LSV_PA1

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Problem B.

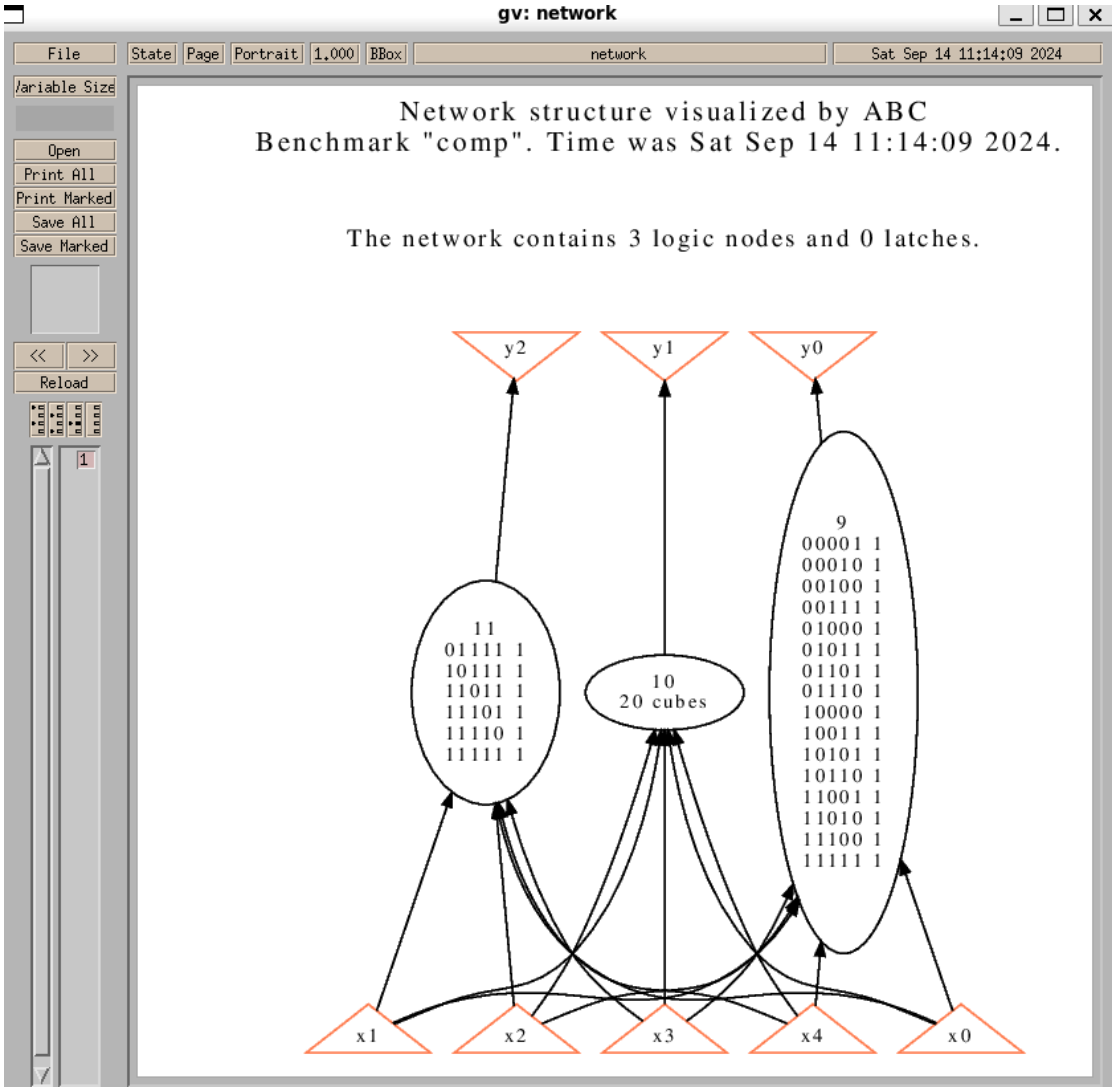
1.

```
abc 01> read comp.blif
abc 02>
```

2.

```
abc 02> print_stats
comp                  : i/o =    5/    3  lat =    0  nd =    3  edge =    15  cube =    42  lev = 1
```

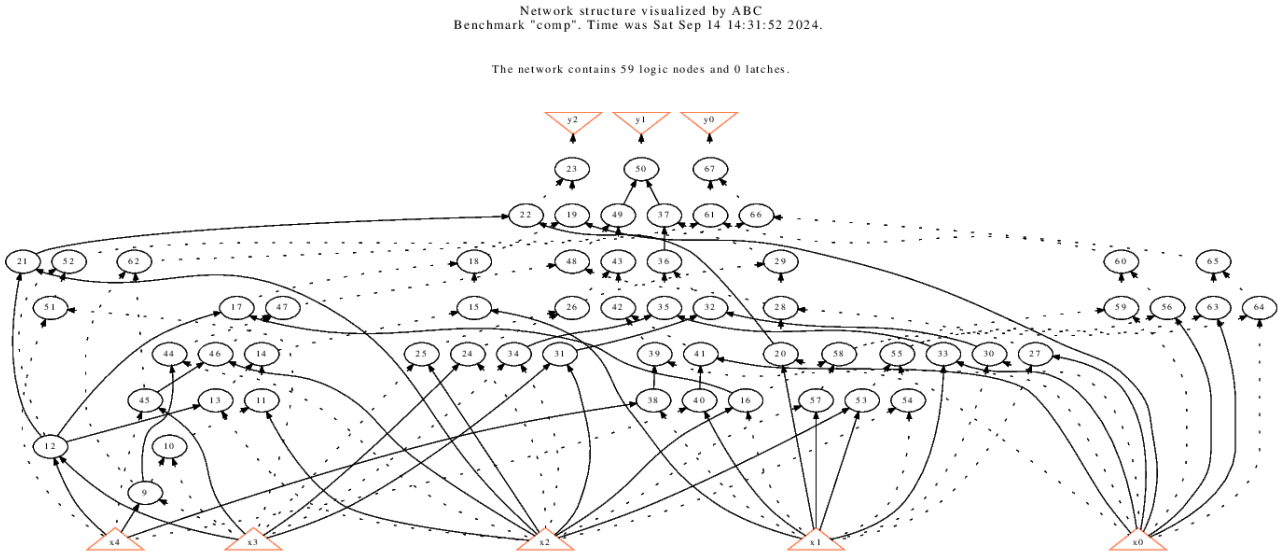
3.



