

IN2010 - Gruppe 3

Plan for dagen: Repetisjon av forrige ukes pensum, balanserte binære søketrær (AVL-trær), evt. se på obligen.

BinærSøk(A, x)

low \leftarrow 0

high \leftarrow |A| - 1

while low \leq high do

.... i \leftarrow $\lfloor (\text{low} + \text{high}) / 2 \rfloor$

.... if A[i] = x then

..... return true

.... else if A[i] < x then

..... low \leftarrow i + 1

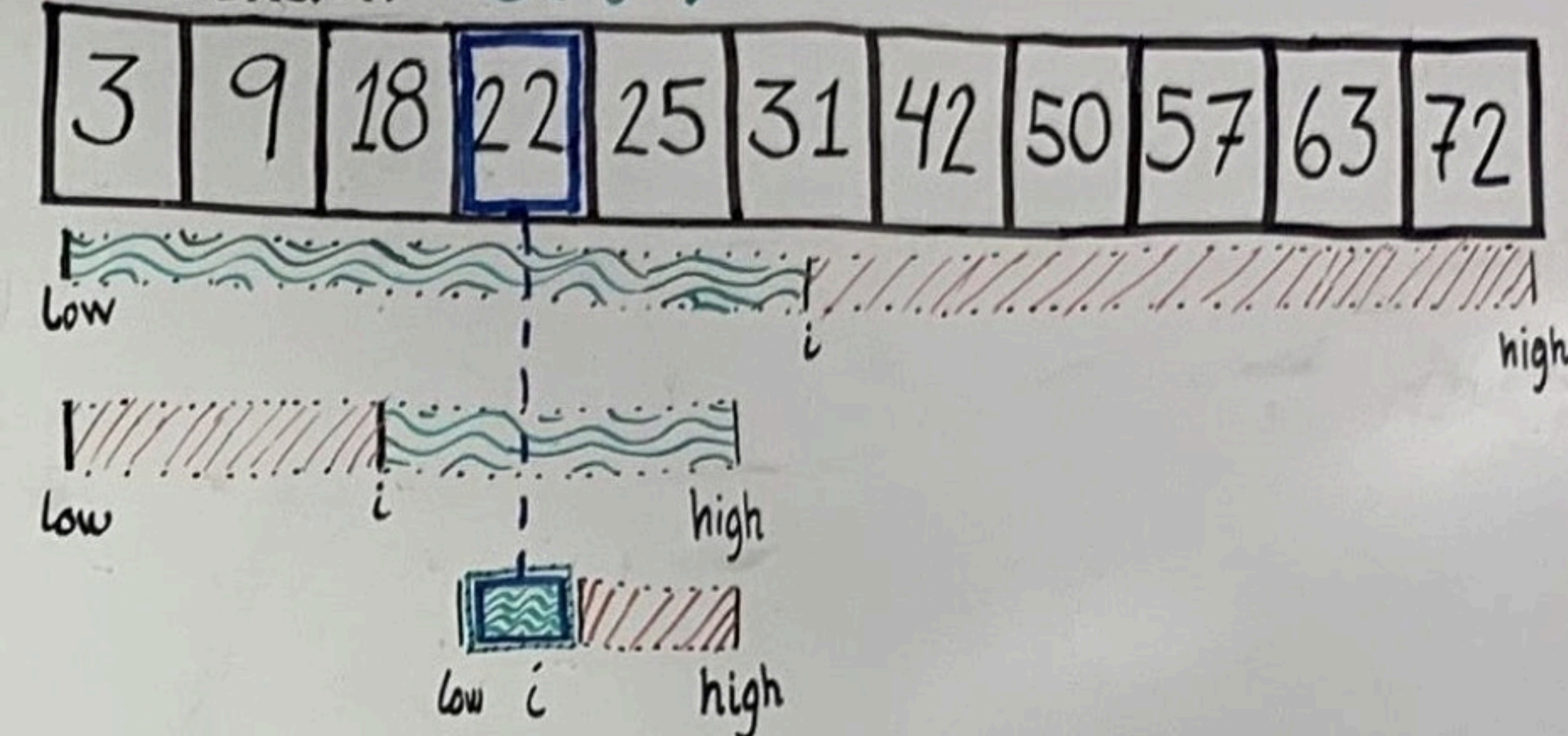
.... else if A[i] > x then

..... high \leftarrow i - 1

end

return false

(BINÆRSØK $O(\log n)$)



Vi ser på...

