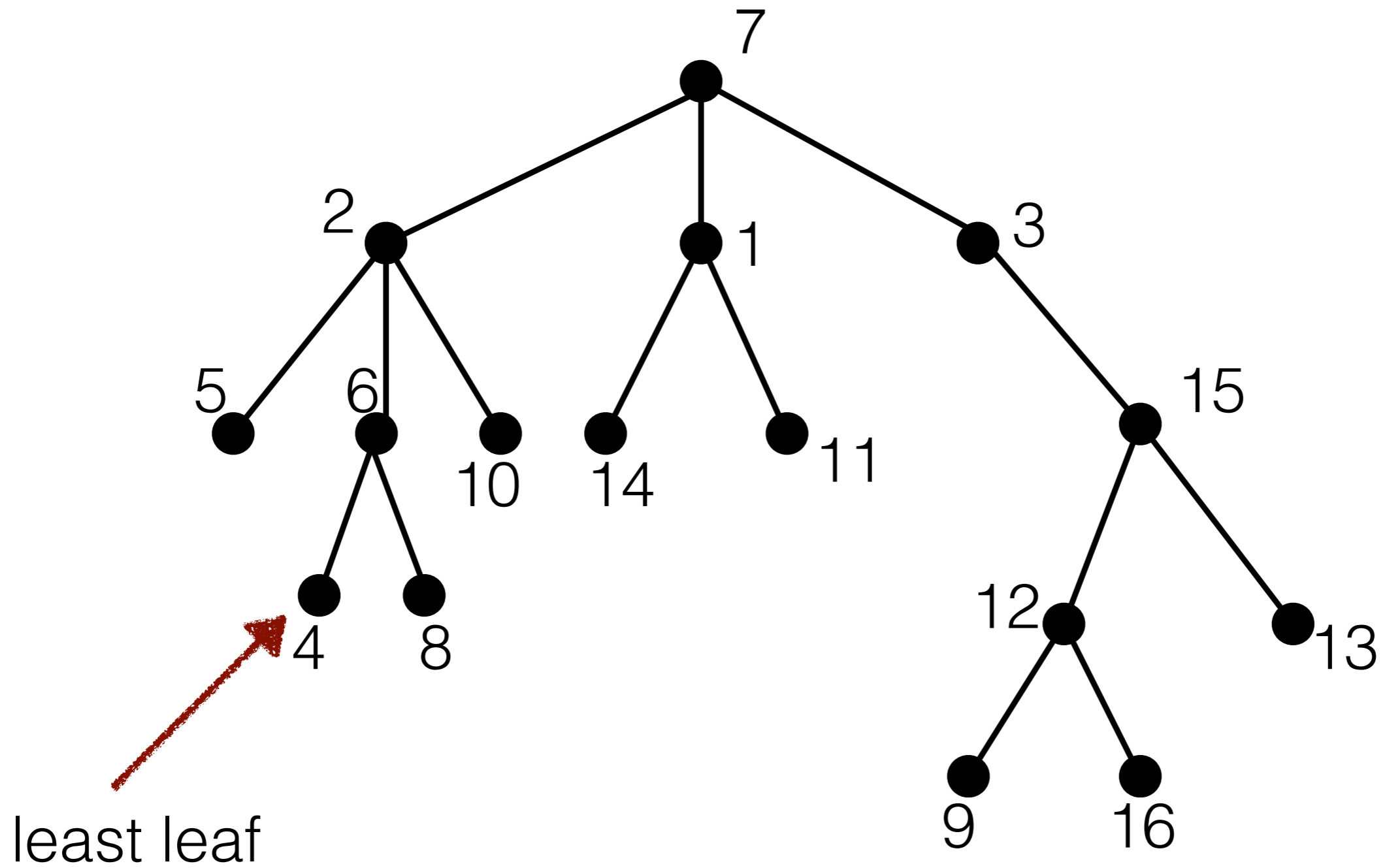
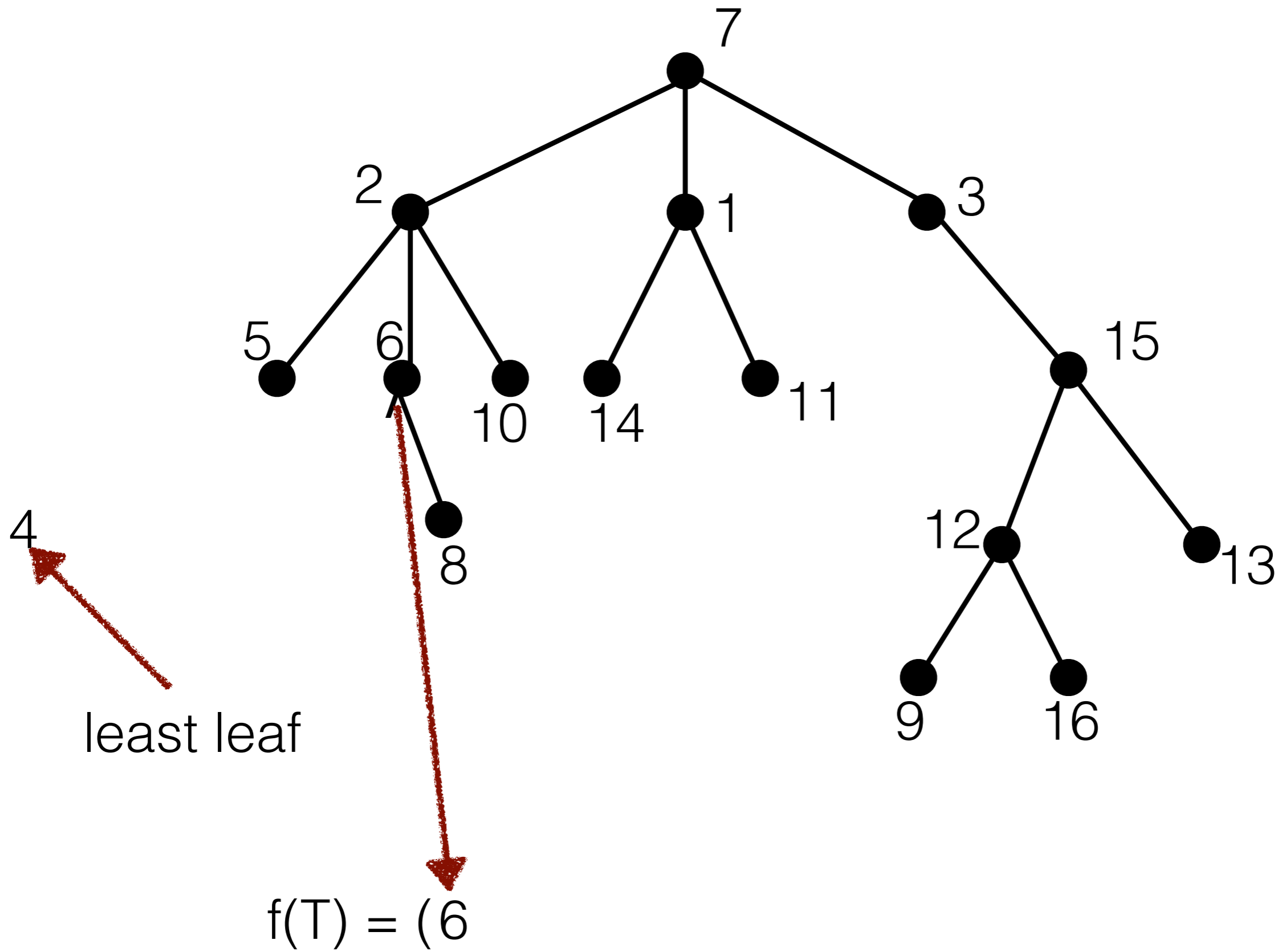
