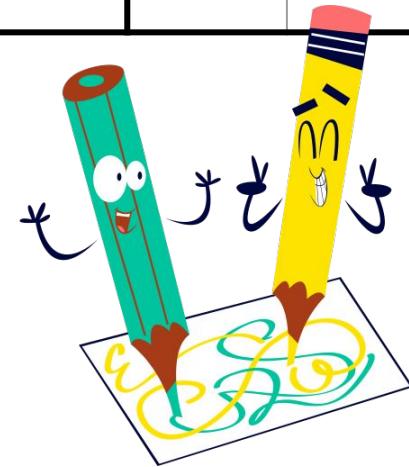


Exercise #49 :



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

MEDIUM



Exercise #50 :



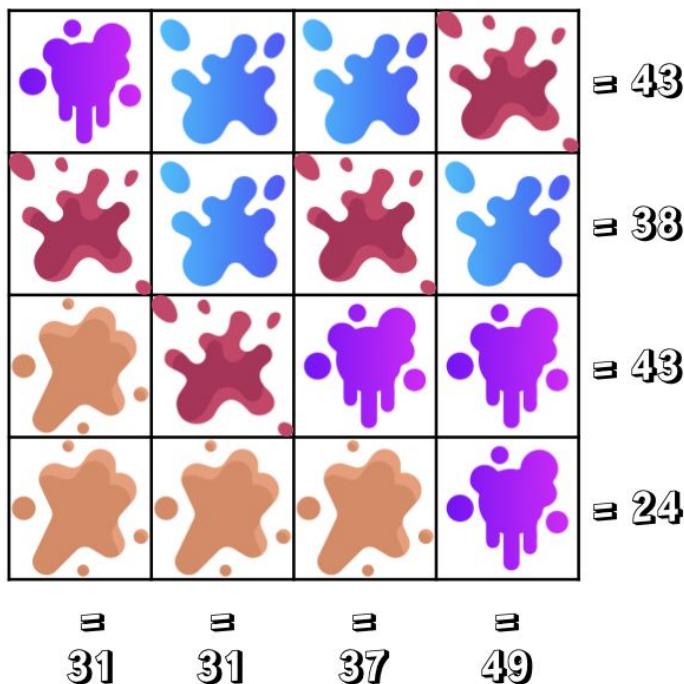
|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
|   |   |   |   |   |   |   |   | 3 |
| 9 | 6 |   |   | 2 |   |   |   | 1 |
|   |   |   |   | 7 | 9 | 2 | 5 |   |
|   | 2 | 9 |   |   |   |   |   |   |
|   | 8 | 6 | 2 | 4 | 1 |   |   |   |
|   |   |   |   | 5 | 2 |   |   | 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

MEDIUM



**Exercise #51 :**

Find the value of each stain.



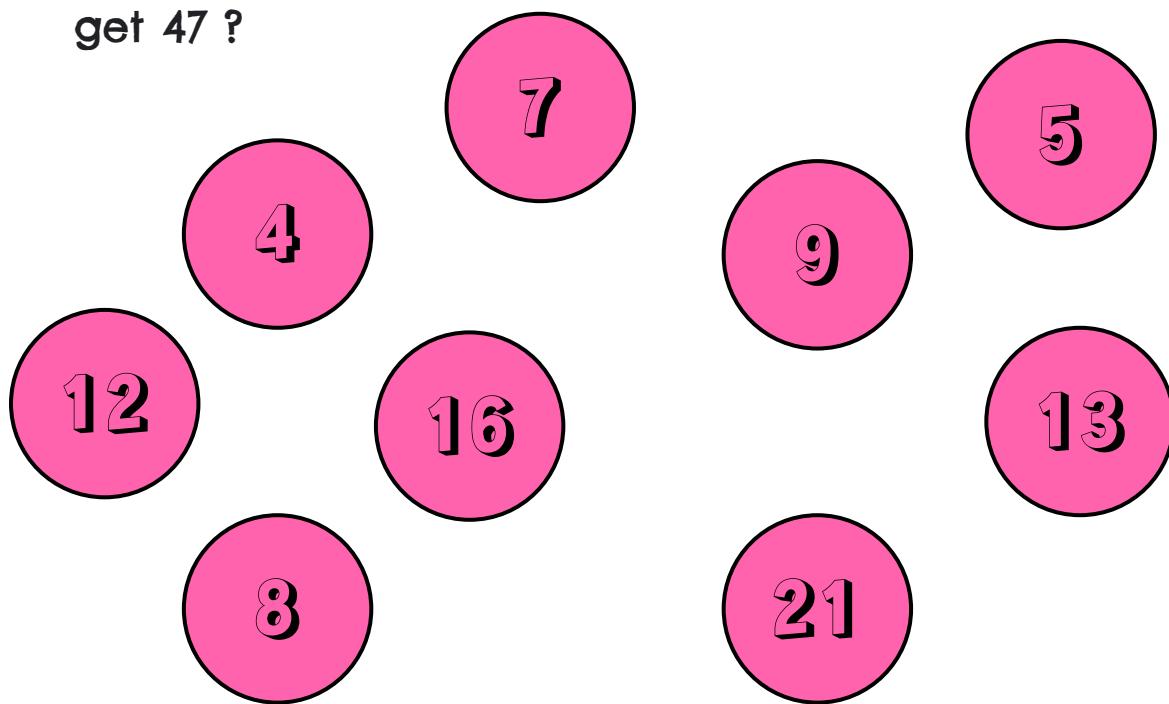
**Exercise #52 :** In the houses below, which belong to Chad, Mike, Lauren and James, find James's.