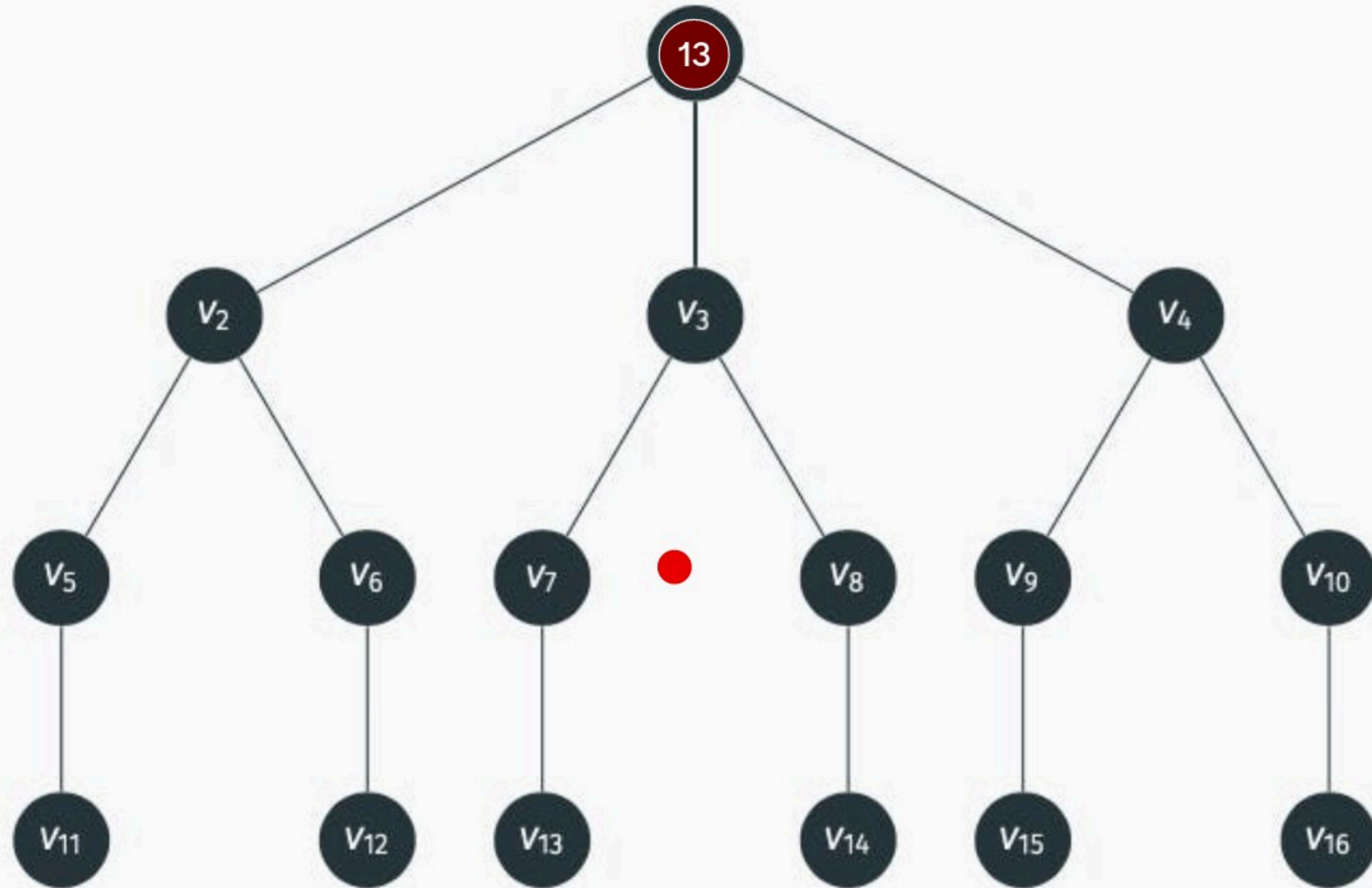
- Lenkeliste
- Trær
- Binære trær



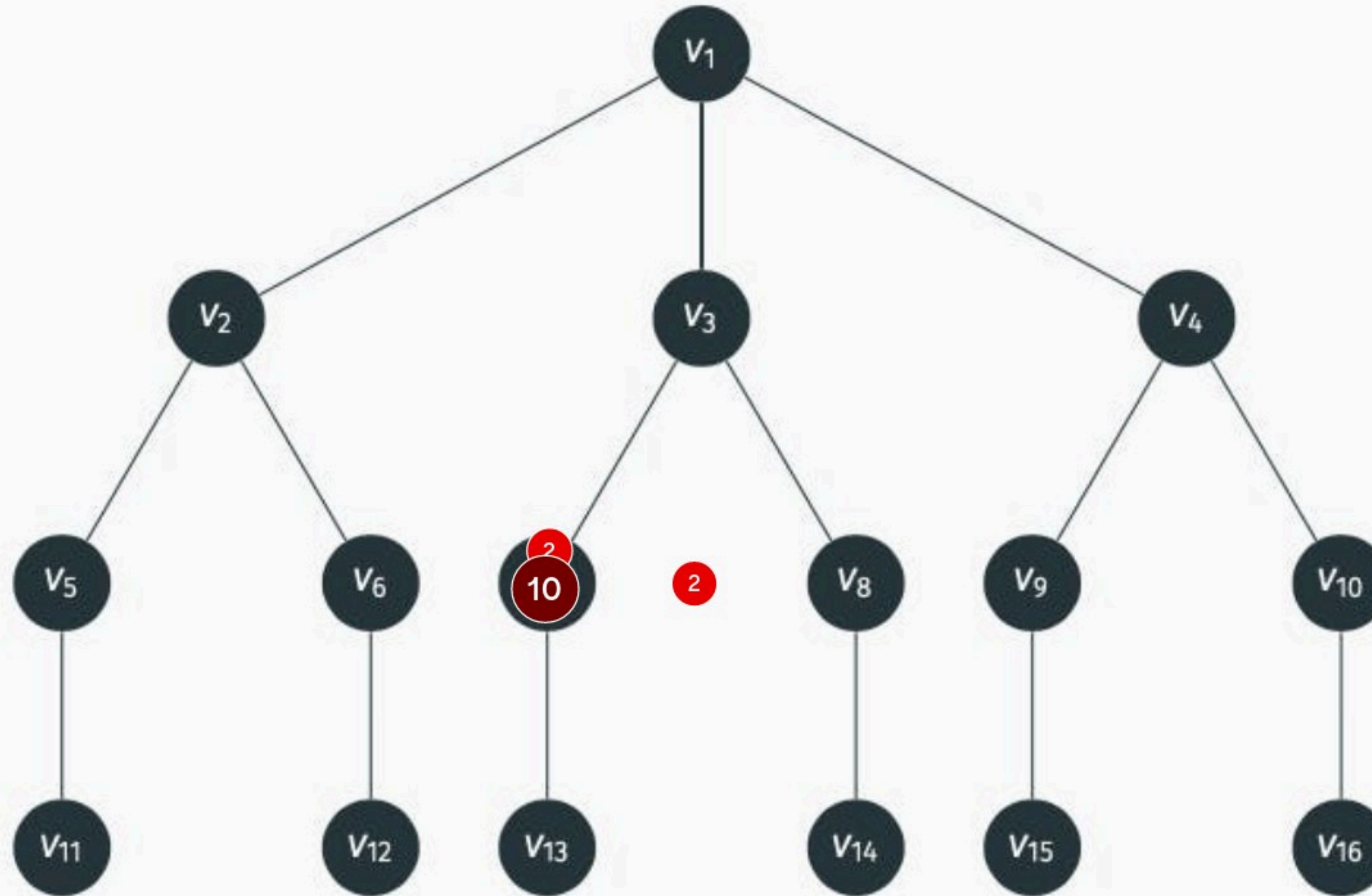
Trær - Terminologi



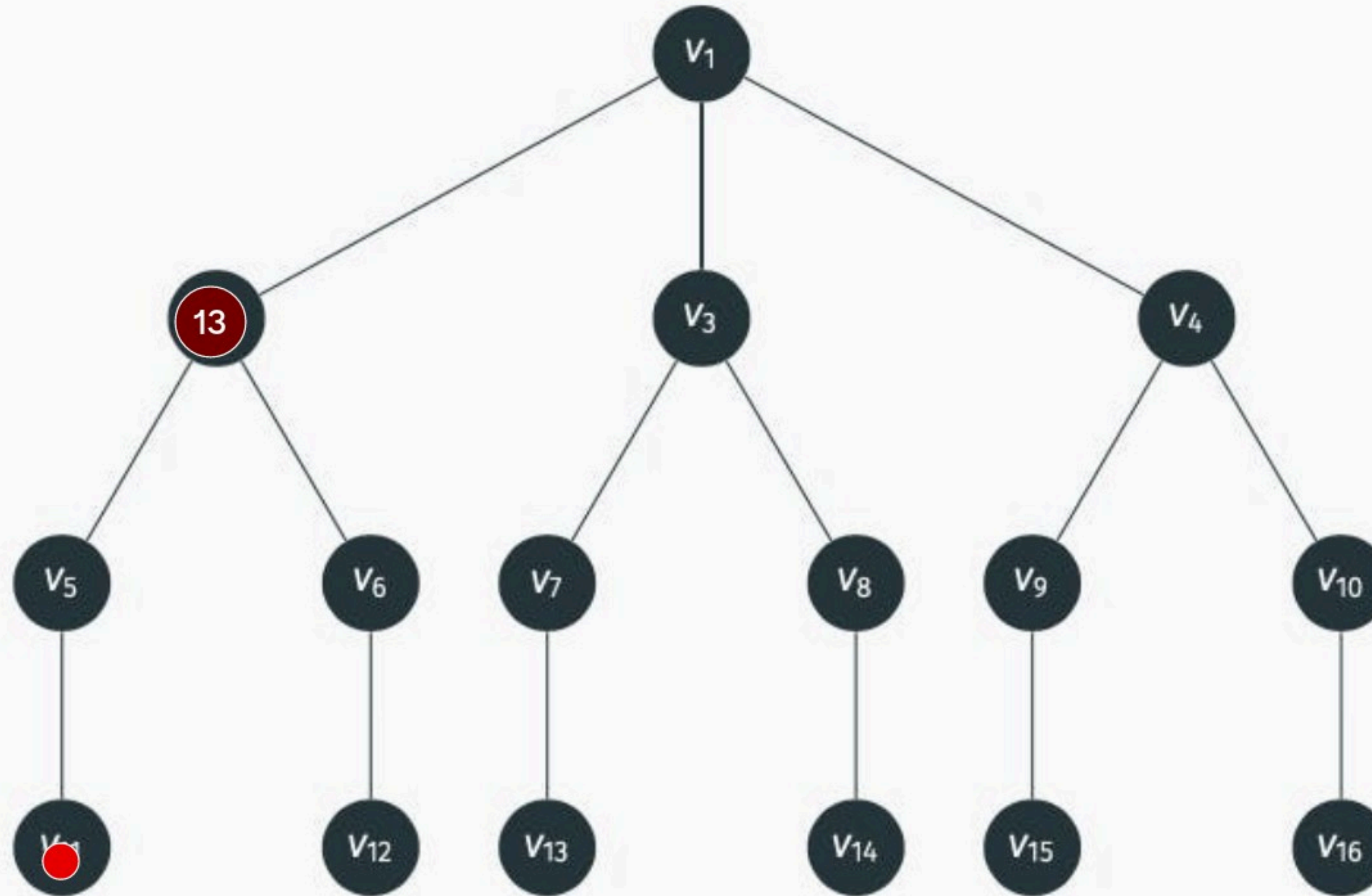