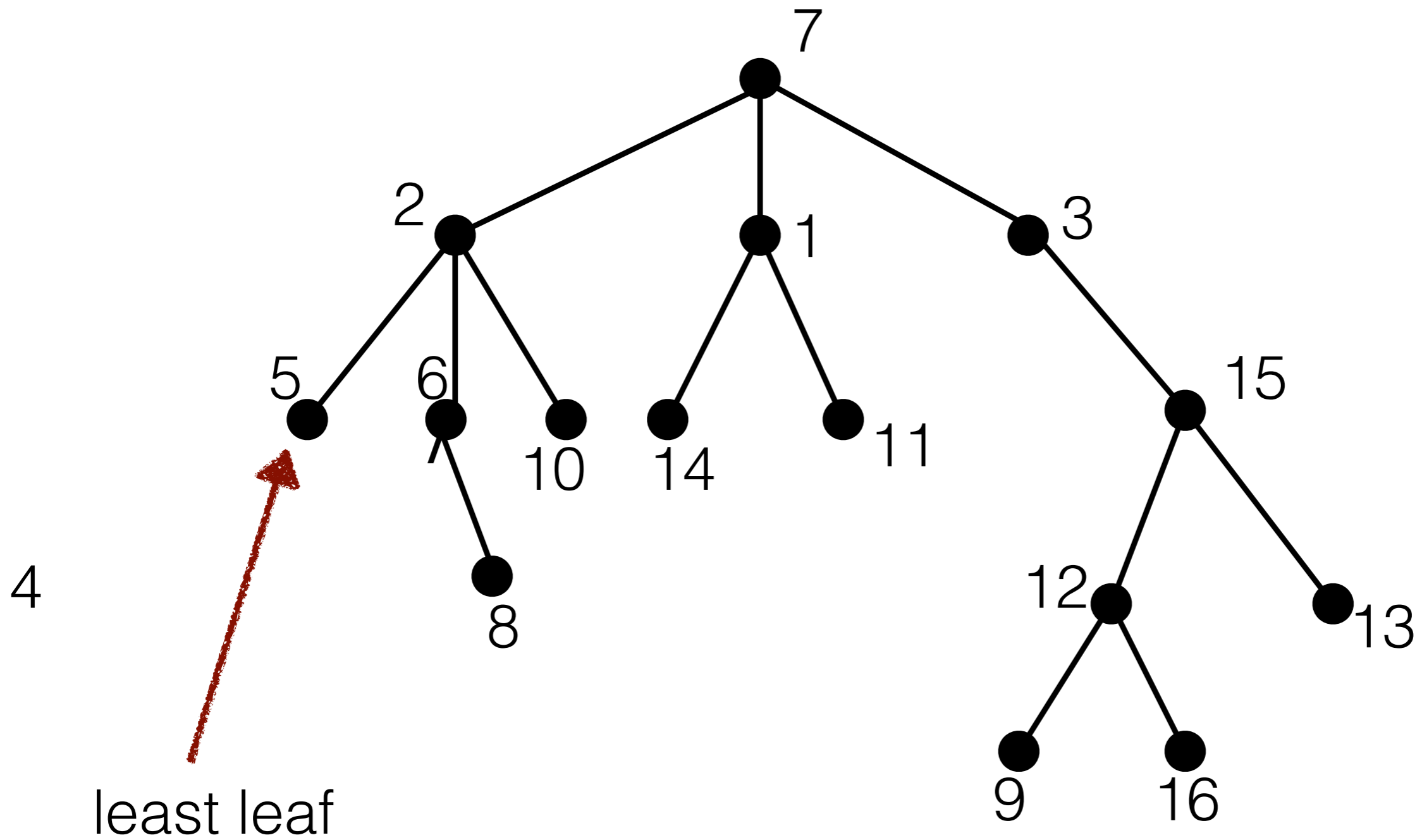


Constructing Prüfer Codes

