

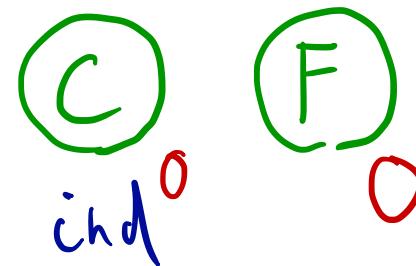
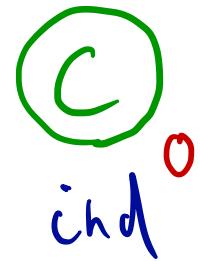
insert BasicItem (ind, "C")



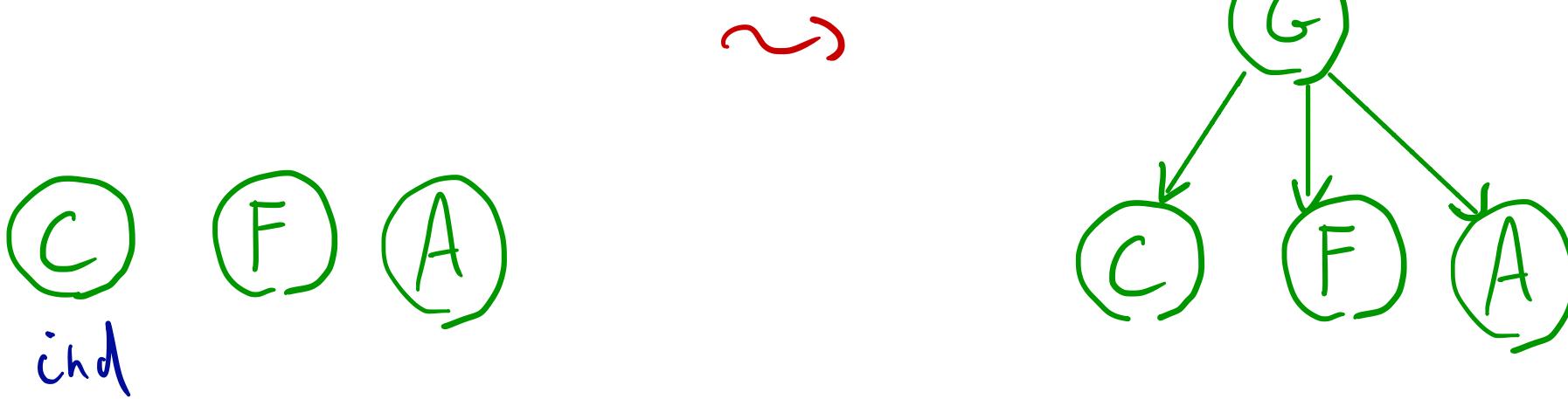
ind

(C)₀
ind

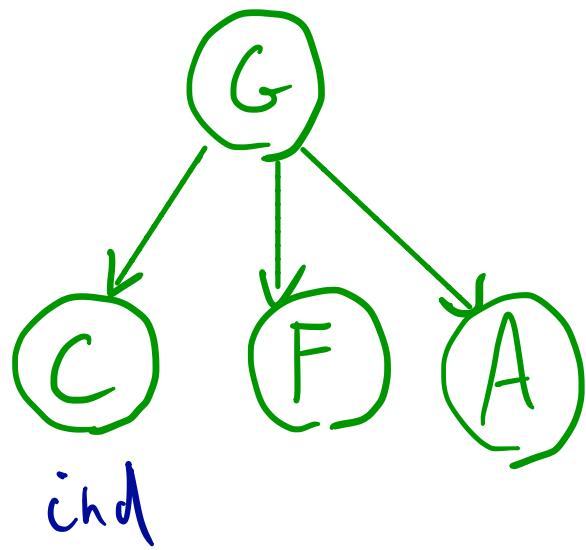
insert BasicItem (ind, "F")



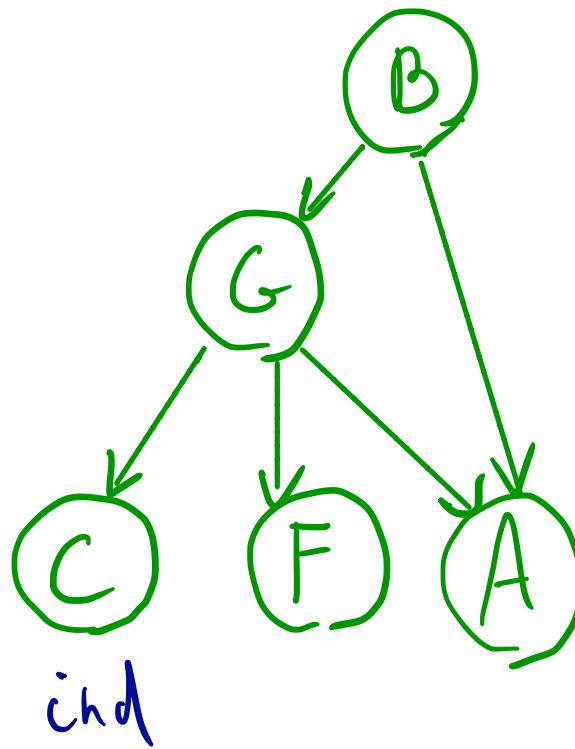
`insertItem(ind, "G", comp, 3)` on `comp = {"F", "C", "A"}`



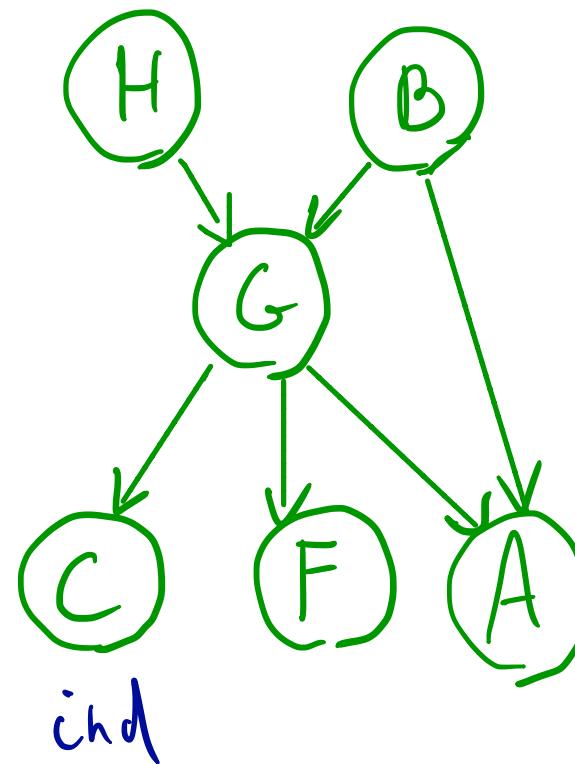
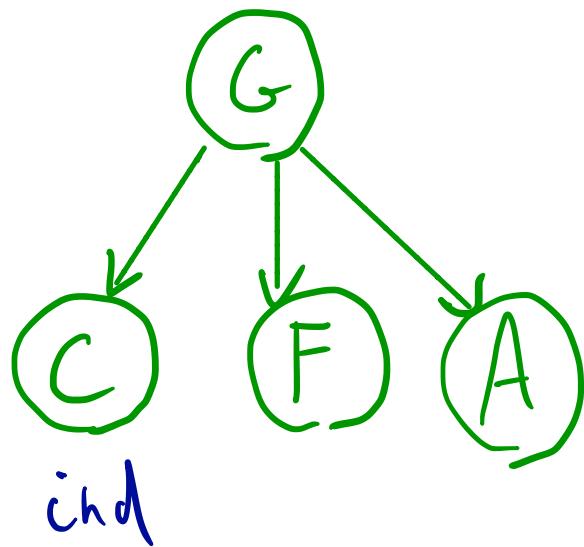
insertItem(ind, "B", comp, 2) con comp = {"A", "G"}