Rot



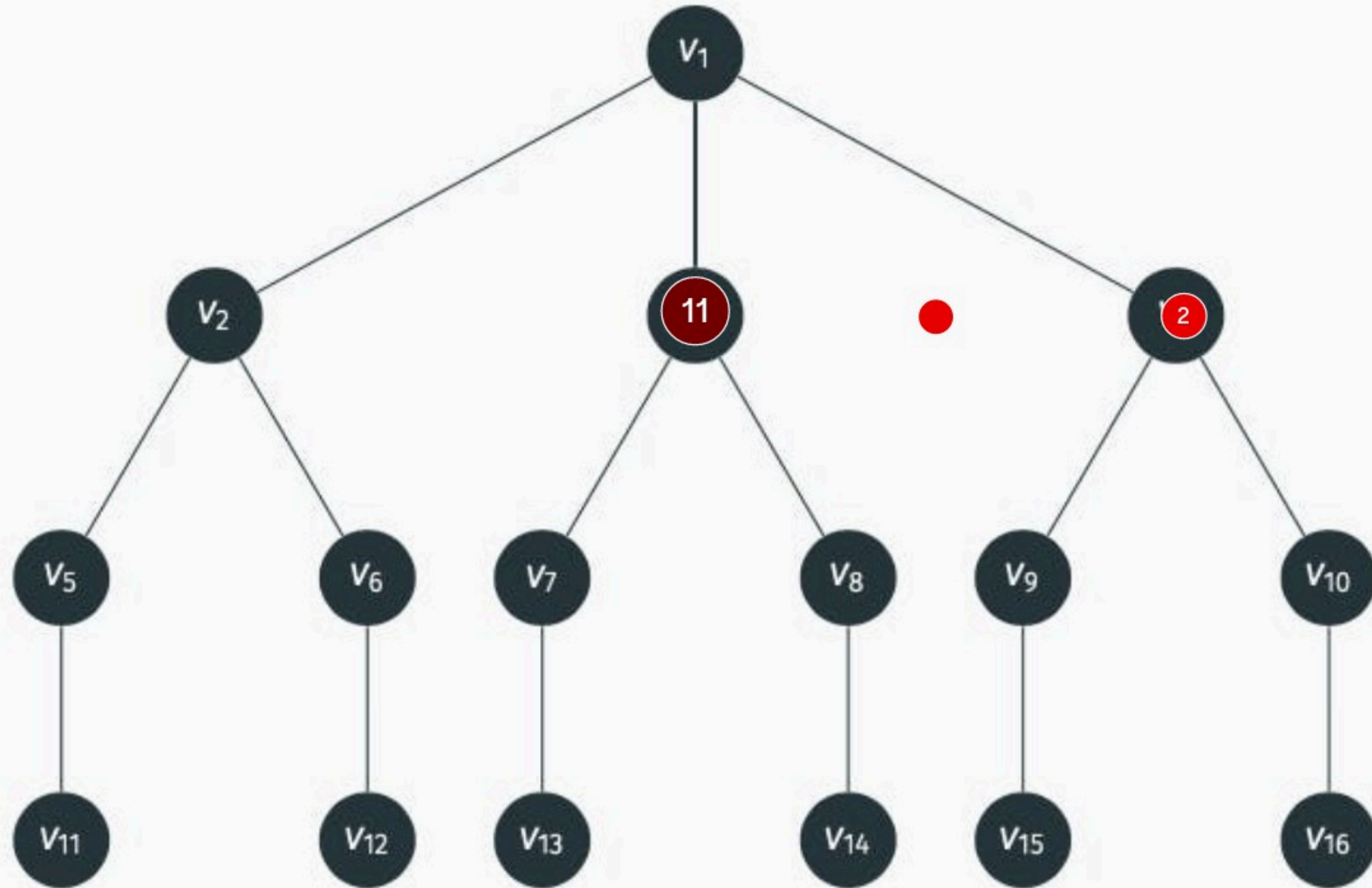
Barn av V_3



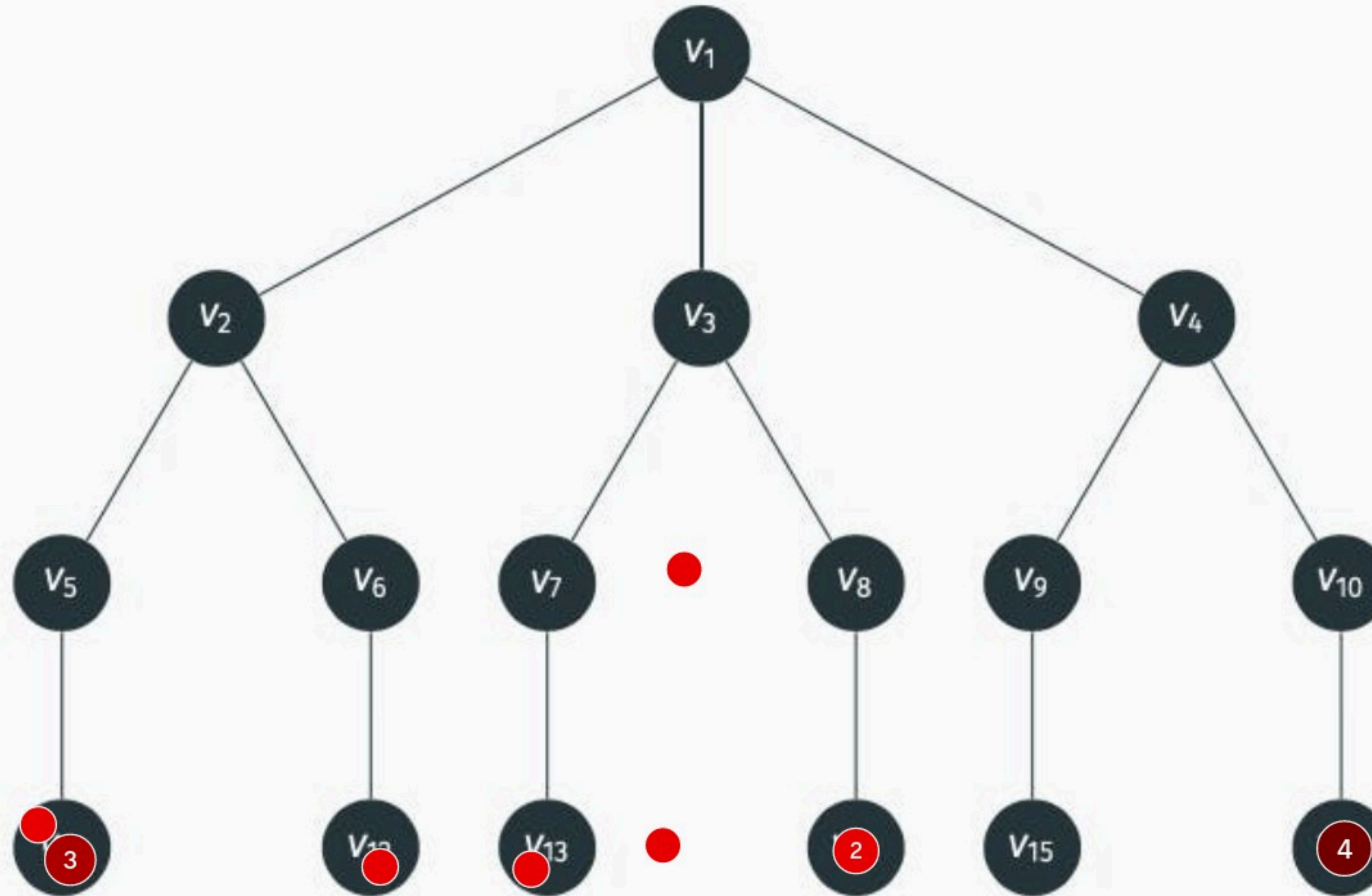
Forelder til V5



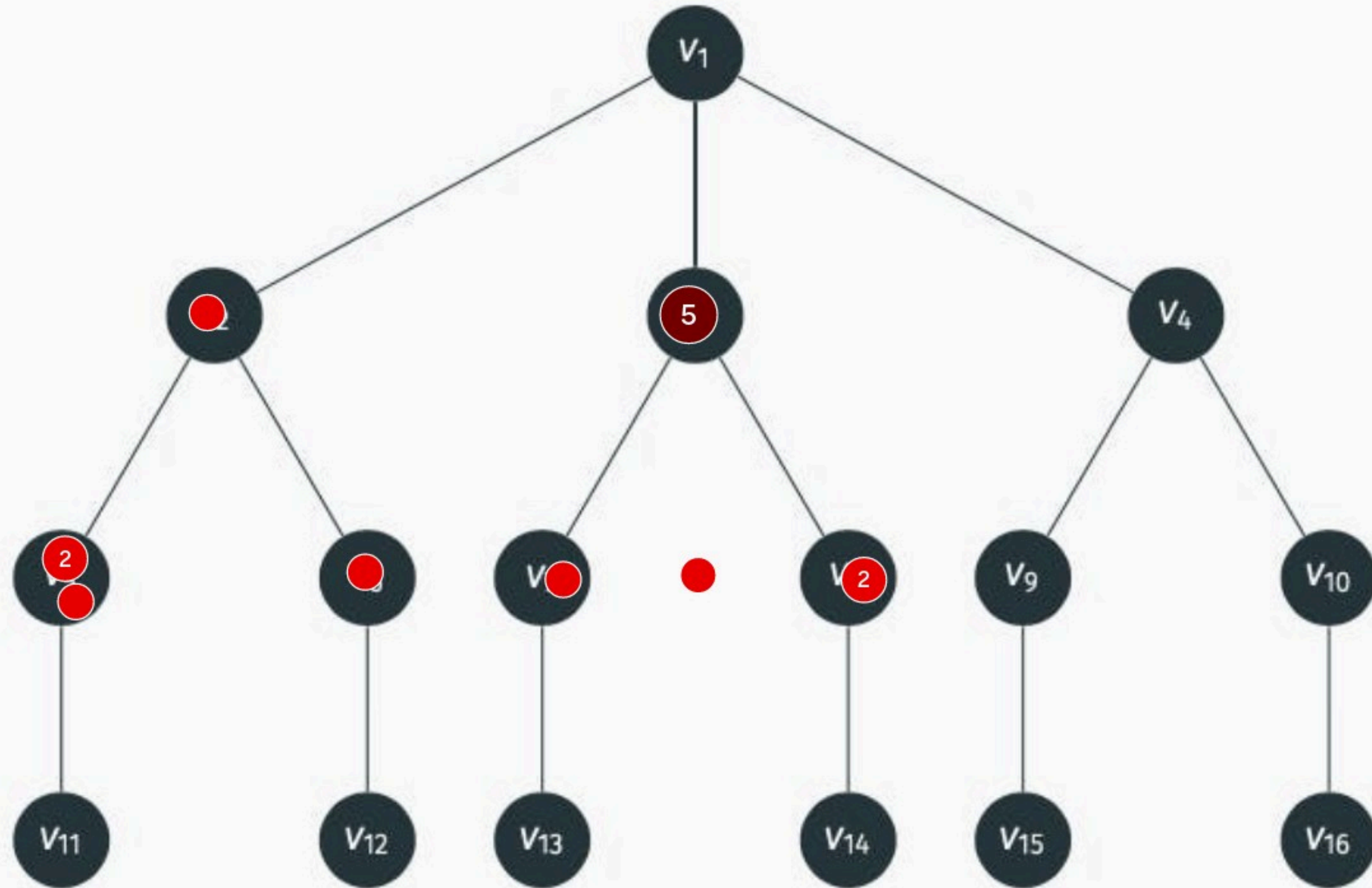