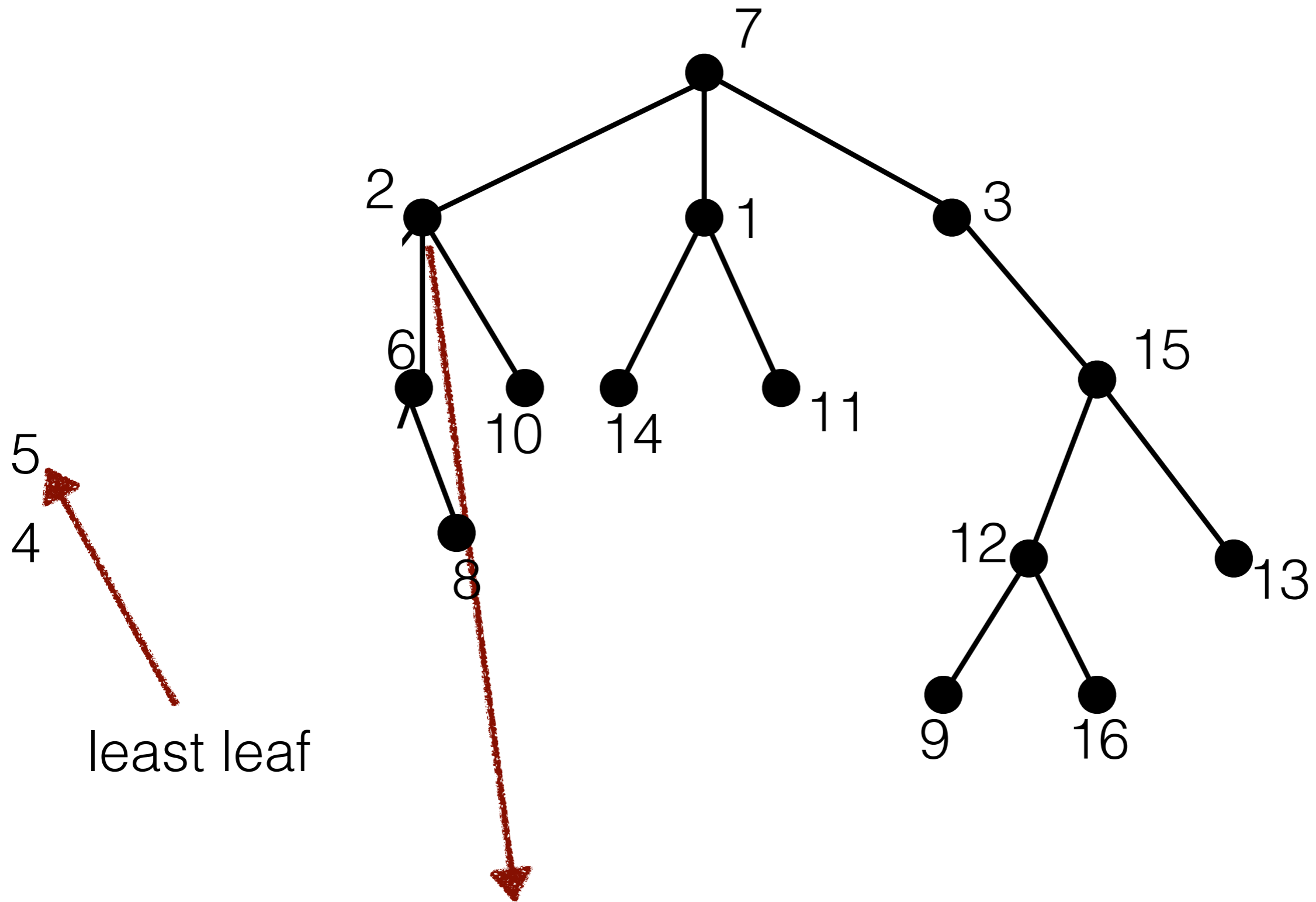


$f(T) = ($

