## **Girls' Adventures in Math 2019** Round 2, Division 3-5

An **"upside-downie number"** is a number that is a valid number when rotated to be upside down.

For example, 8961 is an **upside-downie number** because when we turn it upside down, we get 1968.

However, 25 is not an **upside-downie number** because neither 2 nor 5 is a number when turned upside down.

180 is also not an **upside-downie number** because a three digit number cannot start with 0.

An "**upside-downie expression**" is a mathematical expression written using **upside-downie numbers** that equals itself when turned upside down.

For example, 8+I is an **upside-downie expression** because when turned upside down, it is also equal to 9.

However, 8–6 is not an **upside-downie expression** because it evaluates to a different number upside down.

8961 2 1968

25 S XX

180 C 081

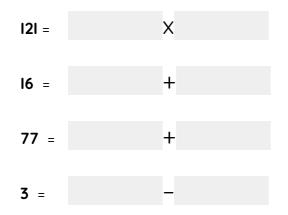
## TEAM CODE: SCHOOL:

## Part I: Which three of the expressions below are upside-downie expressions?

A. 22 – 22	E.	811 - 188
B. 9I – I6	F.	101 + 181
C. 90 + 06	G.	II + 8
D. II + 66	Η.	66 x II

Answer: The upside-downie expressions listed above are , , and .

Part 2: Find an upside-downie expression using positive integers that evaluates to the following results.



Part 3: Find an upside-downie expression using positive integers that evaluates to the following results.