Søsken til V_2



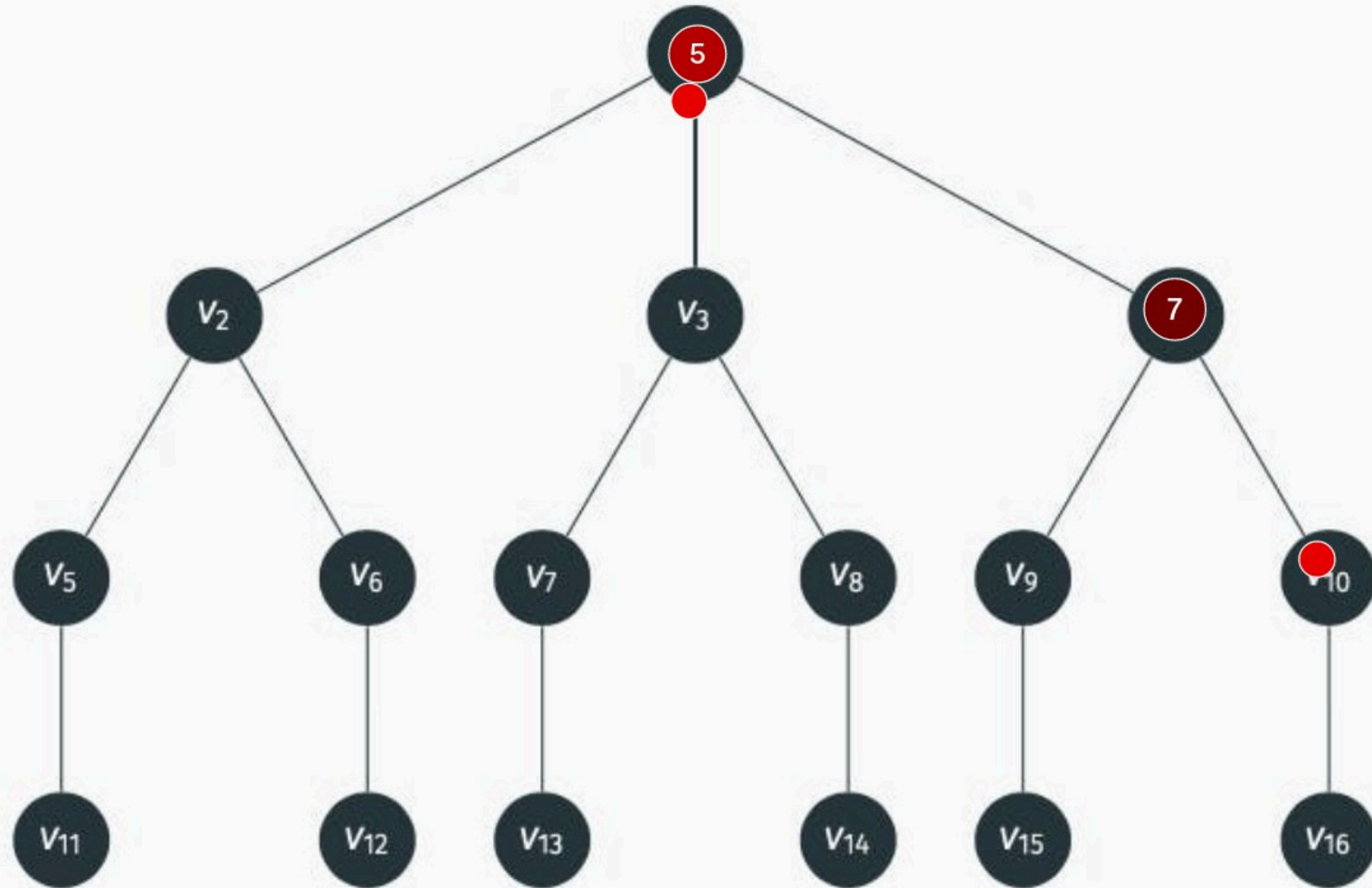
Løvnnode/ekstern node



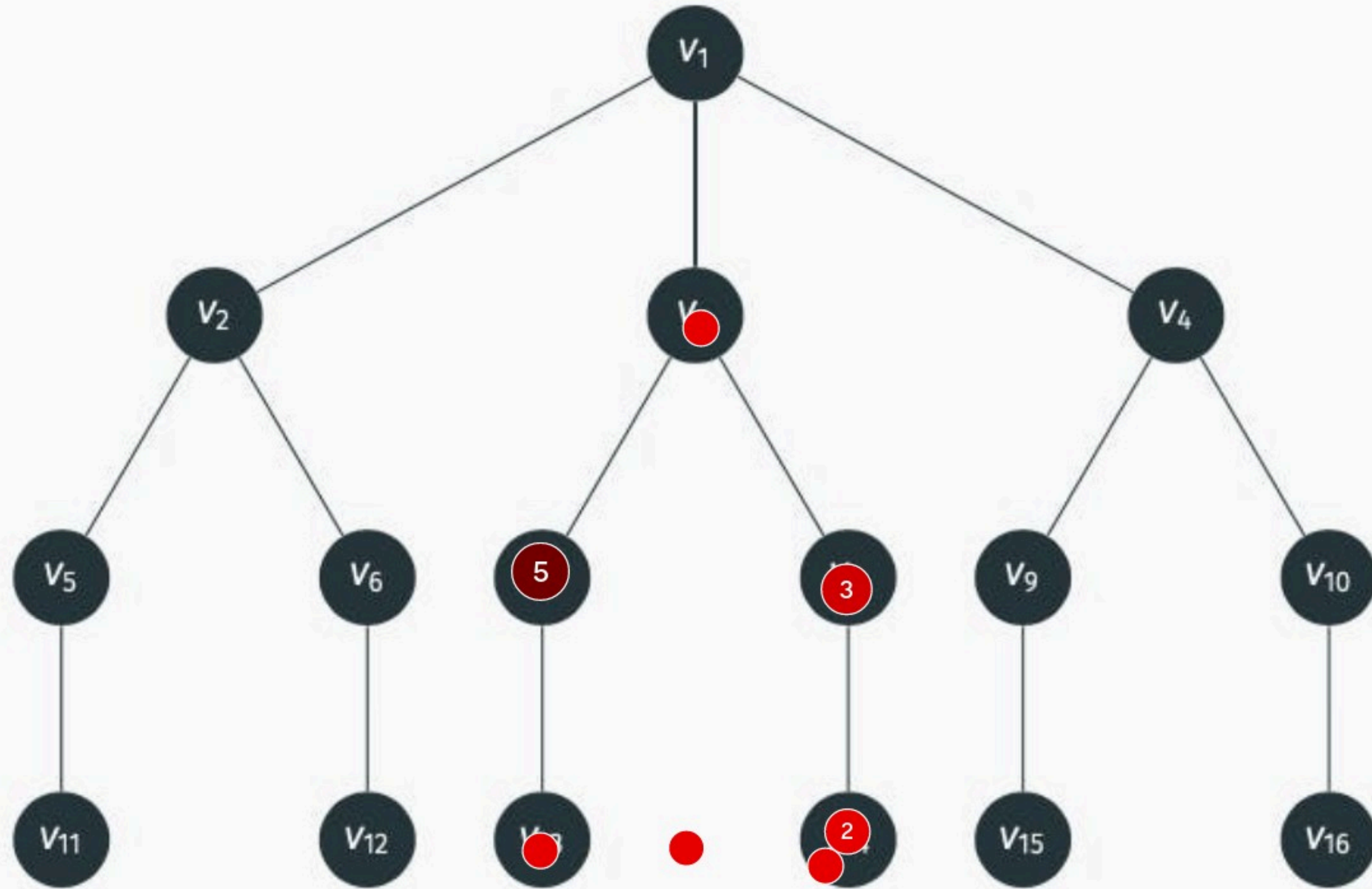
Intern node



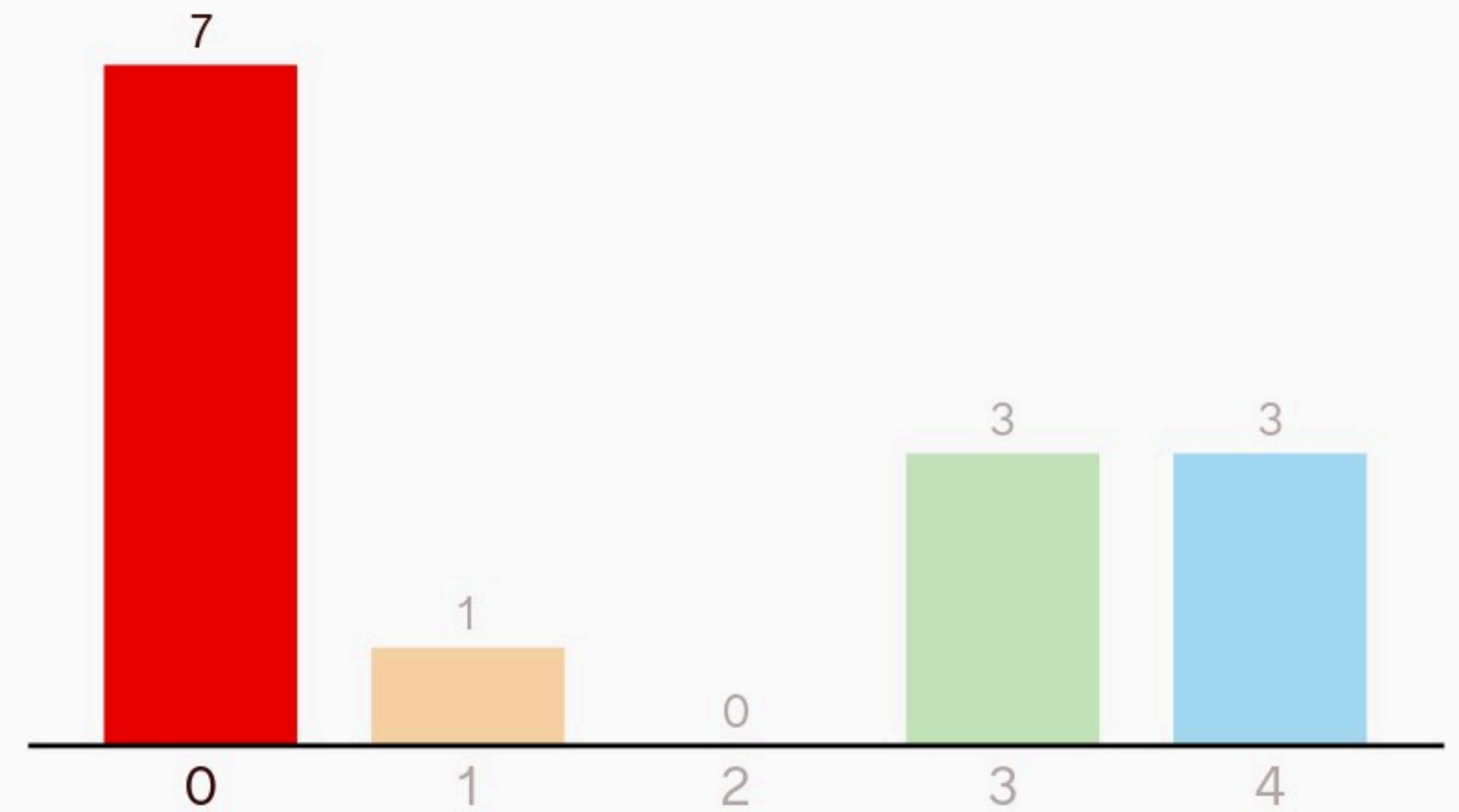