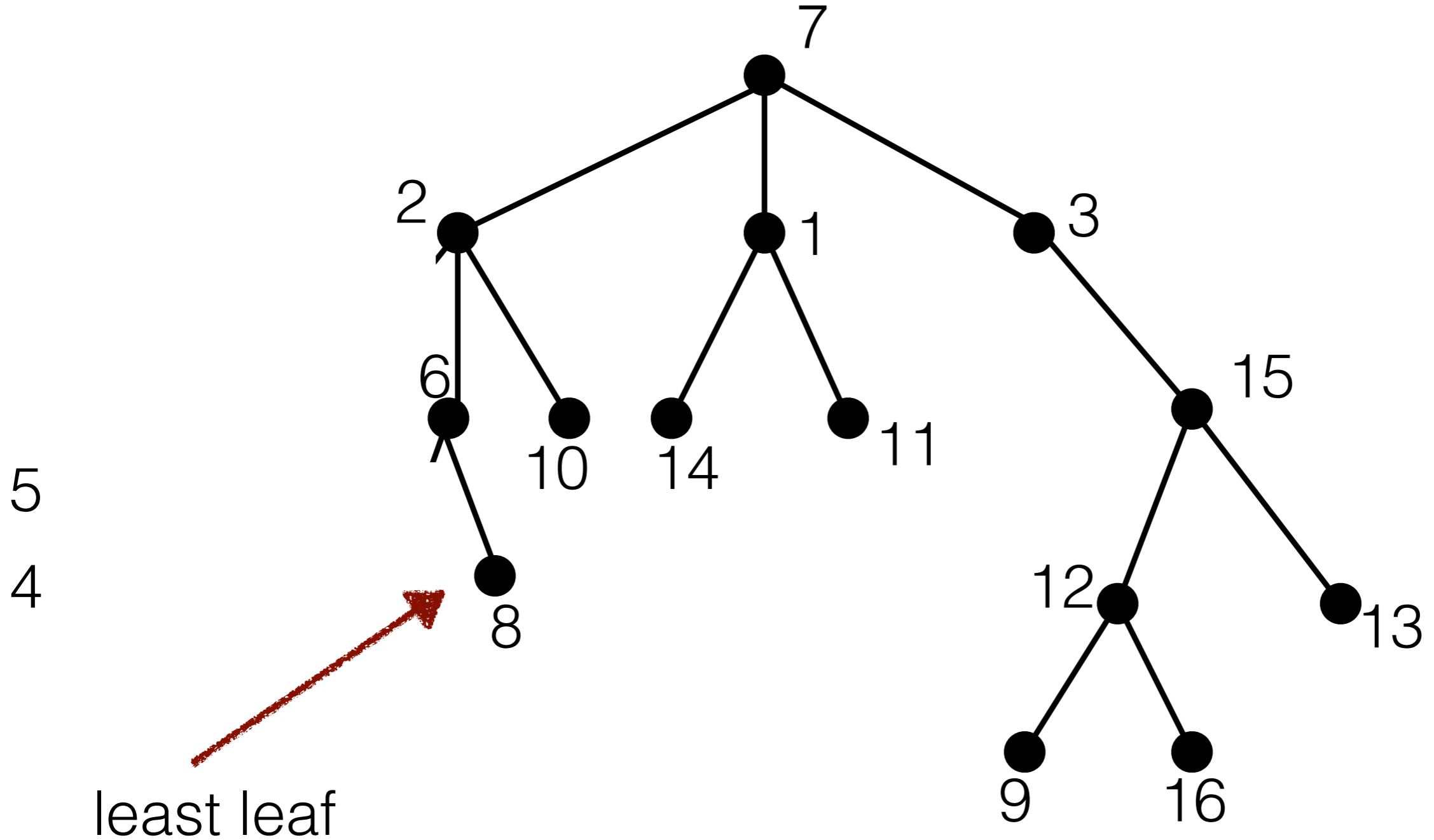




$$f(T) = (6)$$

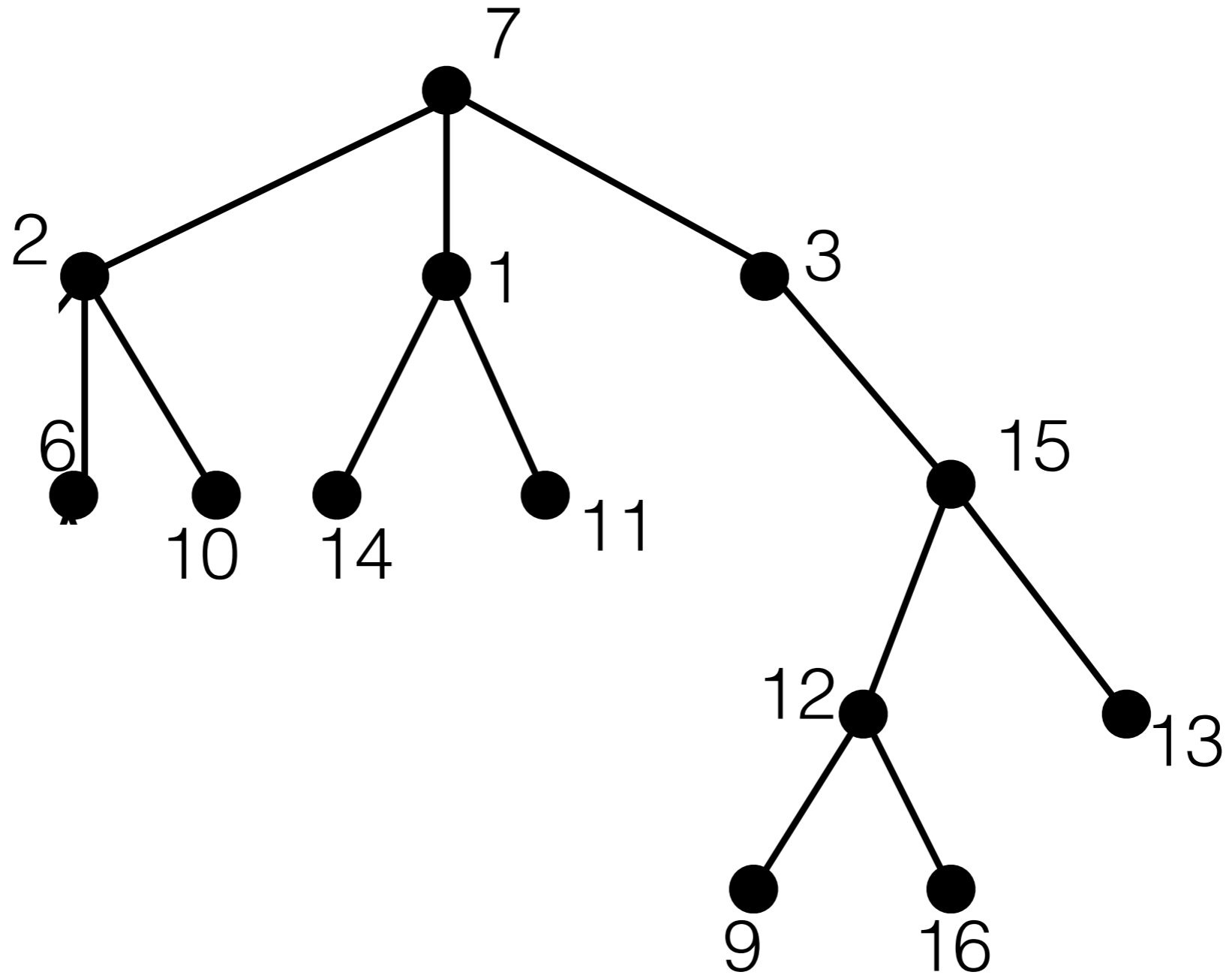