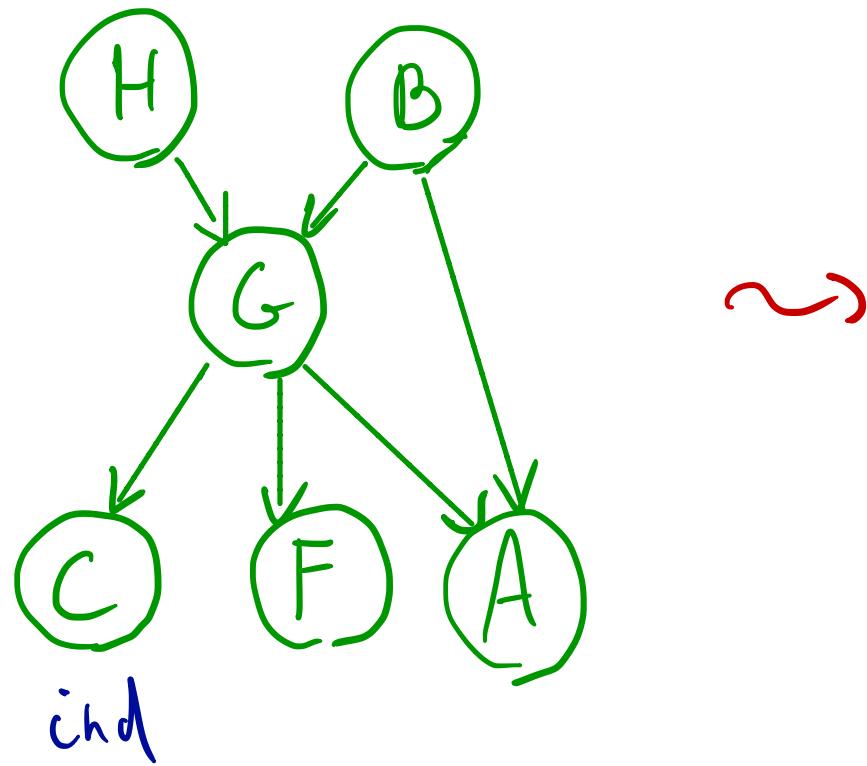
~



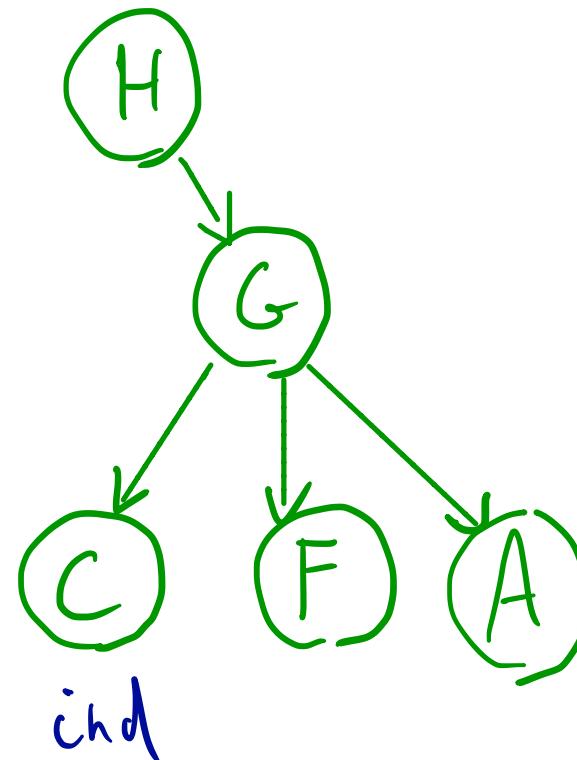
`insertItem(ind, "H", comp, 1) con comp = {"G"}`



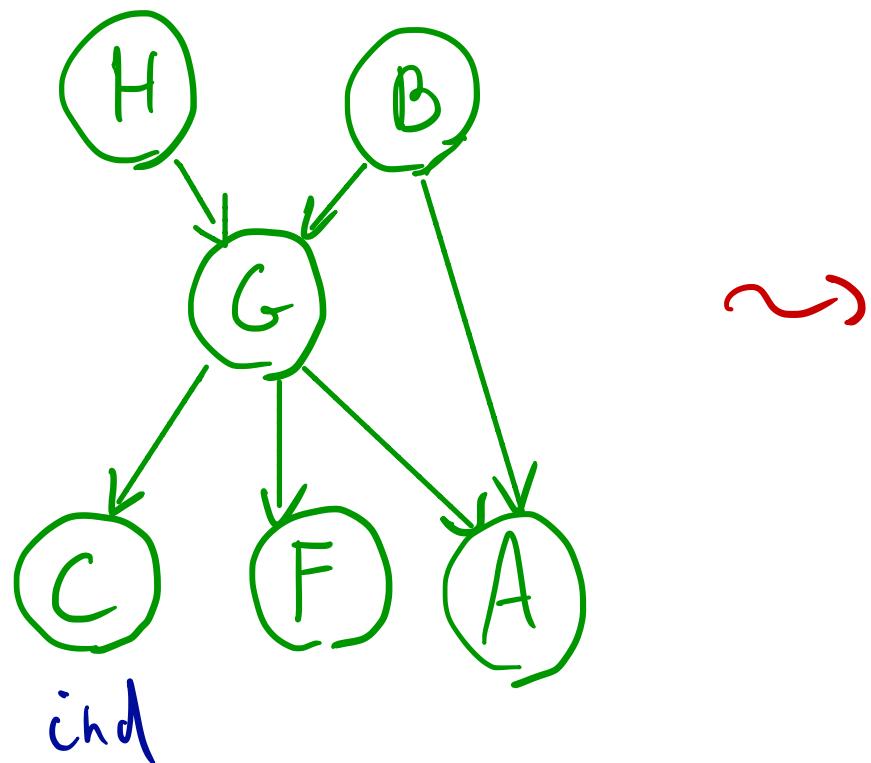
`removeItem(ind, "B")`



?



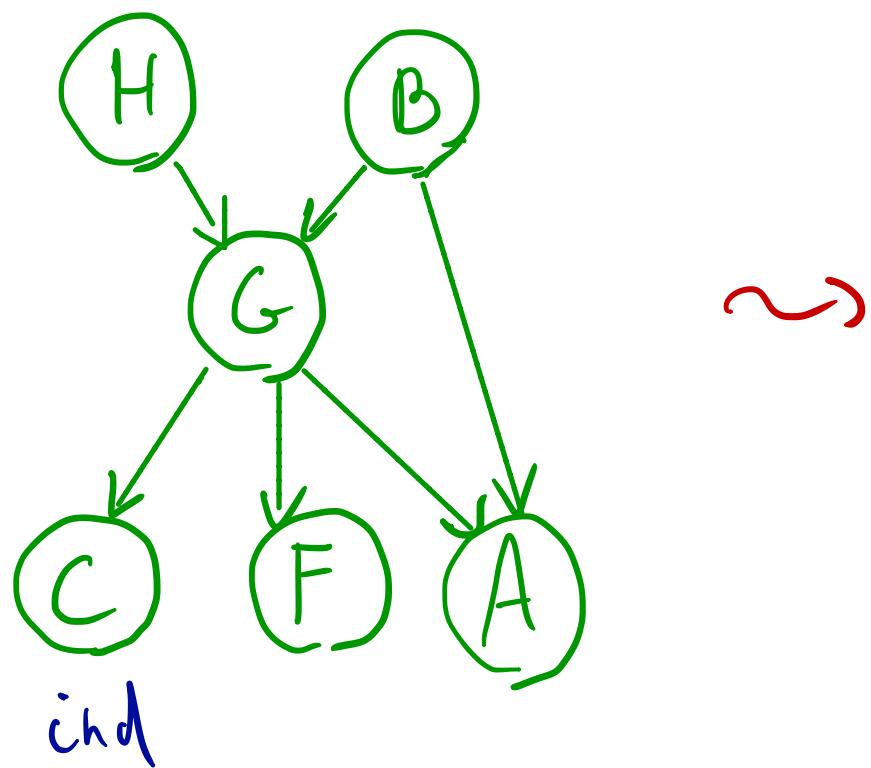
`removeItem(ind, "G")`



~



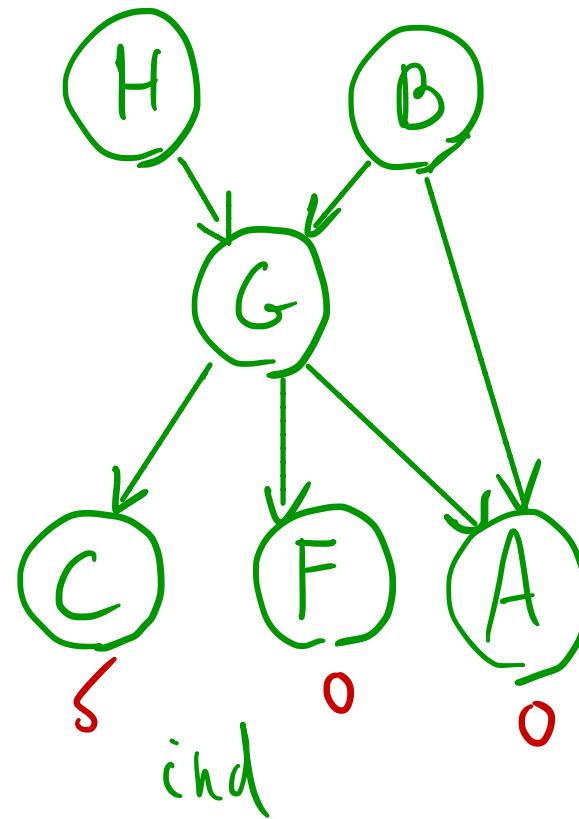
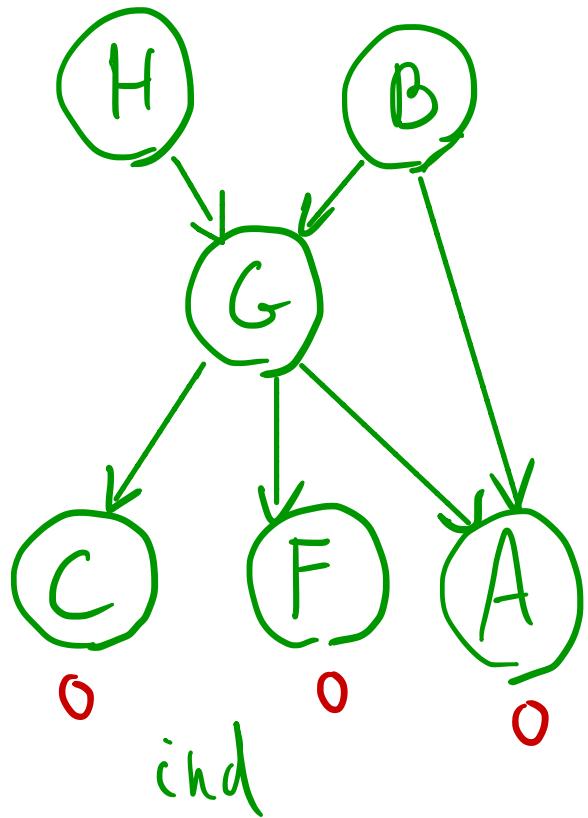
removeItem(ind, "C")