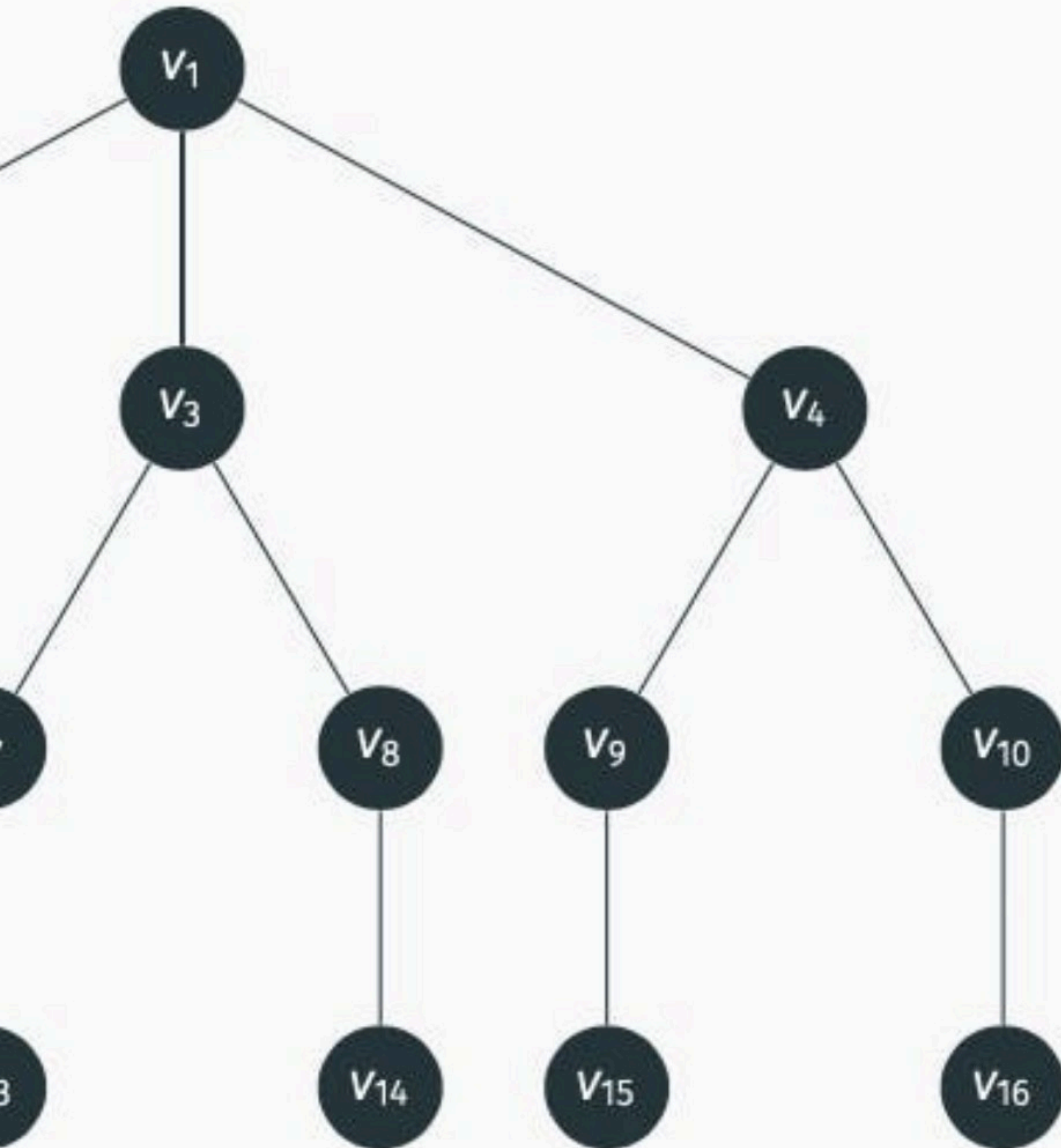
Forfedre av V10



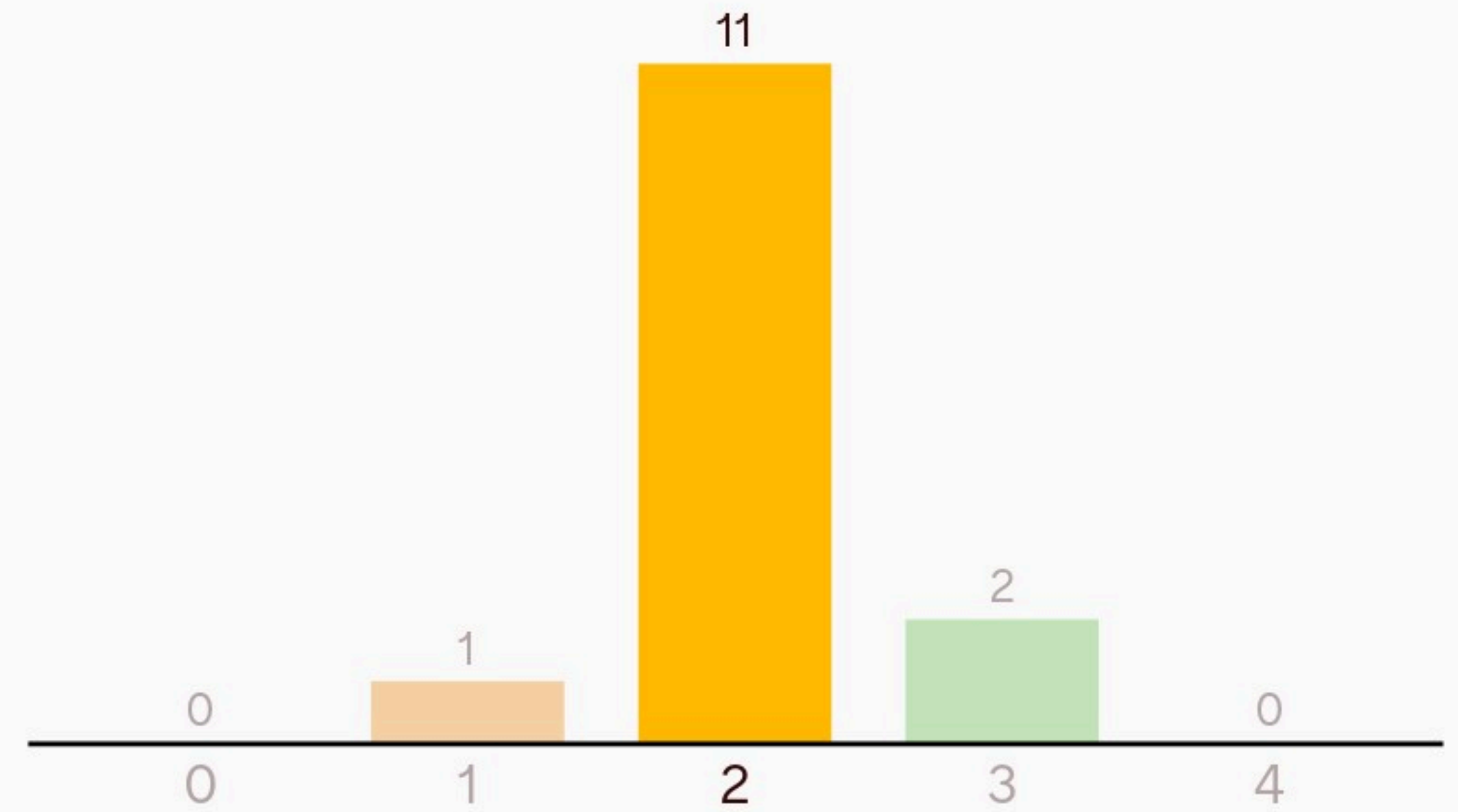
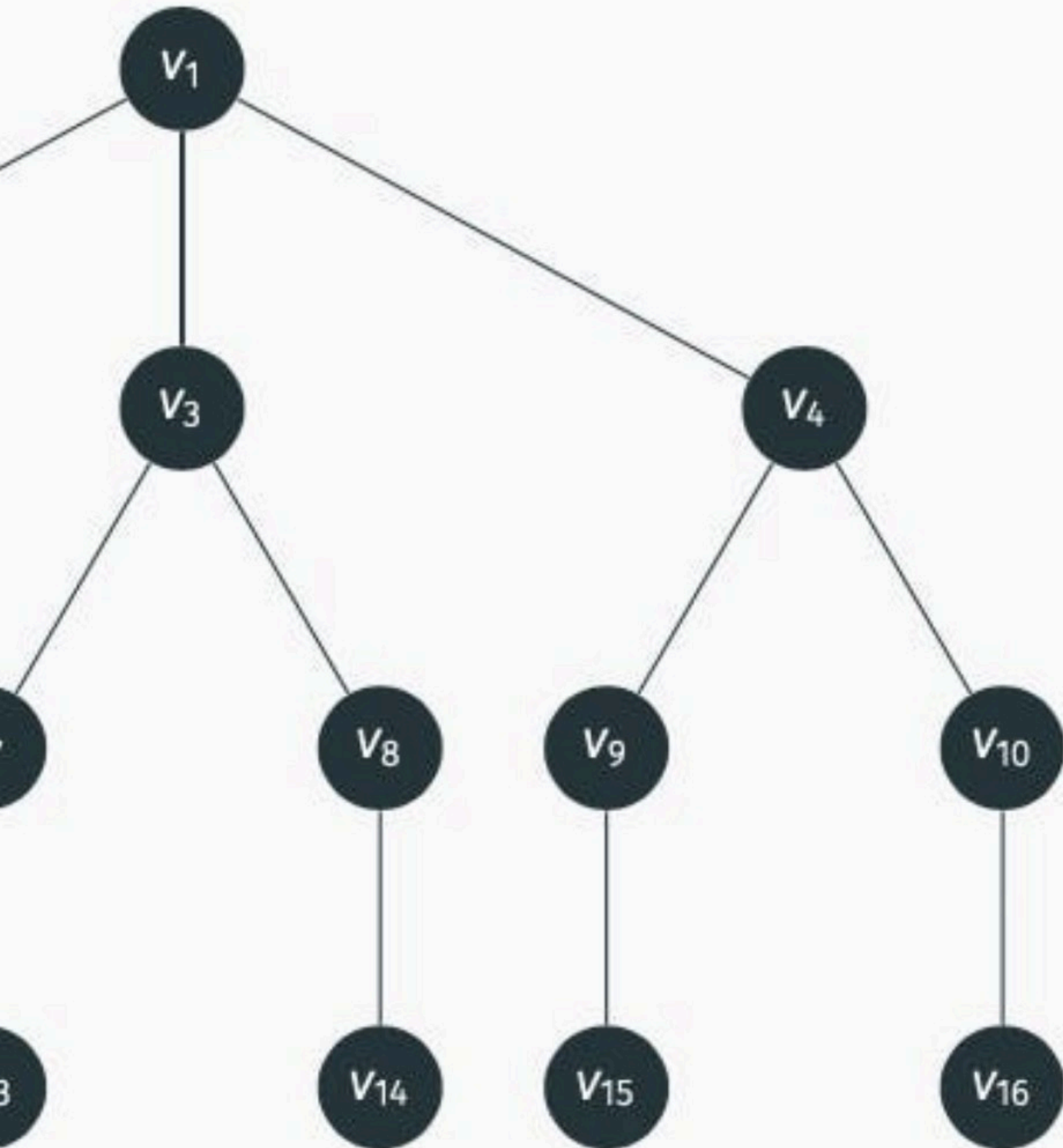
Etterkommere av V3