$$f(T) = (6 \ 2)$$



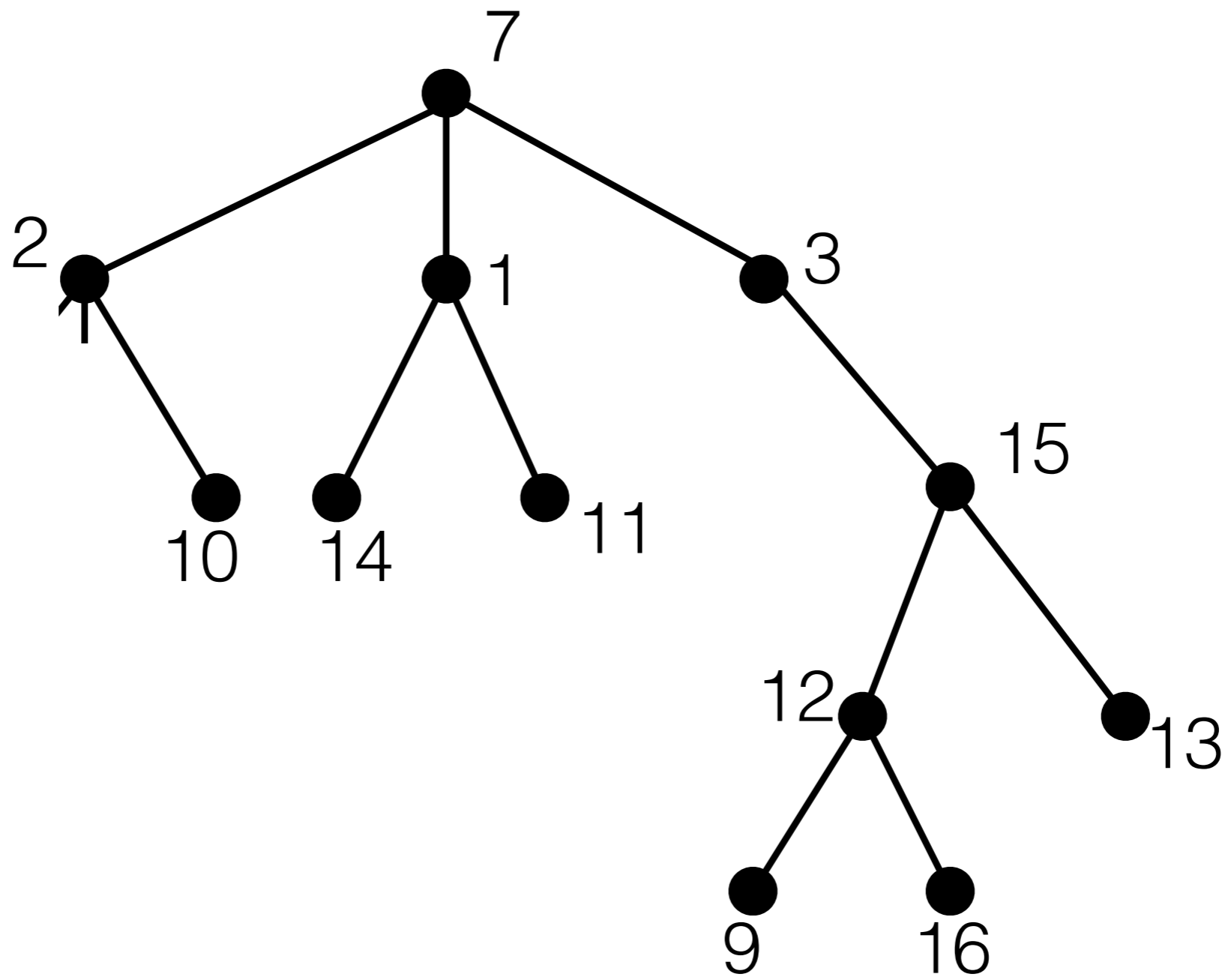
