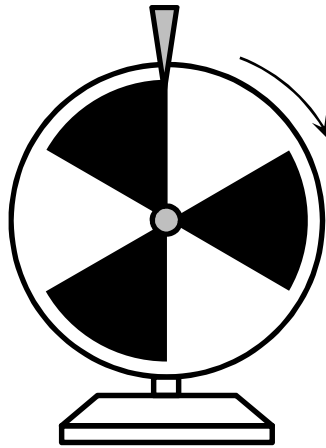


~ FAN ~

The hot and stuffy weather often makes people hot-tempered as well. Joy and Kid both hate hot weather, so they fought over turning the fan toward where each of them was sitting. They kept taking turns redirecting the fan for a long time, until they agreed to settle the matter by gambling using the troublesome fan itself.



Before starting each round, Joy and Kid would set the fan blades as shown in the figure (the black areas are the blades, the white areas are empty space). That is, the edge of one blade would stop exactly at the marker above. Then they would turn the fan on and off. The blades would spin clockwise (while the marker stays fixed).

When the fan stops spinning:

- If the marker points to a fan blade, Joy gets one point.
- If the marker points to an empty space, Kid gets one point.
- If the marker points exactly to the edge of a fan blade, neither gets a point.

After N rounds, whoever has more points wins and gets to use the fan alone all day.

The three fan blades are identical. Each blade spans 60 degrees at the center, and the gaps between blades are also 60 degrees at the center (a full fan rotation is 360 degrees).

Input

The first line contains an integer N ($1 \leq N \leq 10\,000$), the number of rounds. For the next N lines, the $(i + 1)$ -th line contains an integer θ_i ($1 \leq \theta_i \leq 100\,000\,000$), which means the fan spins θ_i degrees in the i -th round.

Output

Output the scores of Joy and Kid, and then the winner, Joy or Kid, if there is a clear winner. If it is a tie, output Draw.

Example

Input	Output
3 30 175 609	3 0 Joy
3 70 171 72	1 2 Kid
4 300 3300 330 30	1 1 Draw