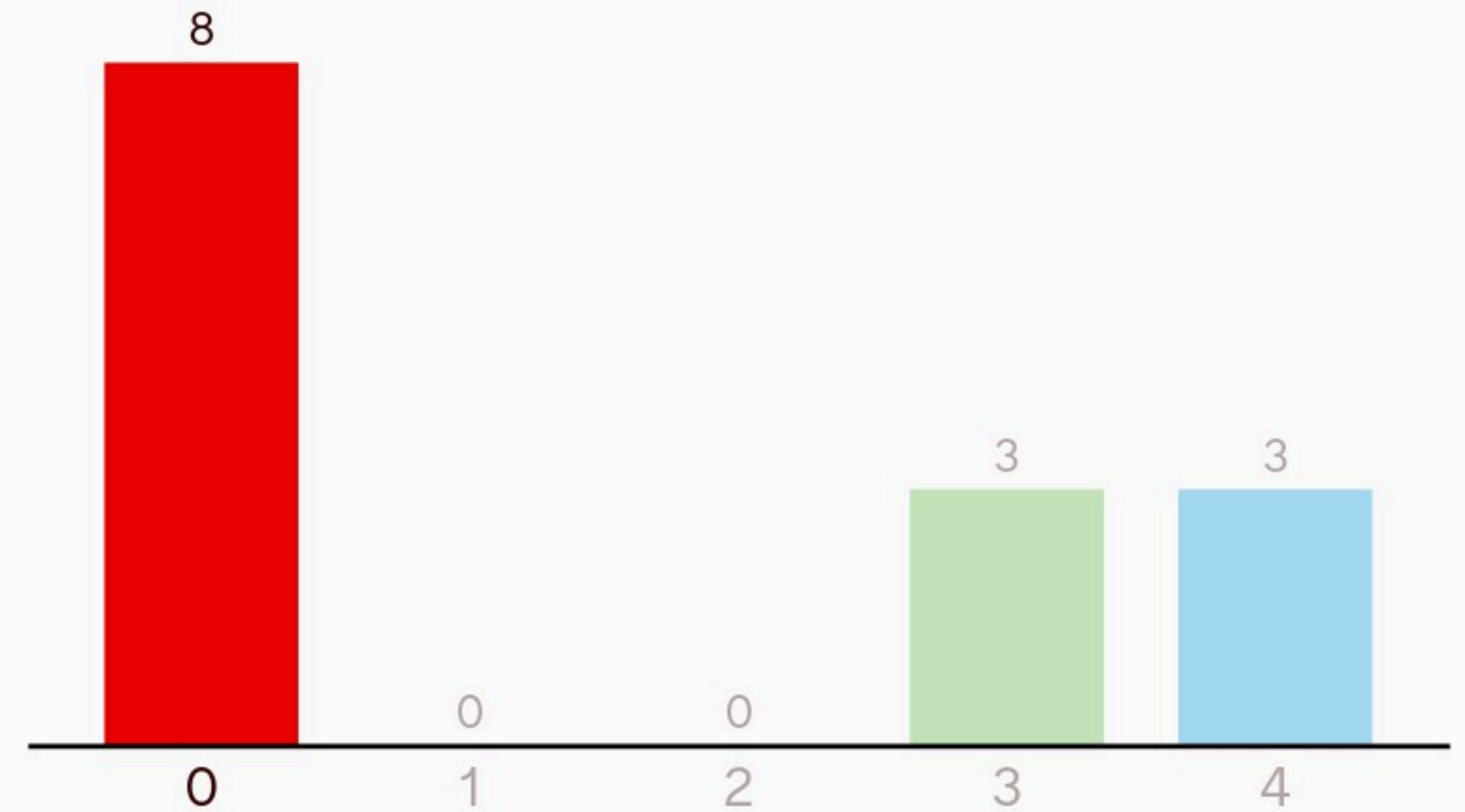
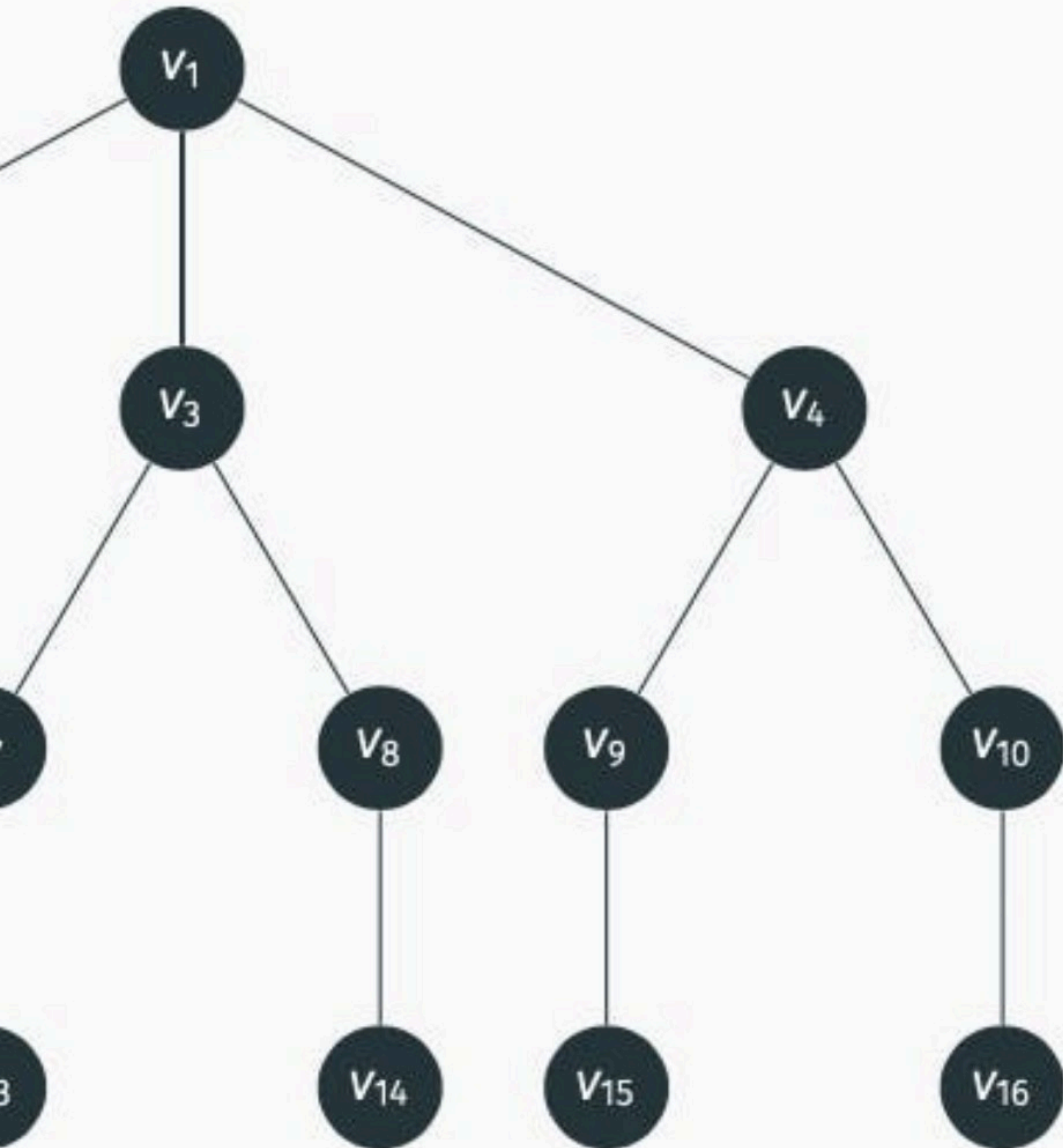
Hva er dybden til V_1 /roten?