$$f(T) = (6 \ 2)$$

8
5
4



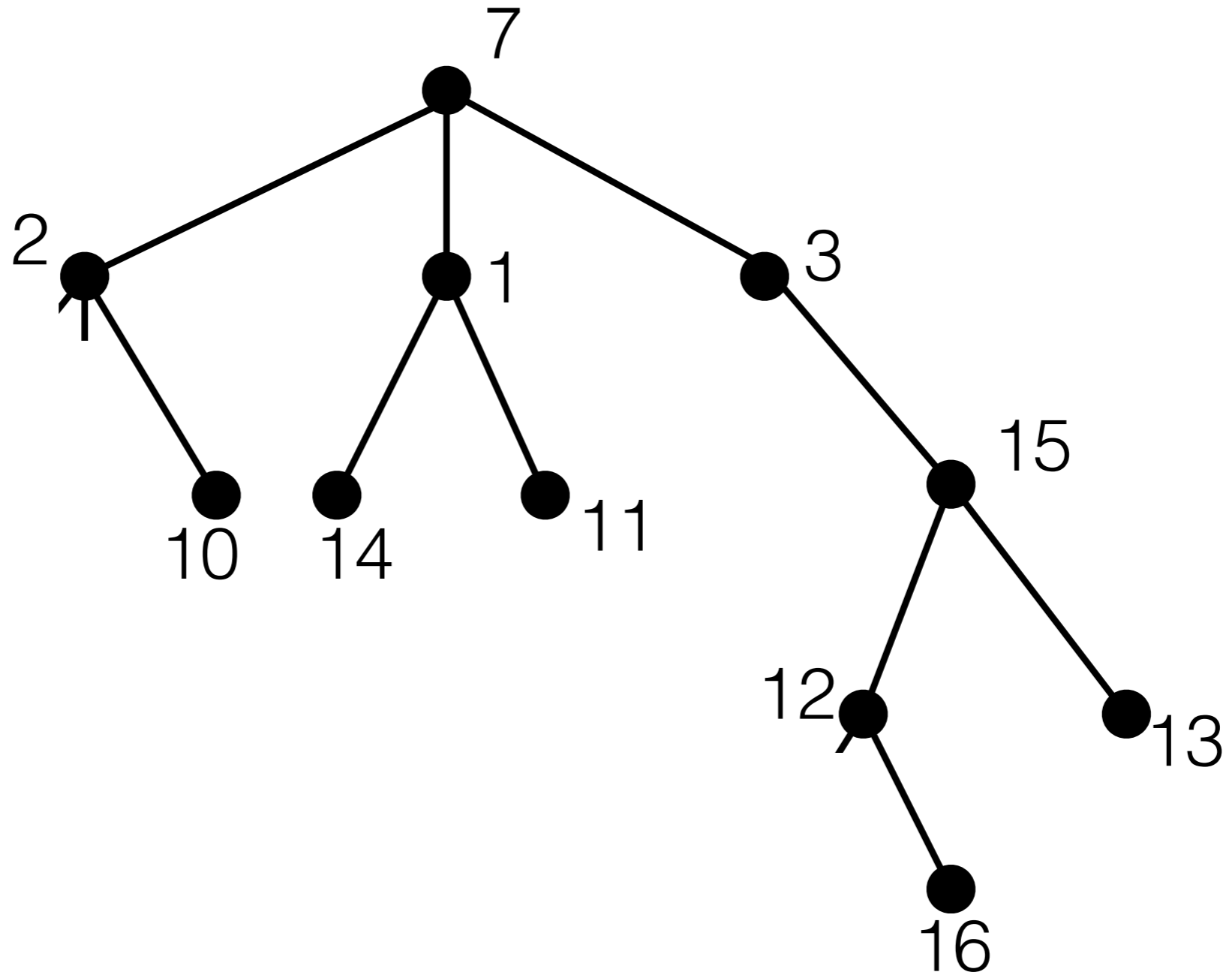
