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## Extension: Reflections \& Rotations with Letters!

1) Write out all of the capital letters in the alphabet:
2) Which of these letters would look the same if you rotated them $180^{\circ}$ ?
3) Which of these letters would look the same if you rotated them only $90^{\circ}$ ?
4) Which of these letters would look the same if you reflected them using a vertical line of reflection?
5) Which of these letters would look the same if you reflected them using a horizontal line of reflection?
6) Which letters, upper case or lower case, turn into a different letter when you rotate them $180^{\circ}$ ?
7) Try to come up as many entire words as you can that look exactly the same when you reflect them using a horizontal line of reflection. (As an example, "MATH" does not work because most of the letters are flipped: MATH )

WVIH
8) Try to come up as many entire words as you can that look exactly the same when you reflect them using a vertical line of reflection. You may use upper case or lower case letters. "HOT" would not work because it would become "TOH". And even though "RACECAR" is a palindrome, it would not work because most of the letters would become reversed:

## RACECAR|ЯAЈЭЈАЯ

9) Try to come up as many entire words as you can that look exactly the same when you rotate them $180^{\circ}$.
