import math

def minimax(tree, depth):

max\_turn = bool(depth % 2)

for \_ in range(depth):

zipped = zip(tree[::2], tree[1::2])

if max\_turn:

tree = [max(a, b) for a, b in zipped]

else:

tree = [min(a, b) for a, b in zipped]

max\_turn = not max\_turn

return tree[0]

A = [3, 5, 2, 9, 12, 5, 23, 23]

depth = math.ceil(math.log(len(A), 2))

print(minimax(A, depth))