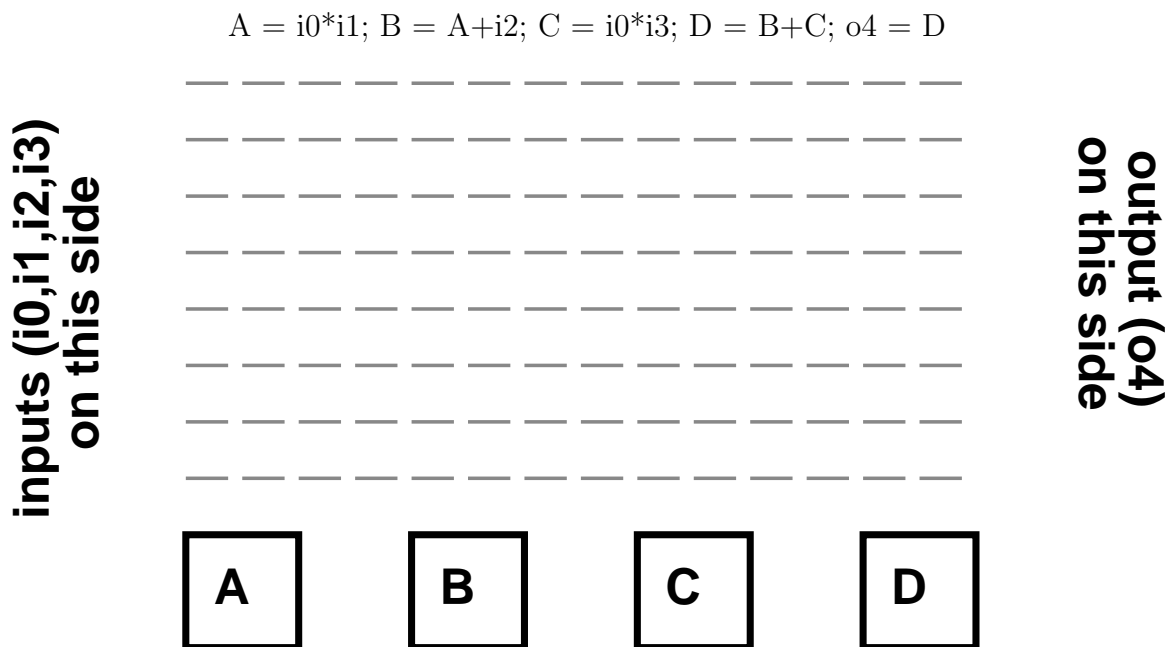


Consider the following 1D placement for the logic:



Assume:

- Input pins are on the left of the gate.
- Gate output is the rightmost pin on the gate.

1. Count the number of unique signals in this graph:

2. What is the maximum channel density?

3. Assign the net connections to channels to minimize the number of channels required.

4. How many channels do you need to route the all the nets?