- If Chad does not have house 1, then he has house 2
- If house 2 is not in Chad, house 4 is not in James
- If house 3 is not Chad's, then house 2 is Mike's



**Exercise #53 :**

What is the minimum number of tokens needed to get 47 ?



**Exercise #54 :**

Place the counters in the squares to form a subtraction.

|   |   |  |   |
|---|---|--|---|
|   |   |  |   |
| - |   |  | 2 |
| 2 | 9 |  |   |



# ANSWERS

## Exercise #1

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

## Exercise #2

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

# ANSWERS

Exercise #3

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

Exercise #4

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

# ANSWERS

## Exercise #5

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

## Exercise #6

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

# ANSWERS

## Exercise #7

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

## Exercise #8

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

# ANSWERS

Exercise #9

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

Exercise #10

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

# ANSWERS

Exercise #11

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

Exercise #12

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

# ANSWERS

Exercise #13

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

Exercise #14

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

# ANSWERS

Exercise #15

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

Exercise #16

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

# ANSWERS

Exercise #17

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

Exercise #18

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

# ANSWERS

Exercise #19

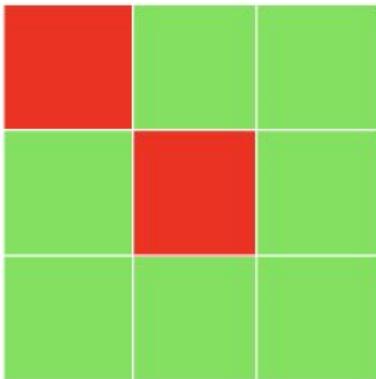
|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 5 | 4 | 7 | 6 | 1 | 3 | 2 | 8 | 9 |
| 9 | 1 | 8 | 2 | 7 | 5 | 3 | 4 | 6 |
| 6 | 2 | 3 | 9 | 4 | 8 | 5 | 7 | 1 |
| 4 | 3 | 5 | 7 | 2 | 9 | 6 | 1 | 8 |
| 2 | 8 | 6 | 4 | 5 | 1 | 9 | 3 | 7 |
| 1 | 7 | 9 | 3 | 8 | 6 | 4 | 5 | 2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

Exercise #20

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

# ANSWERS

## Exercise #21

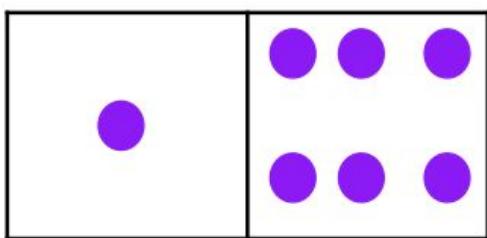


## Exercise #22

H N T

|           |            |
|-----------|------------|
| 1 -> One  | 6 -> Six   |
| 2 -> Two  | 7 -> Seven |
| 3 -> Tree | 8 -> Eight |
| 4 -> Four | 9 -> Nine  |
| 5 -> Five | 10 -> Ten  |