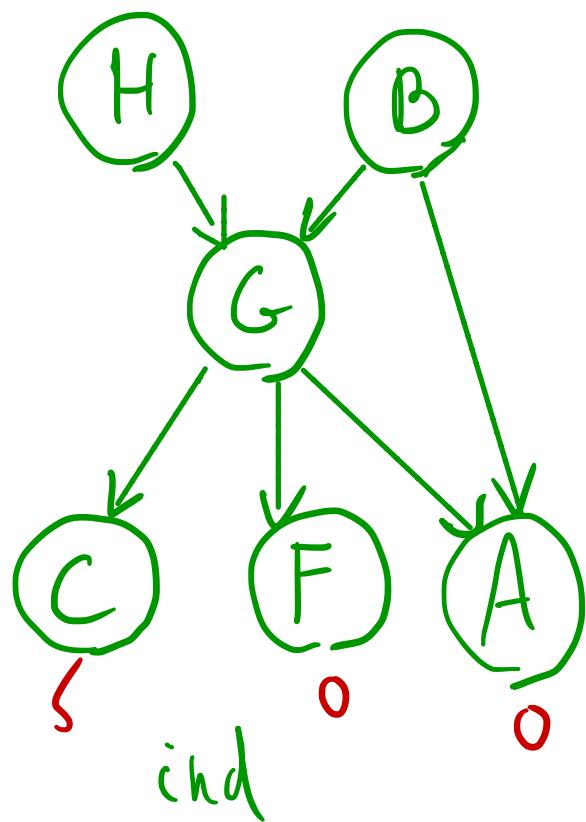
?



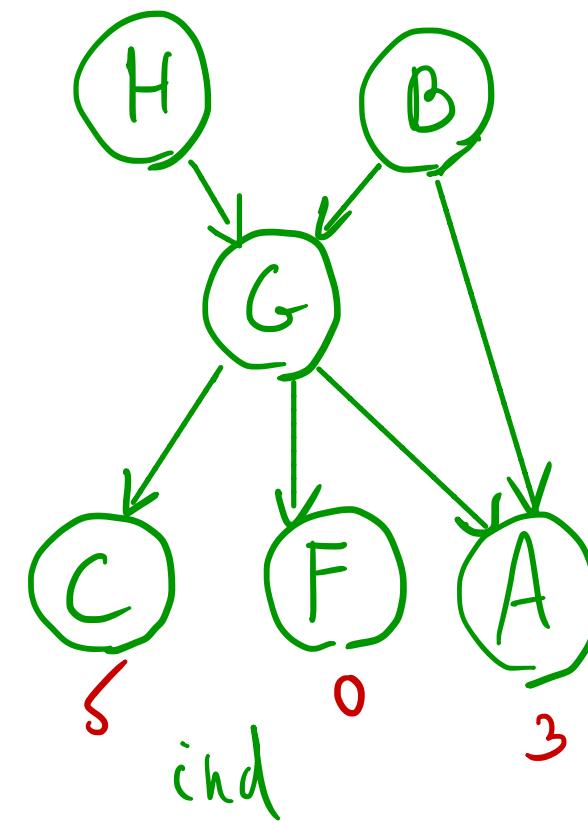
addBasicItem(ind, "C", S)



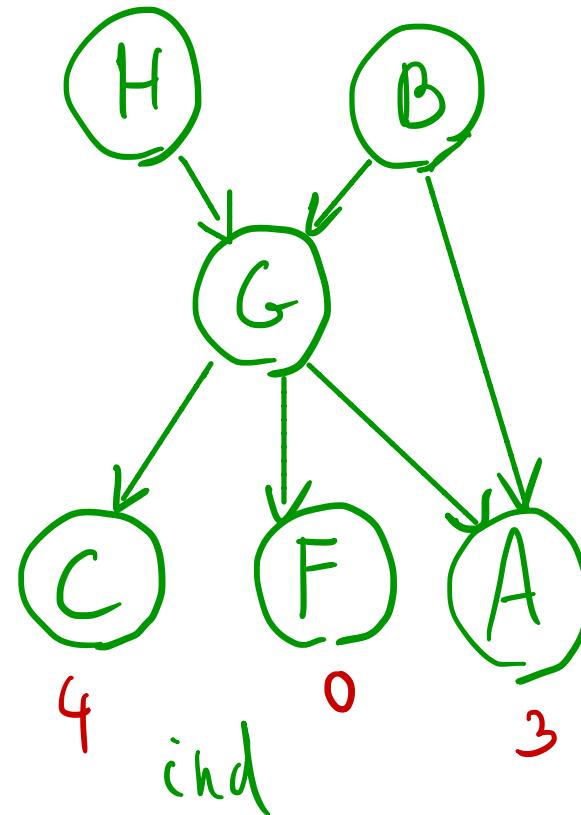
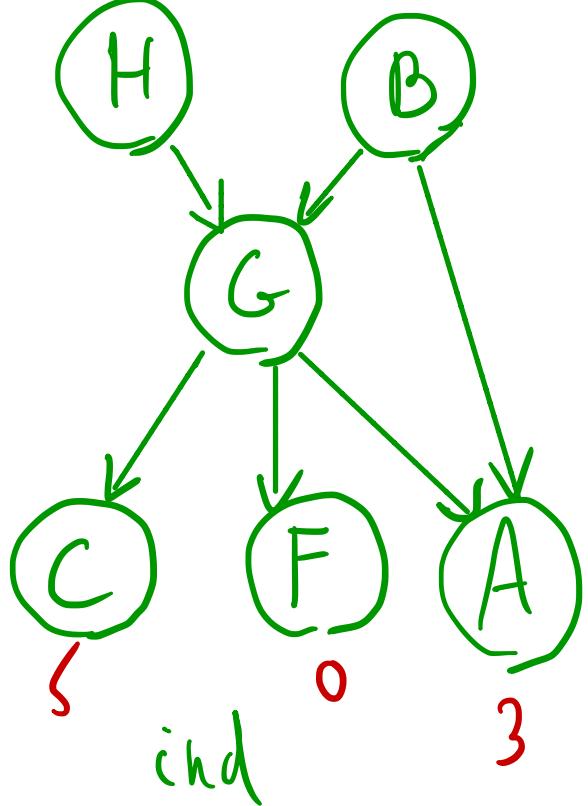
addBasicItem(ind, "A", 3)