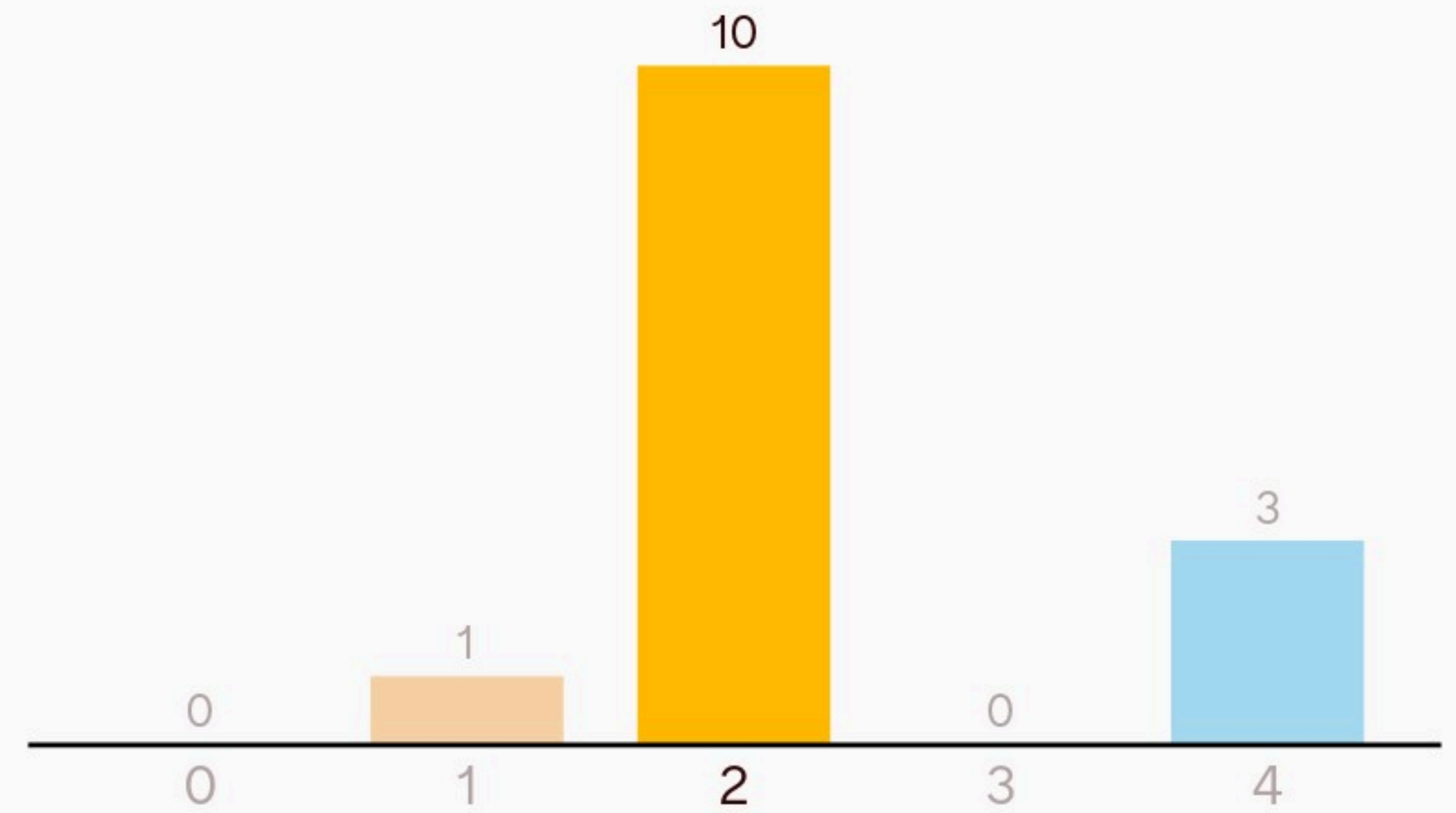
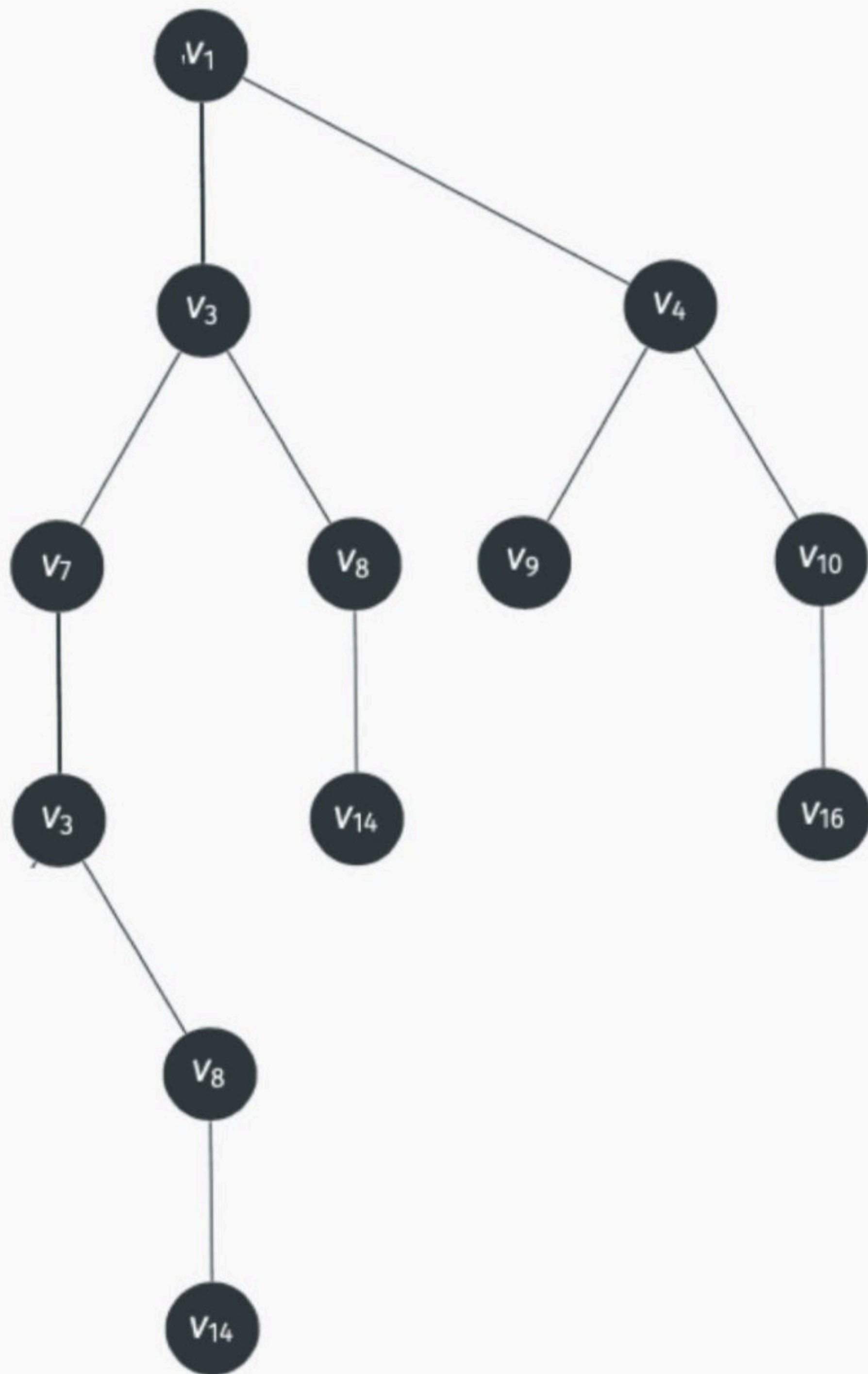
Hva er dybden til V9?



