r12943094 劉建亨

- 2. (b)
 - o terminal:

```
abc 01> read mul.blif
abc 02> ps
mul : i/o = 4/ 4 lat = 0 nd = 4 edge = 16 cube = 8 lev = 1
abc 02> show
abc 02> gv: Unable to open the display.

abc 02> strash
abc 03> show
abc 03> show
abc 03> show
abc 04> show_bdd -g
abc 04> show_bdd -g
abc 04> gv: Unable to open the display.
```

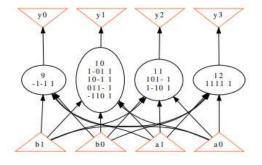
since it still can't display on work station, I use https://ehubsoft.herokuapp.com/psviewer/

 $\underline{\text{(https://ehubsoft.herokuapp.com/psviewer/)}} \ to \ see \ the \ results$

Network structure visualized by ABC Benchmark "mul". Time was Fri Sep 15 22:05:24 2023.

The network contains 4 logic nodes and 0 latches.

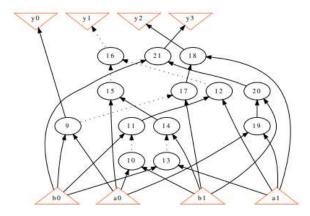
o 3.

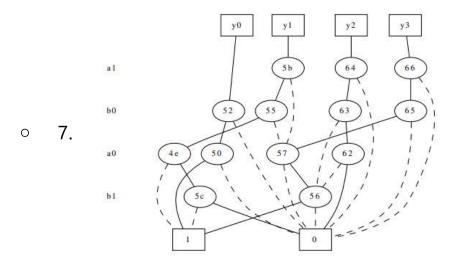


Network structure visualized by ABC Benchmark "mul". Time was Fri Sep 15 22:06:37 2023.

The network contains 13 logic nodes and 0 latches.

o 5.



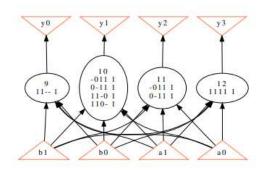


• 3. (a)

Network structure visualized by ABC Benchmark "mul". Time was Fri Sep 15 22:08:59 2023.

The network contains 4 logic nodes and 0 latches.

o aig:

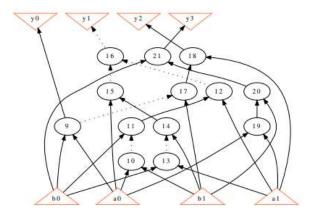


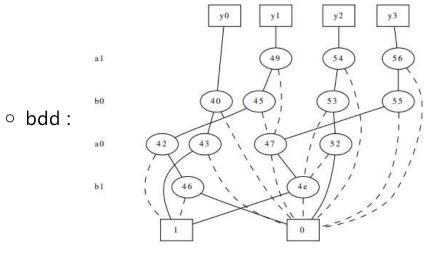
 with "aig" command, we found it just like showing blif with different order of input variables

Network structure visualized by ABC Benchmark "mul". Time was Fri Sep 15 22:06:37 2023.

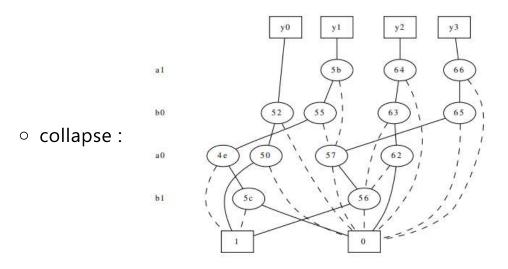
The network contains 13 logic nodes and 0 latches.

o strash:





we found the result of bdd and collapse are same, it's probably because the blif file is already the simplest.



- 3. (b)
 - my command sequence :

```
abc 01> read mul.blif
abc 02> strash
abc 03> logic
abc 04> sop
abc 04> show
abc 04> gv: Unable to open the display.
```

The network contains 13 logic nodes and 0 latches.