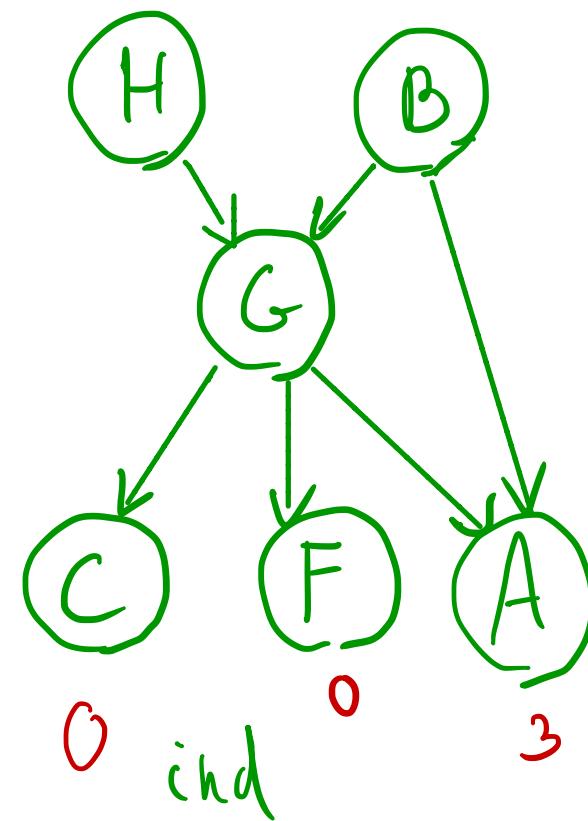
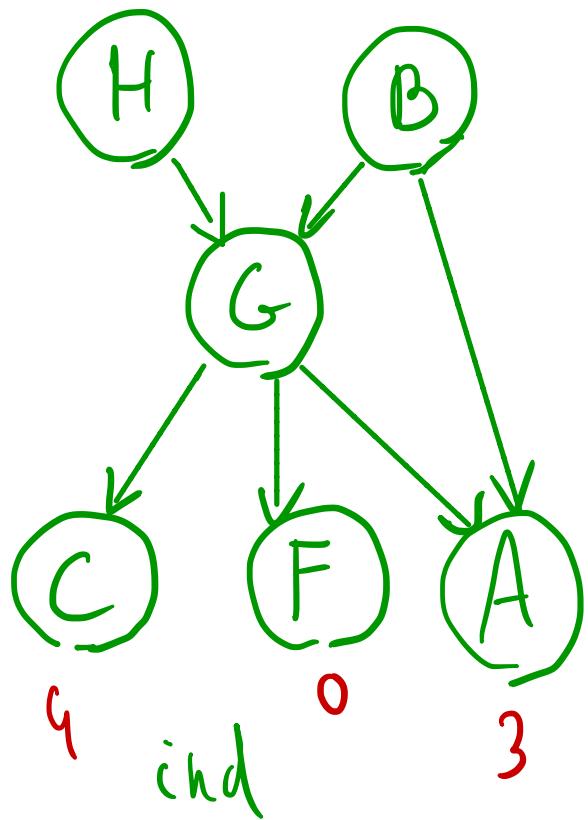
?



addBasicItem(ind, "C", -1)



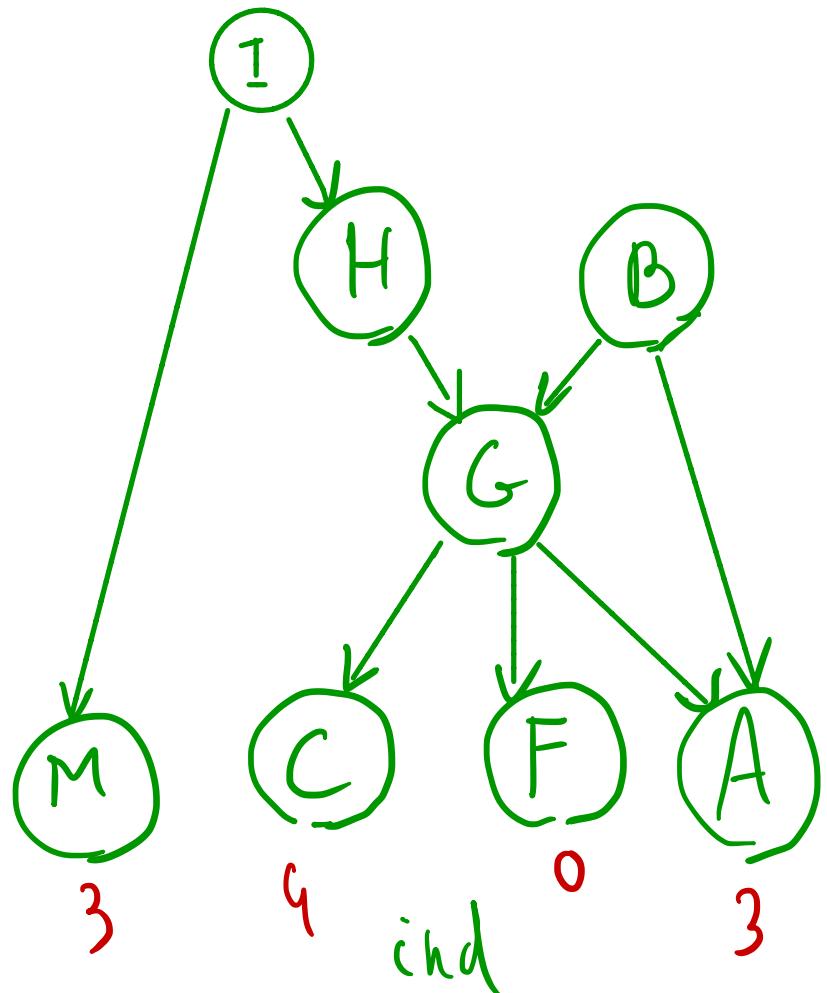
`addBasicItem(ind, "C", -6)`



listNeed(ind, "A", li);

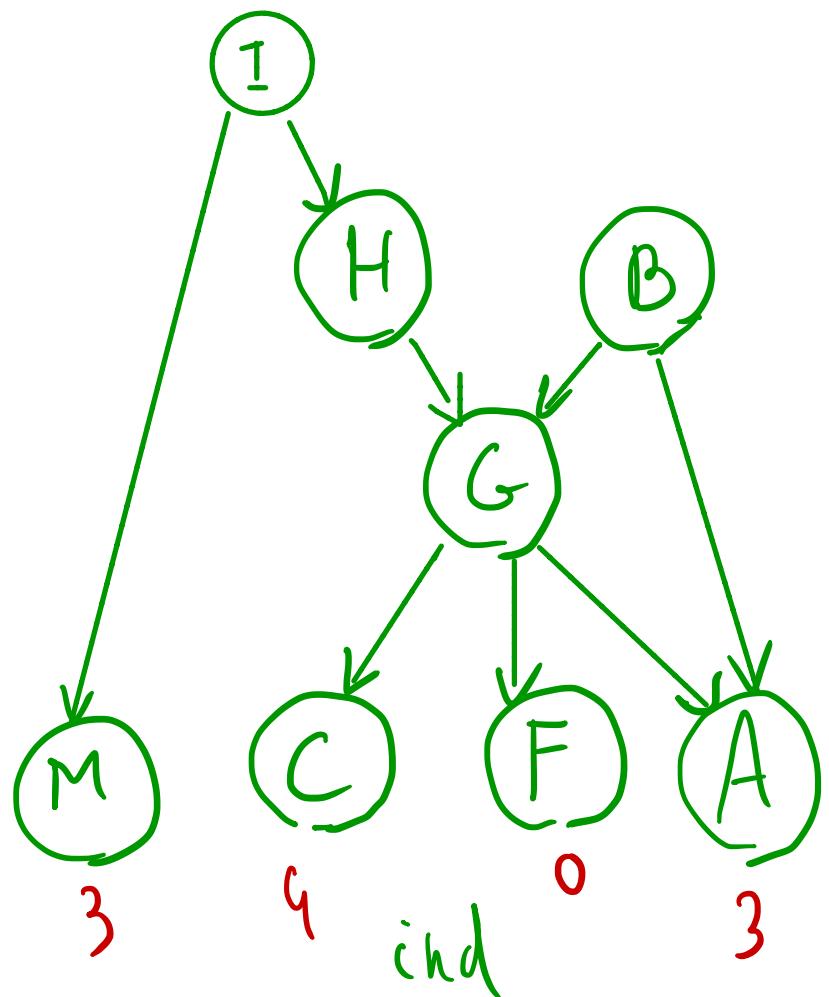
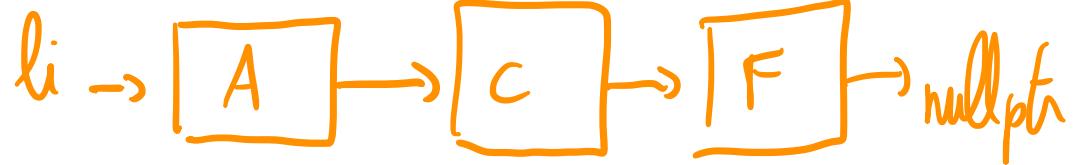
}

li = nullptr



listNeed(ind, "G", li);