$$f(T) = (6 \ 2 \ 6)$$

6
8
5
4

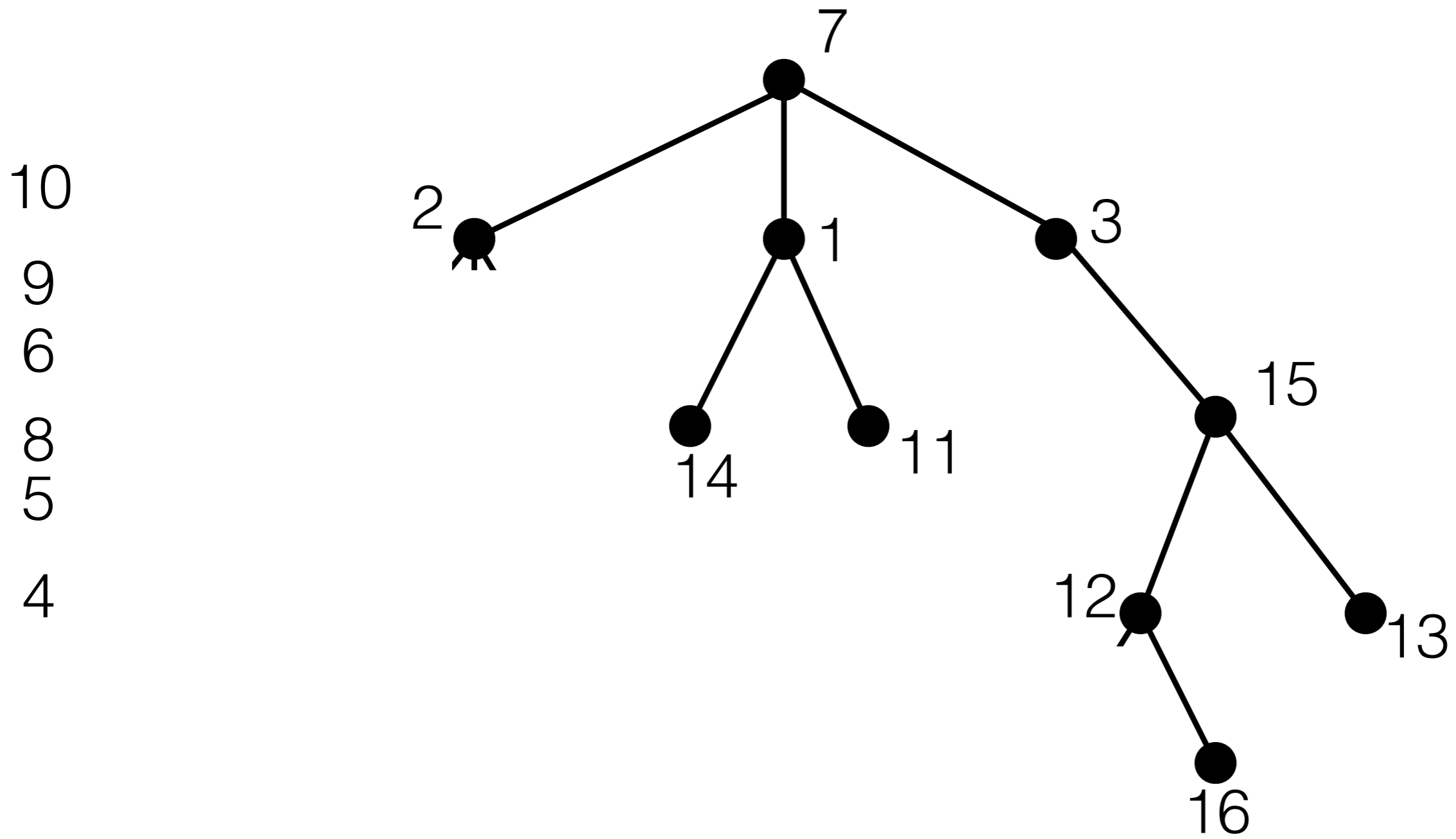


