2A

$[0, 1, \ldots, n-1] \rightarrow p_i$
$\rightarrow q_i$

$$\gamma_i = \max_{j=0}^{i} \left(2^{p_j} + 2^{q_{i-j}}\right)$$

Dp → 2d-array? → ~~i → row~~ 0, 1, ... n-1
~~j → column~~

$i - j = \text{index of } q$

$2^{70} + 2^{50} \;/\; 2^{60} + 2^{55}$

but

$$2^{60} + 2^{55} < 2^{61} < 2^{70}$$

- if one indice is greater its max.
  so max will be that which contains highest power → no need / way to implement dp here?
- no we don't want to recalculate powers of 2 → use 2-d dp array to store? Yes

~~Final:~~

- If we reach some i where $q_i = n-1$, then for greater i's we don't need to recalculate max.
- γ_i → (i) find highest p_j from $j=0$ to i
  (ii) find highest q_{i-j} from $j=0$ to i
  if both equal compare ~~p_j with q~~

{ store power of 2 in dp
~~Store~~ to find maxes use ~~help too~~ dp array for p, q.

bottom up dp