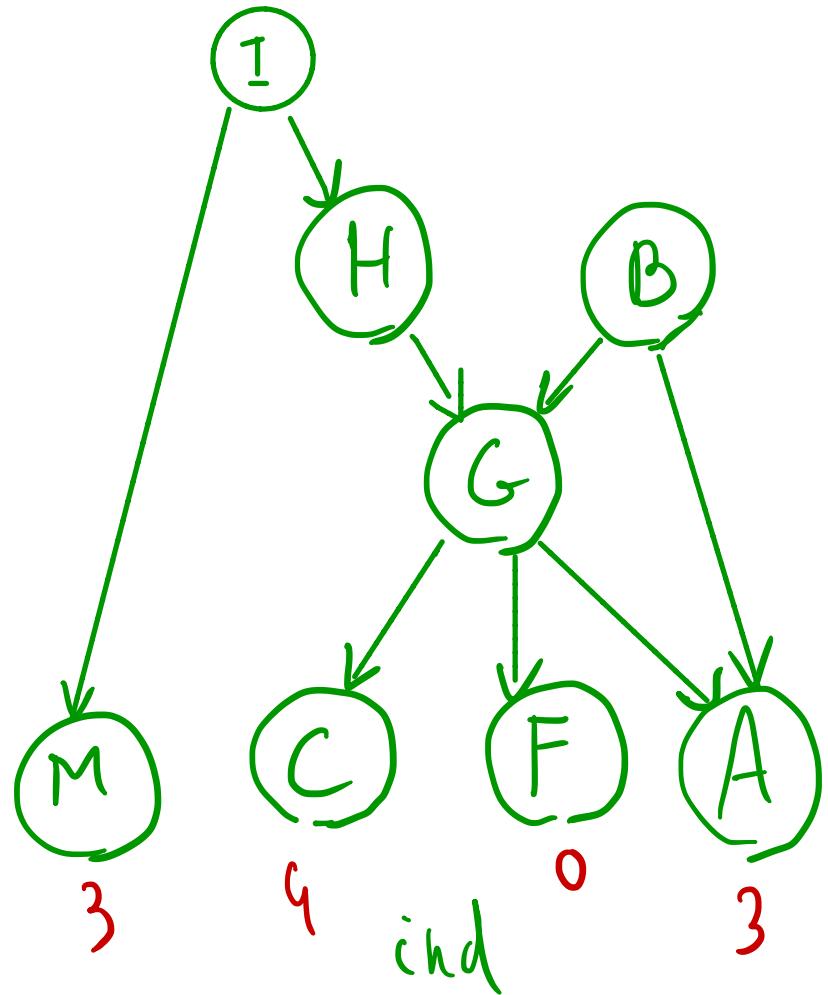
}

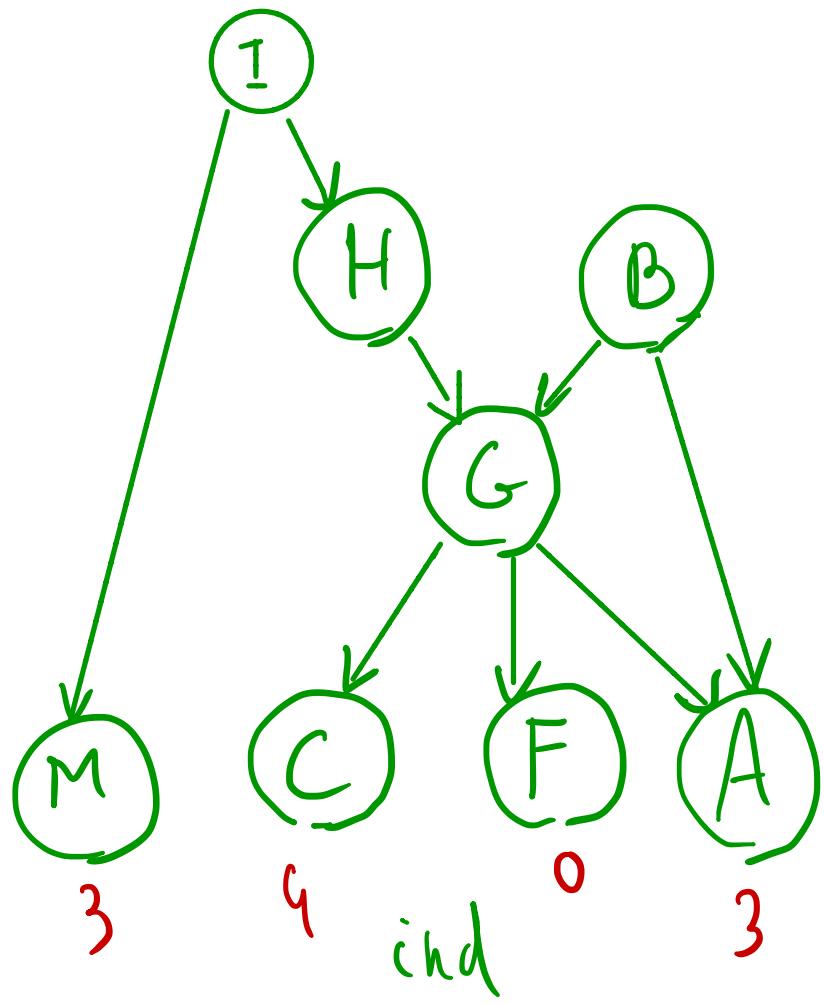


listNeed(ind, "B", li);

}

li → A → G → nullptr

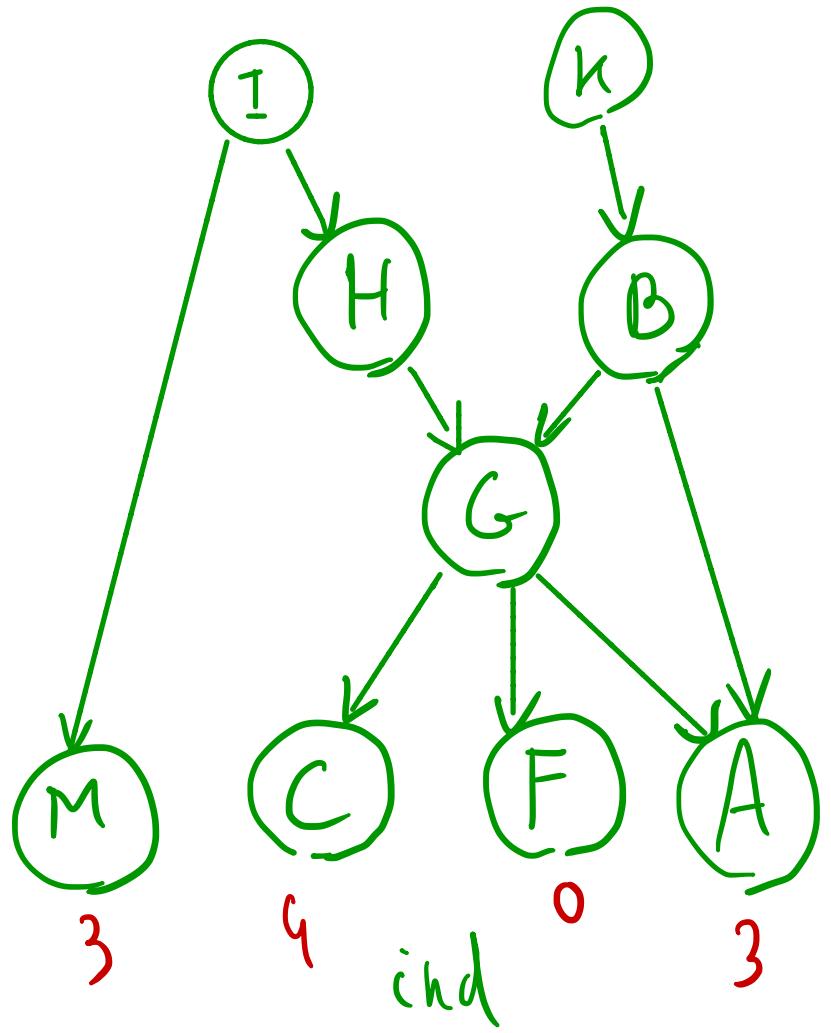




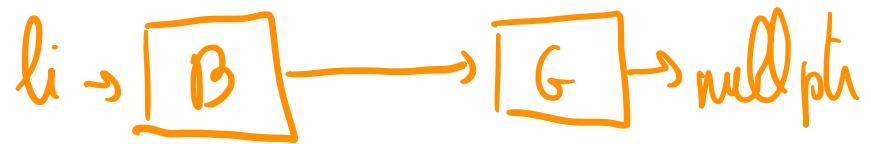
listNeededBy(ind, "B", li);