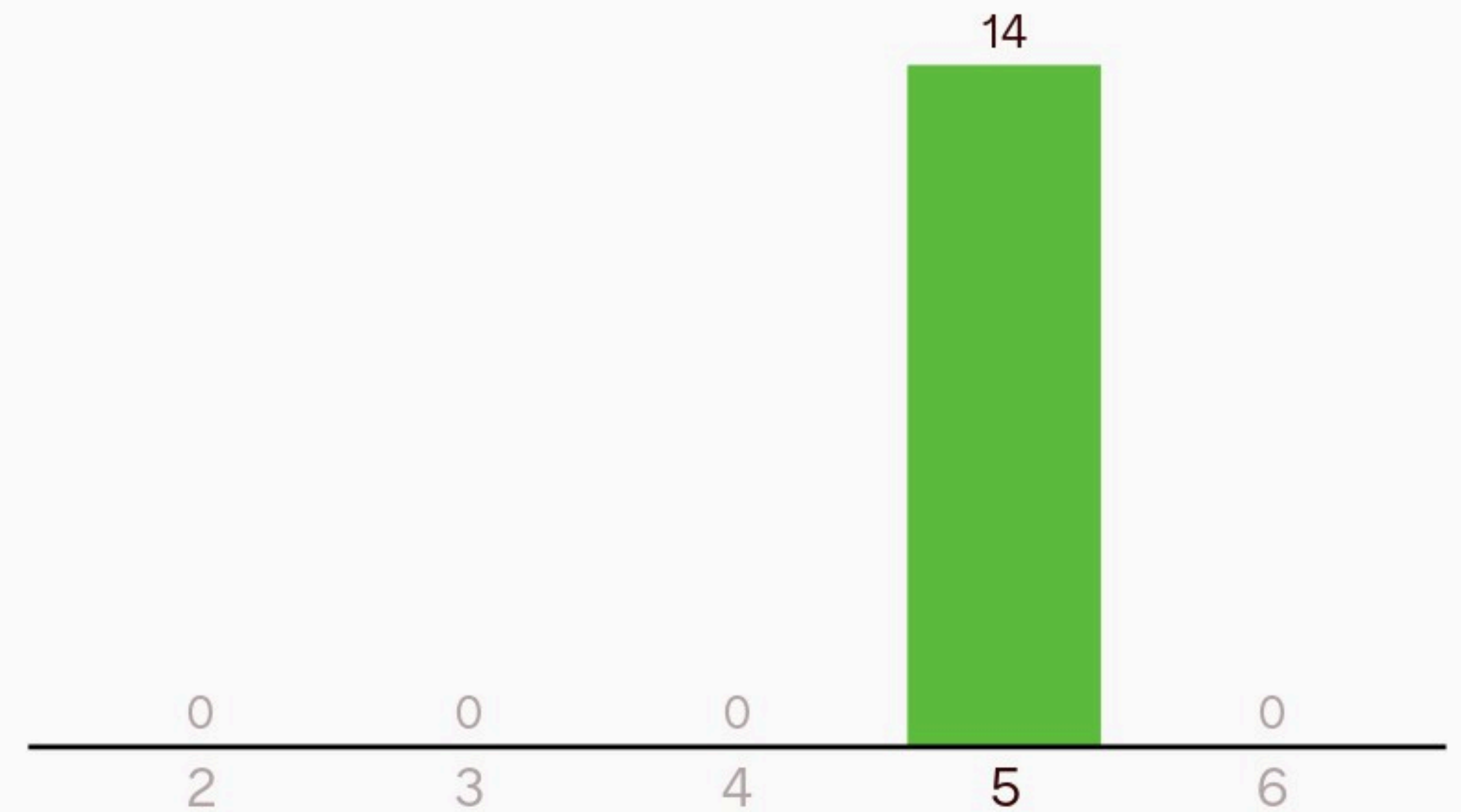
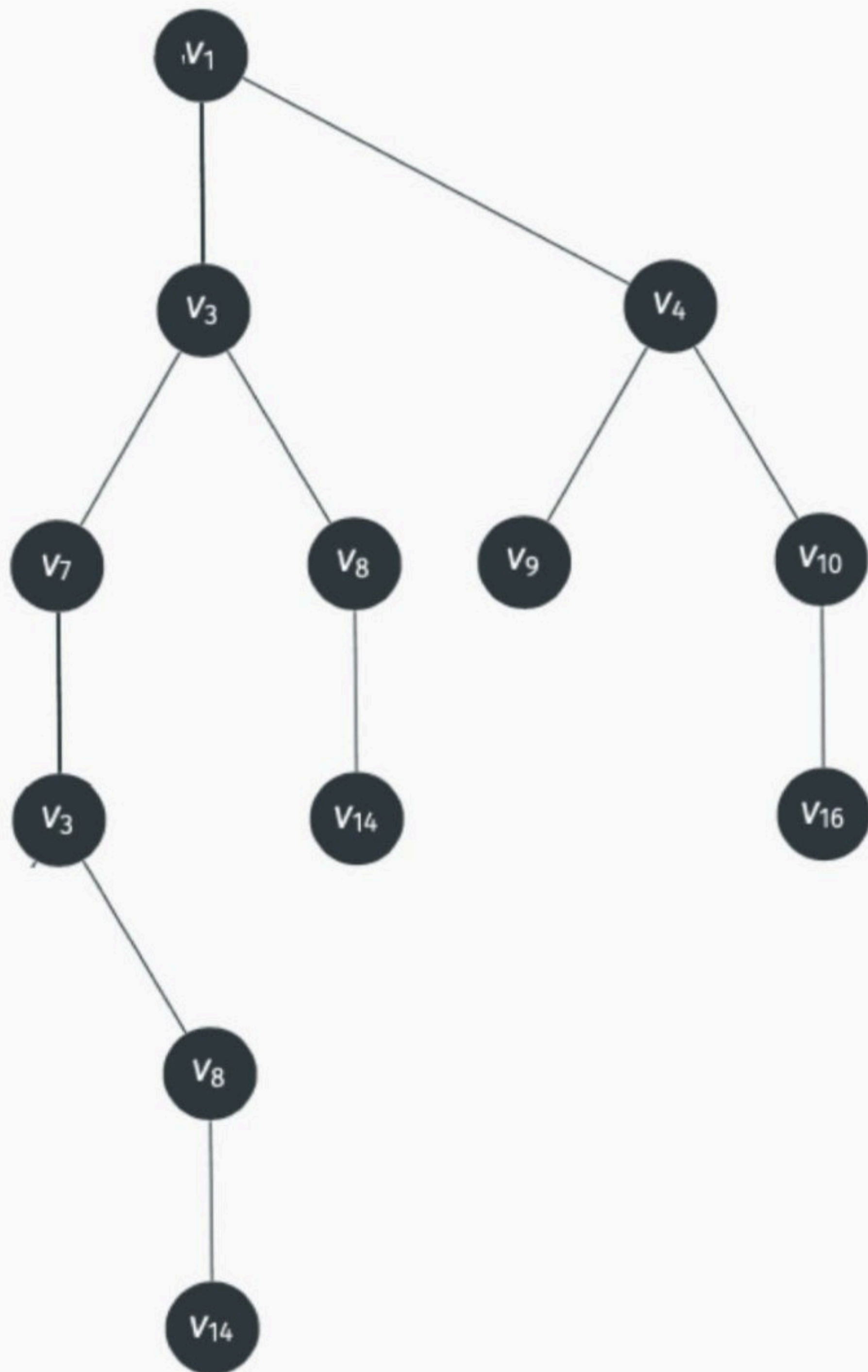
(Obs: Ikke dybde lenger!)
Hva er høyden til V_{15} ?

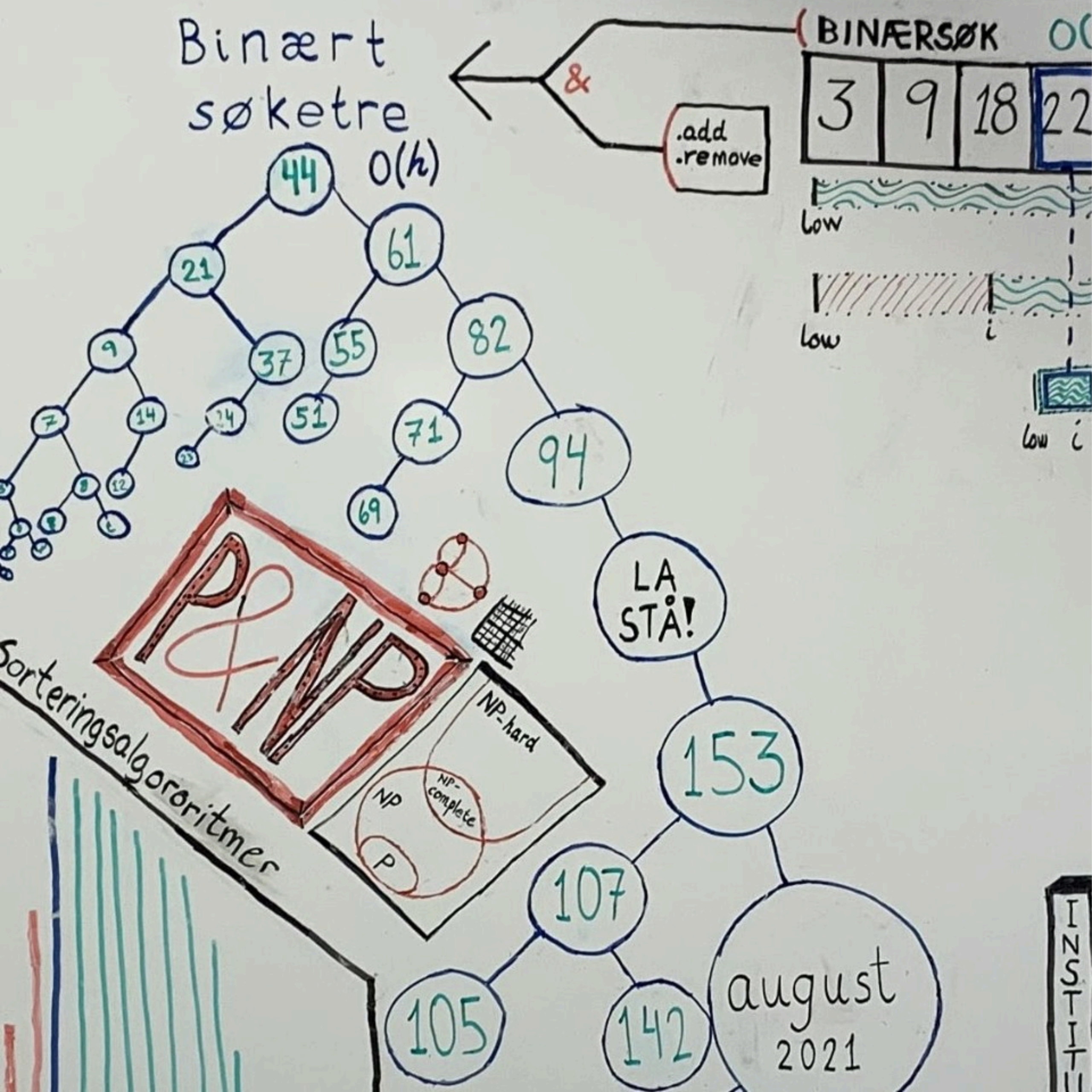


Hva er høyden til V_4 ?



Hva er høyden til treet?





Vi ser på...

- Binært søketre
- AVL-trær (Balansert binært søketre)

Resten av timen

- Se på O-notasjon oppgaver?
- Eksamensoppgave (H20) om AVL
- Se på obliken?
- Annet?