## Exercise #23



## Exercise #24

1, 3, 6, 10, 15, 21, 28

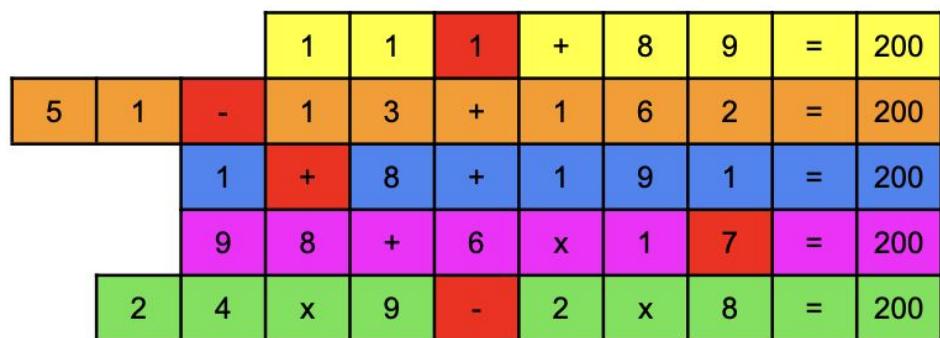
1, 2+1, 3+3, 4+6, 5+10, 6+15, 7+21

# ANSWERS

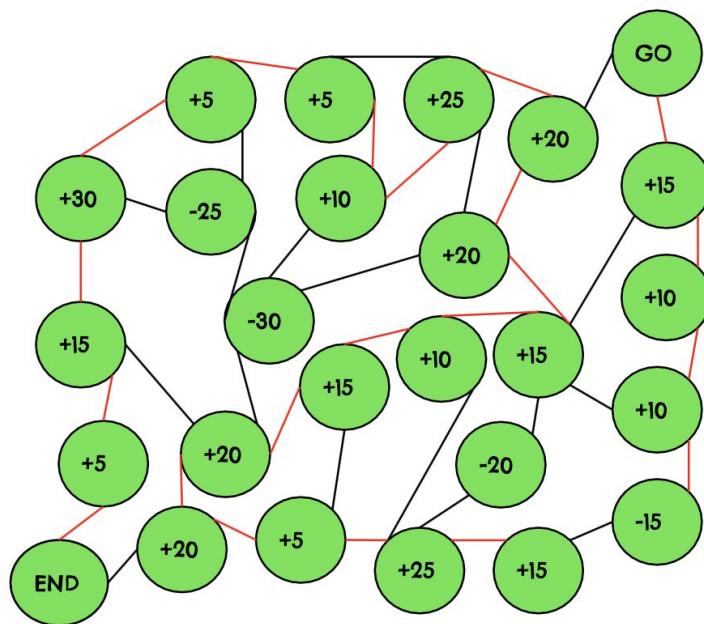
## **Exercise #25**

$$((5 \div 5) + 5) \times 5 = 30$$

## **Exercise #26**

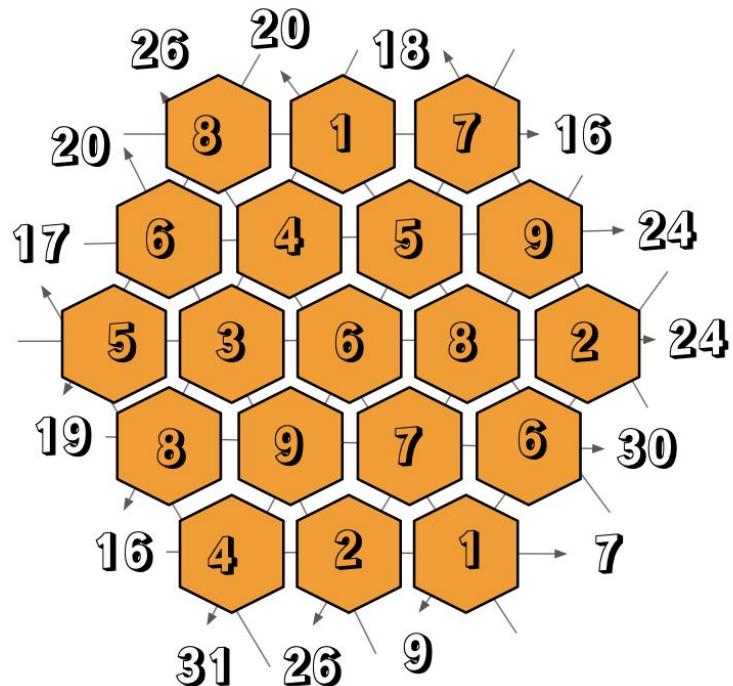


## **Exercise #27**

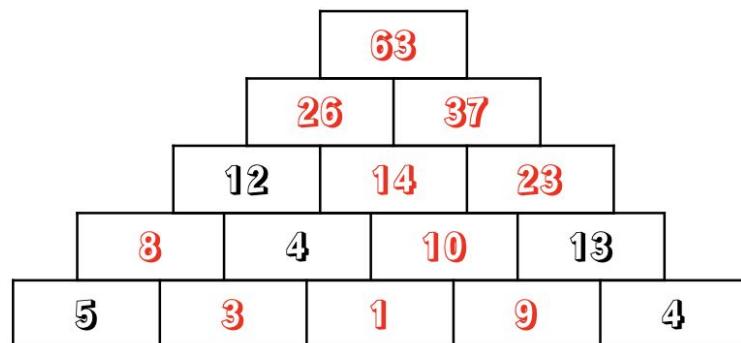


# ANSWERS

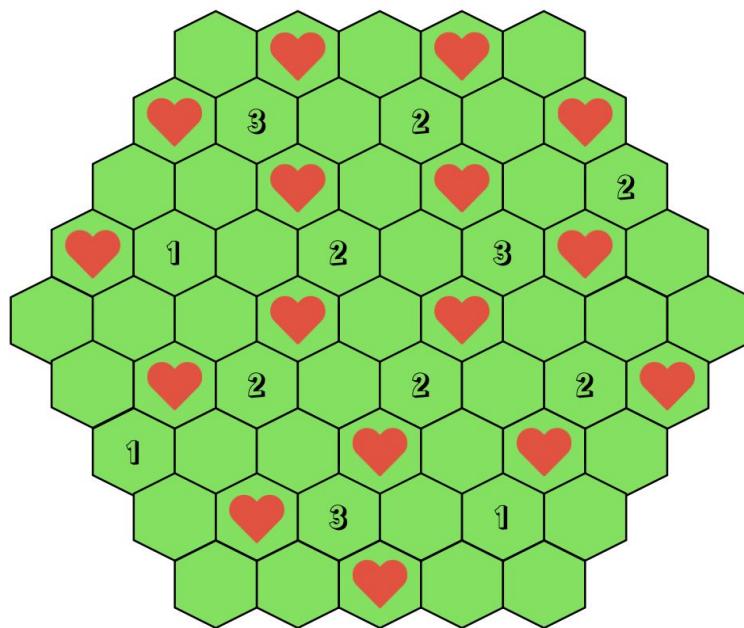
## **Exercise #28**



## **Exercise #29**



## **Exercise #30**



# ANSWERS

Exercise #31

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

Exercise #32

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

# ANSWERS

Exercise #33

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

Exercise #34

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

# ANSWERS

Exercise #35

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

Exercise #36

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

# ANSWERS

Exercise #37

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

Exercise #38

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

# ANSWERS

Exercise #39

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

Exercise #40

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

# ANSWERS

## Exercise #41

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

## Exercise #42

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

# ANSWERS

Exercise #43

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

Exercise #44

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

# ANSWERS

Exercise #45

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

Exercise #46

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

# ANSWERS

Exercise #47

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

Exercise #48

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

# ANSWERS

Exercise #49

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

Exercise #50

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

# ANSWERS

## Exercise #51

 = 15

 = 9

 = 10

 = 3

## Exercise #52

Home 1 -> Chad

Home 2 -> Mike

Home 3 -> James

Home 4 -> Lauren

## Exercise #53

$$21 + 13 + 5 + 8 \text{ ou } 21 + 13 + 4 + 9 \text{ ou } 21 + 12 + 5 + 9$$

## Exercise #54

|   |   |   |   |
|---|---|---|---|
|   | 7 | 3 | 8 |
| - | 4 | 4 | 2 |
|   | 2 | 9 | 6 |