}

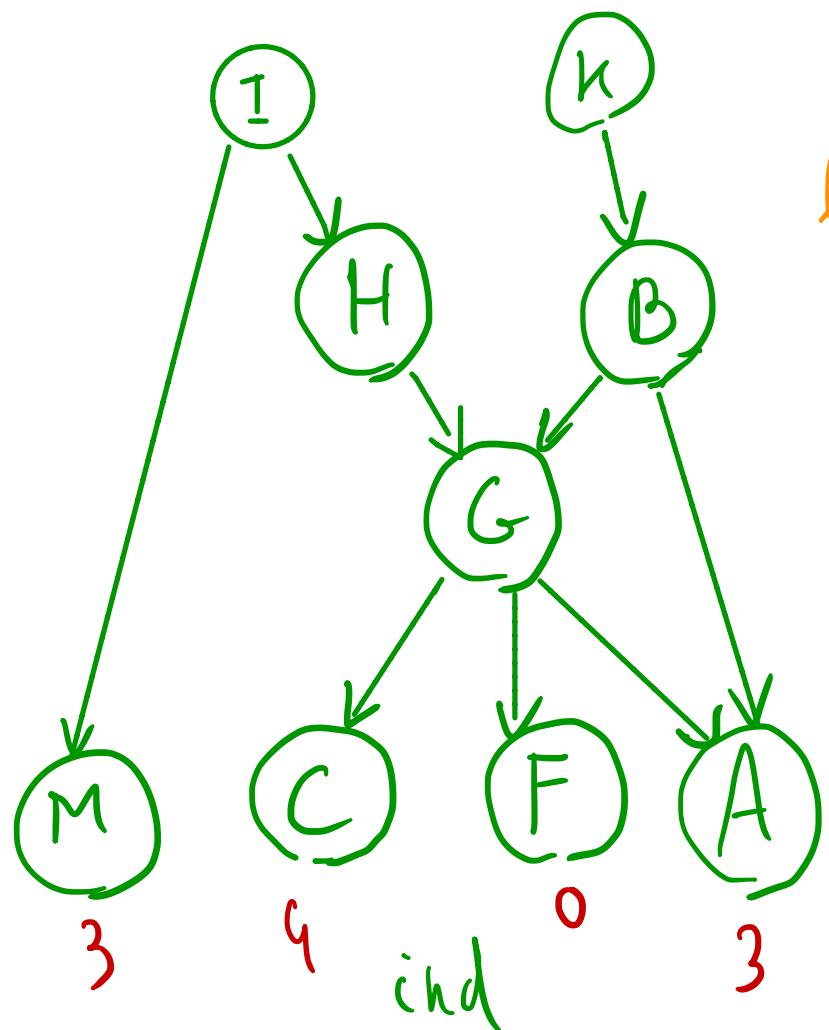
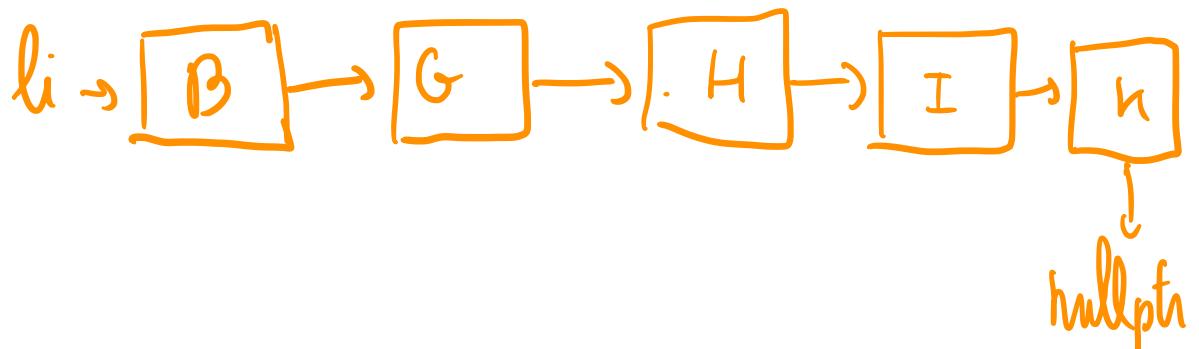
li = nullptr

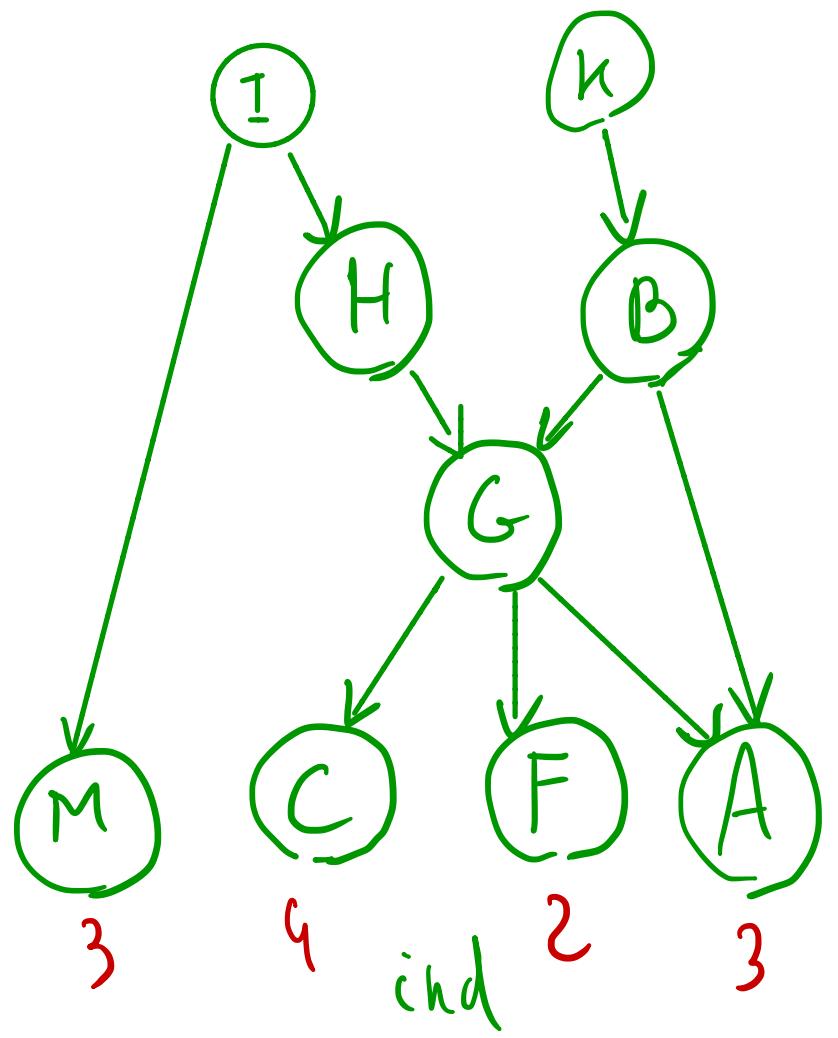


`listNeededBy(ind, "A", li);`



listNeededByChain(ind, "A", li);

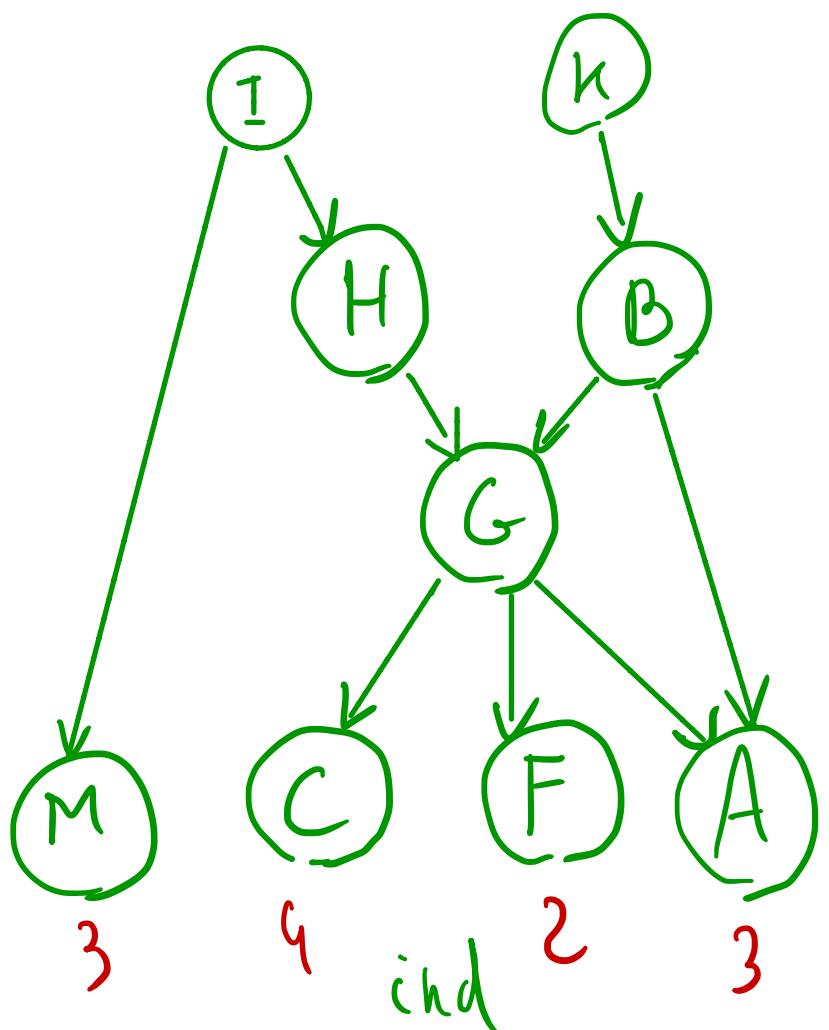




howManyItem(ind, "C", n)

)