4.

```
abc 02> strash
abc 03>
```

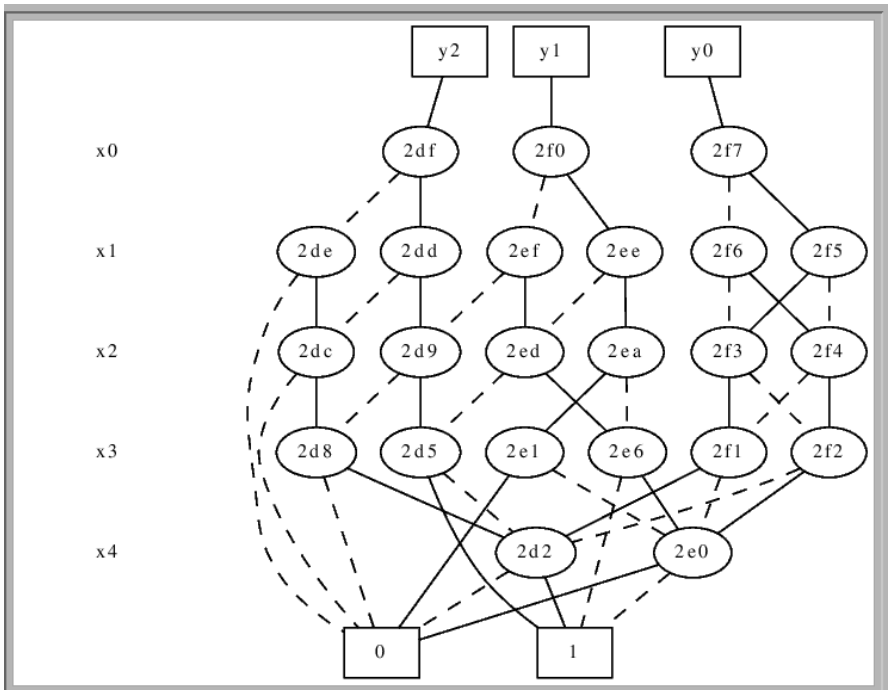
5.



6.

```
abc 03> collapse
abc 04>
```

7.



Problem C.

(a)

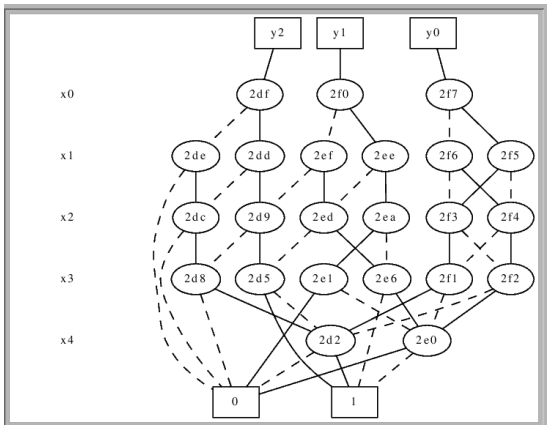
(1)

```
================================================
abc 01> read comp.blif
abc 02> strash
abc 03> ps
comp                    : i/o =    5/    3  lat =    0  and =     59  lev =  8
abc 03> read comp.blif
abc 04> aig
abc 04> ps
comp                    : i/o =    5/    3  lat =    0  nd =     3  edge =     15  aig  =    65  lev = 1
```

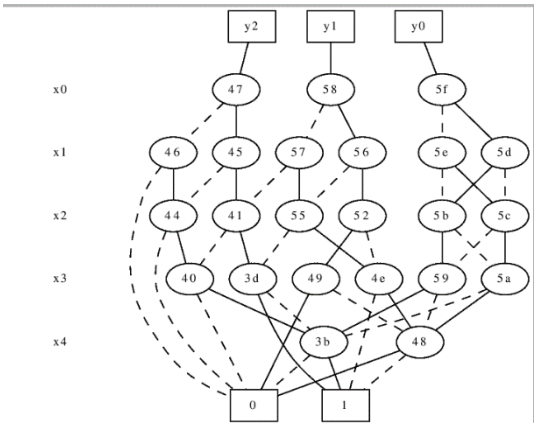
We can find that the number of nodes with the command “strash” is less than that with command “aig”. It may because structural hashing can simplify the network.

(2)

Collapse



bdd



There’s no big difference between the results of the two commands.

It may because that the we represent the logic network with primary inputs.

(b)

```
abc 04> read comp.blif
abc 05> strash
abc 06> logic
abc 07> ps
comp                    : i/o =    5/    3  lat =    0  nd =    59  edge =    118  cube =    59  lev = 8
abc 07> show
```

Network structure visualized by ABC
Benchmark "comp". Time was Thu Sep 19 21:49:06 2024.

The network contains 59 logic nodes and 0 latches.