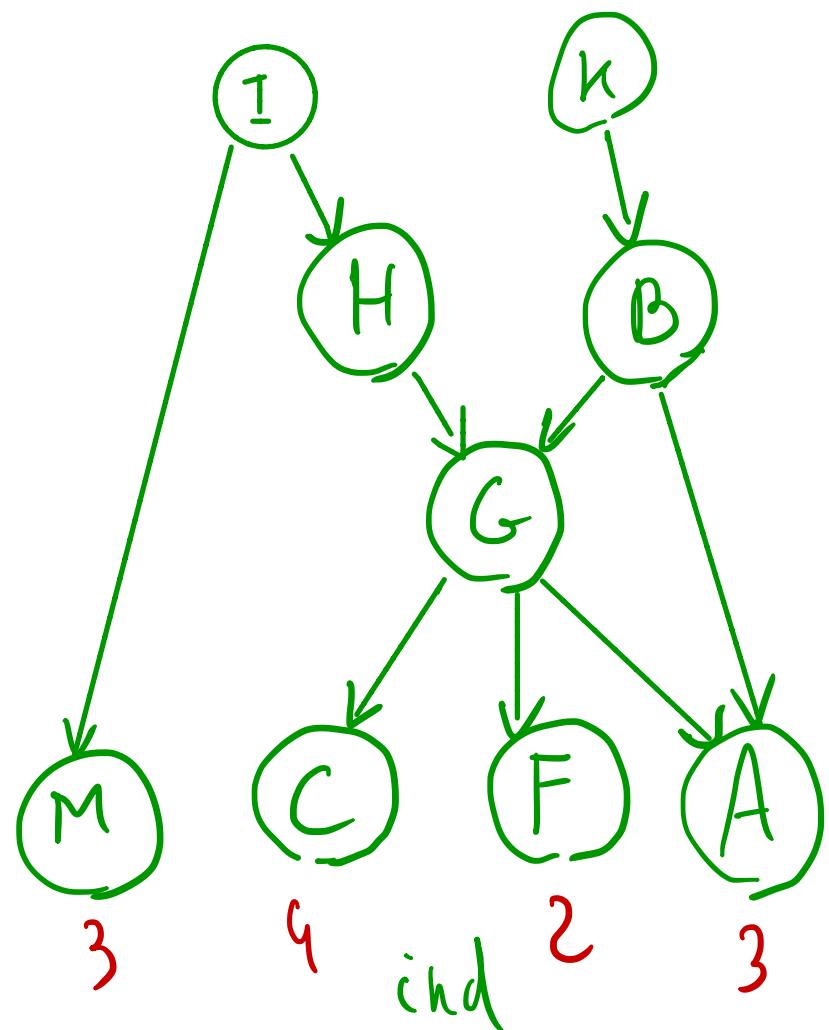
$$n = 9$$



howManyItem(ind, "n", n)



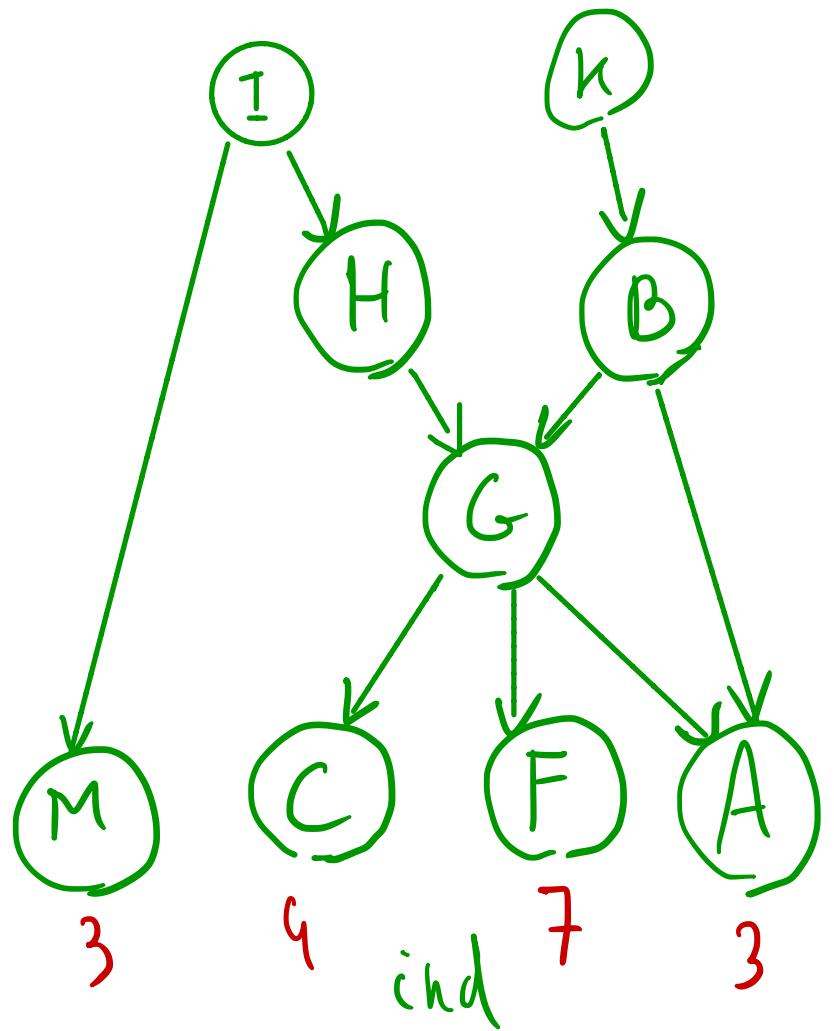
$$n = 3$$



howManyItem(ind, "G", n)

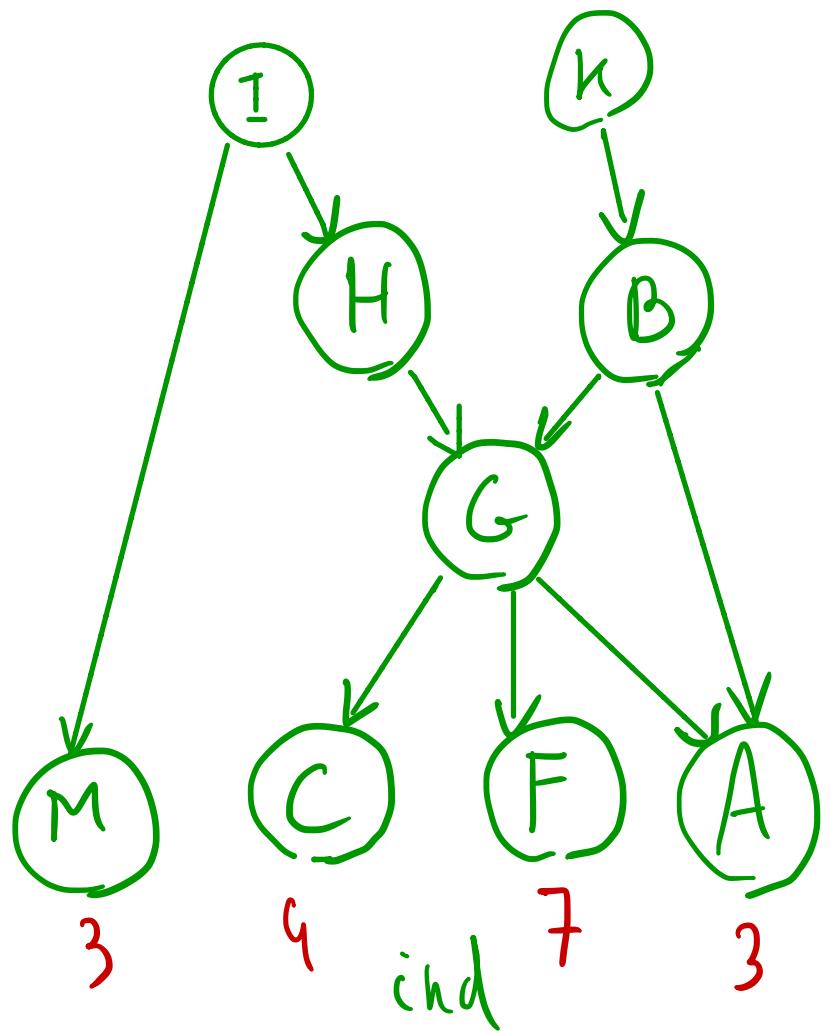
}

$n = 2$



howManyItem(ind, "G", n)

$$n = 3$$



howManyItem(ind, "B", n)

}

$$n = 1$$

↳ Ogni B ha bisogno di

1 A

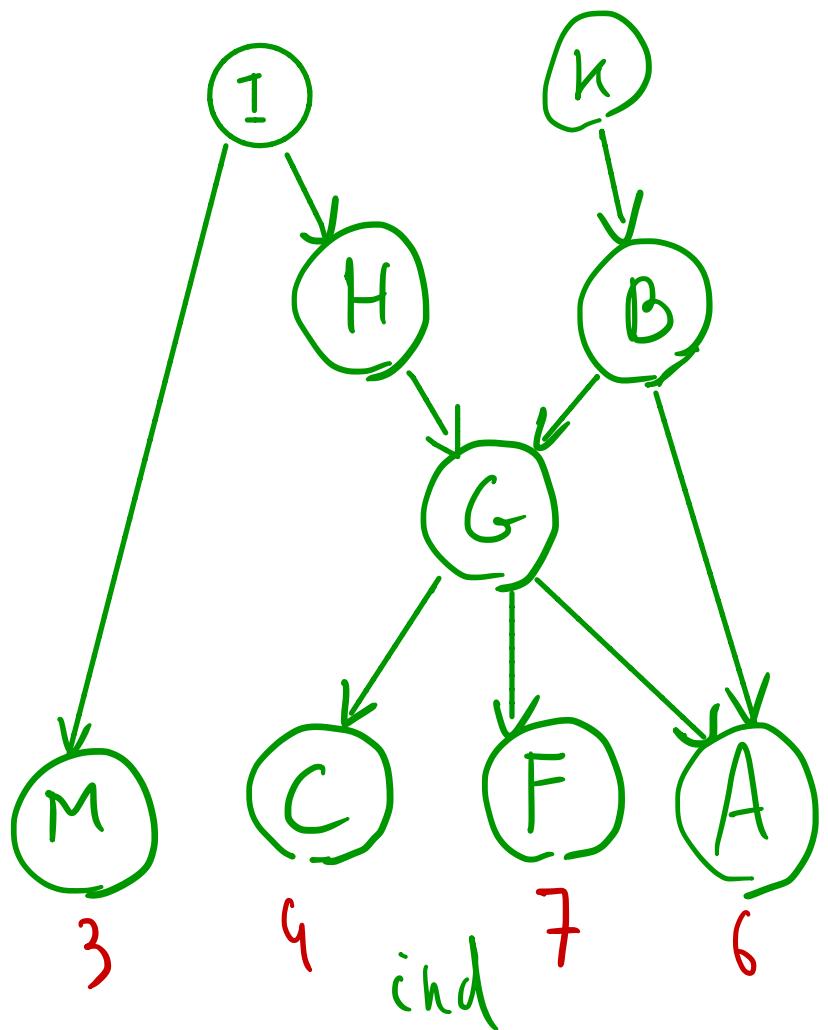
1 A

1 F

1 C

} per fare 1 B

$$\begin{aligned} & 2 A \\ & 1 F \\ & 1 C \end{aligned} = 1 F$$



howManyItem(ind, "B", n)



$$n = 3$$

↳ Ogni B ha bisogno di

1 A

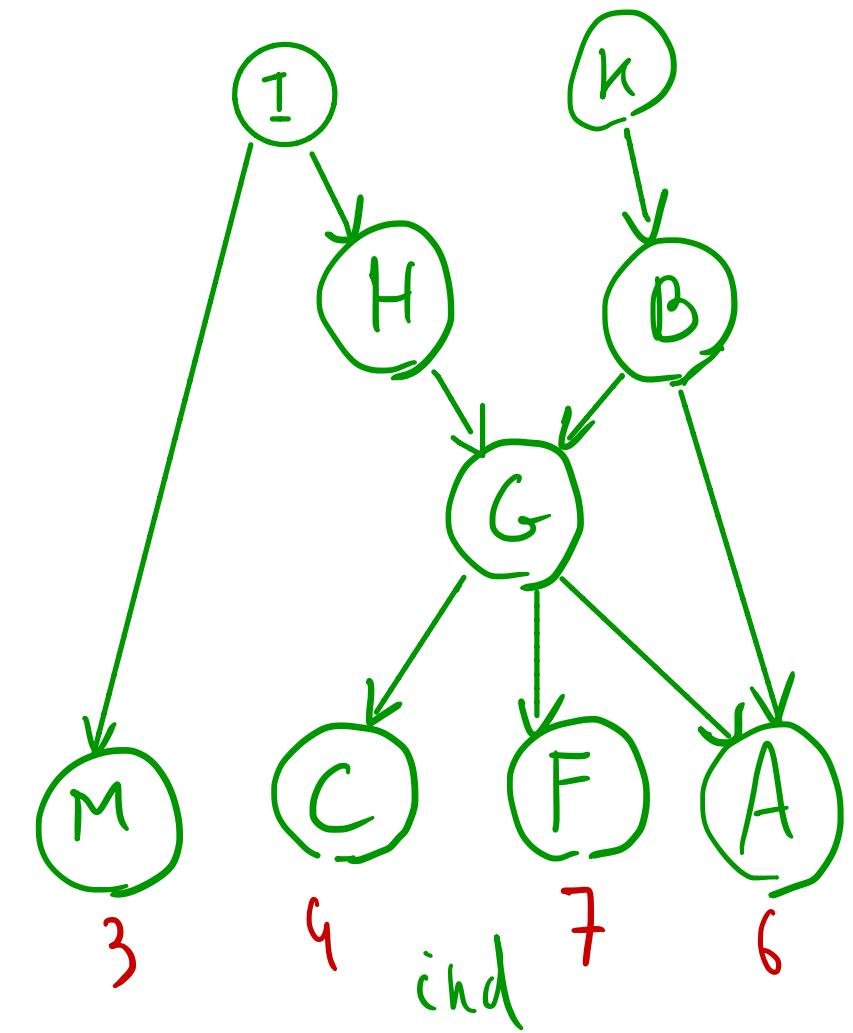
1 A

1 F

1 C

} per fare 1 B

$$\begin{aligned}
 & 2 A \\
 & 1 F \\
 & 1 C
 \end{aligned}
 = 1 F$$

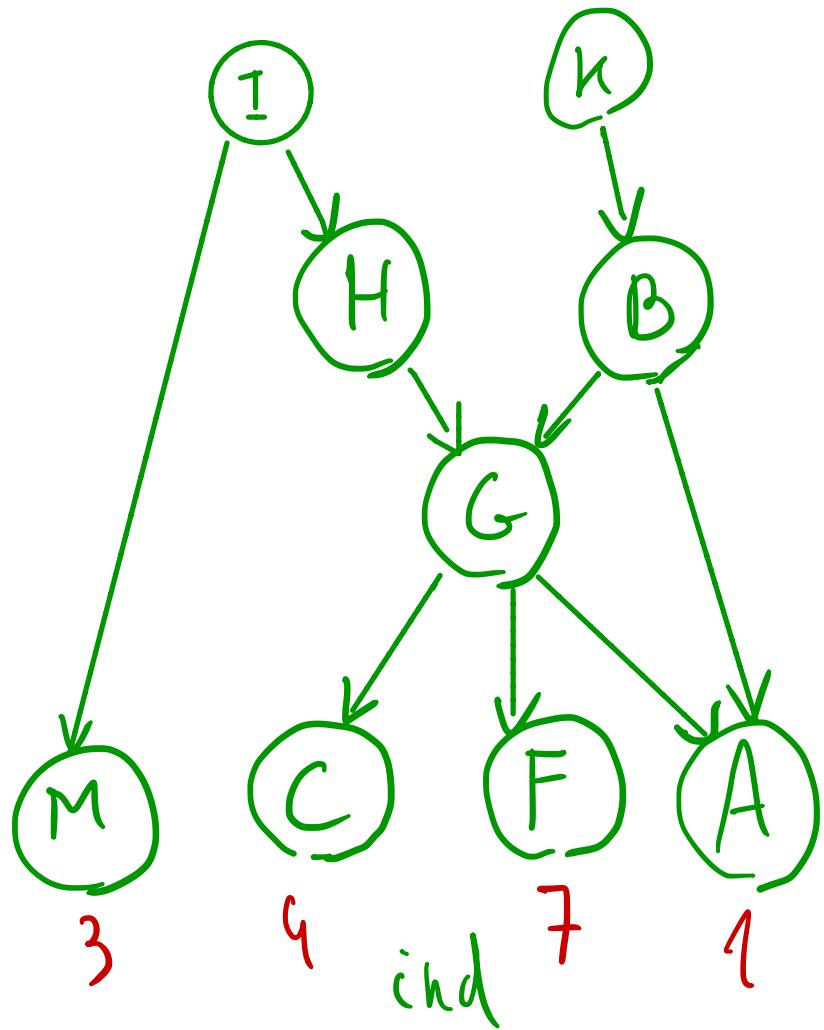


howManyItem(ind, "k", n)

$$n = 3$$

↳ Ogni K ha bisogno di

1 A
 1 A }
 1 F } per fare 1 G } per fare 1 B : 1 F
 1 C }
 • 2 A
 1 C



howManyItem(ind, "B", n)

$$n = 0$$

↳ Ogni B ha bisogno di

1 A

1 A

1 F

1 C

} per fare 1 G

= 2 A
1 F
1 C