$$f(T) = (6 \ 2 \ 6 \ 2)$$

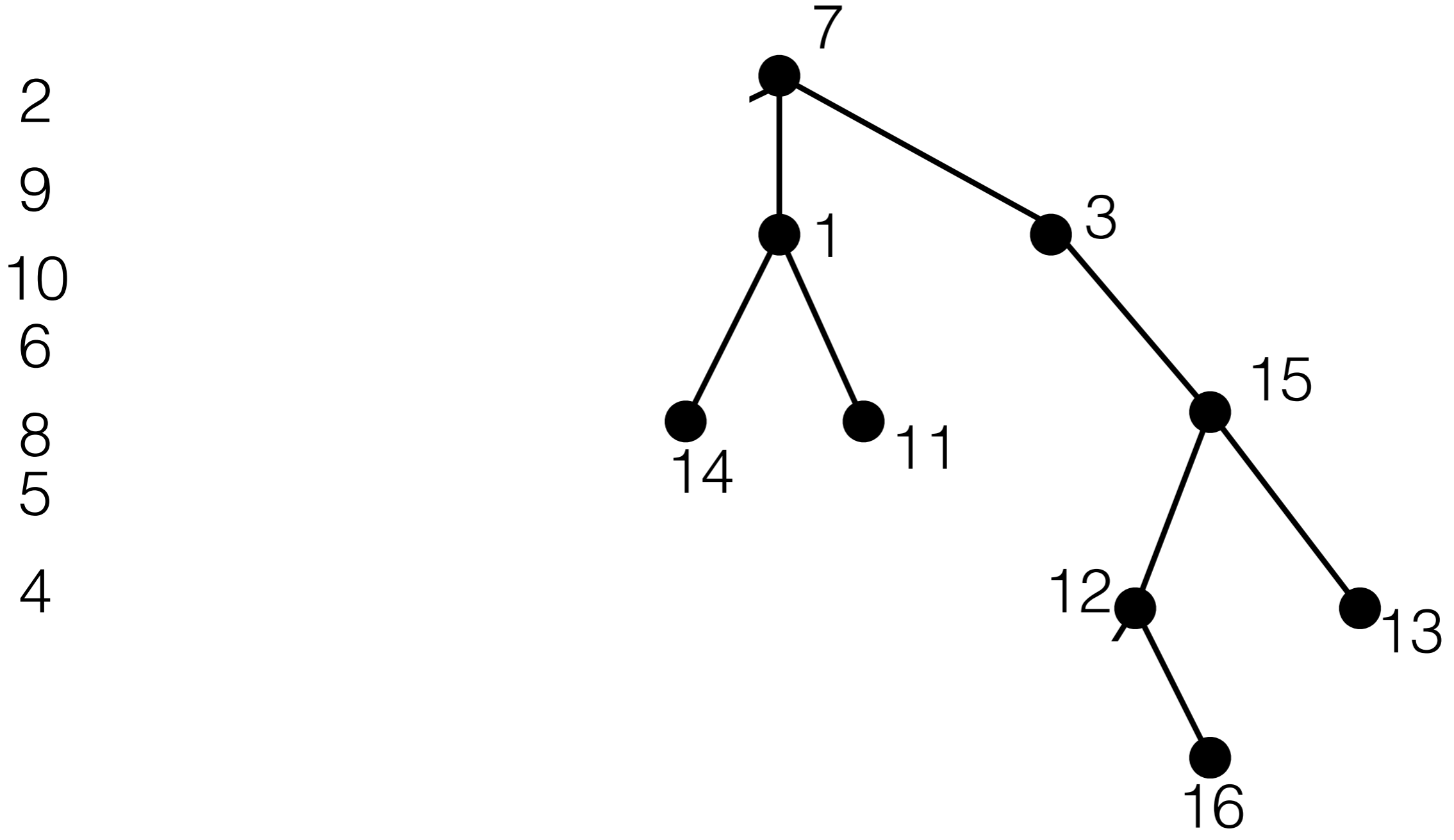
9
6
8
5
4



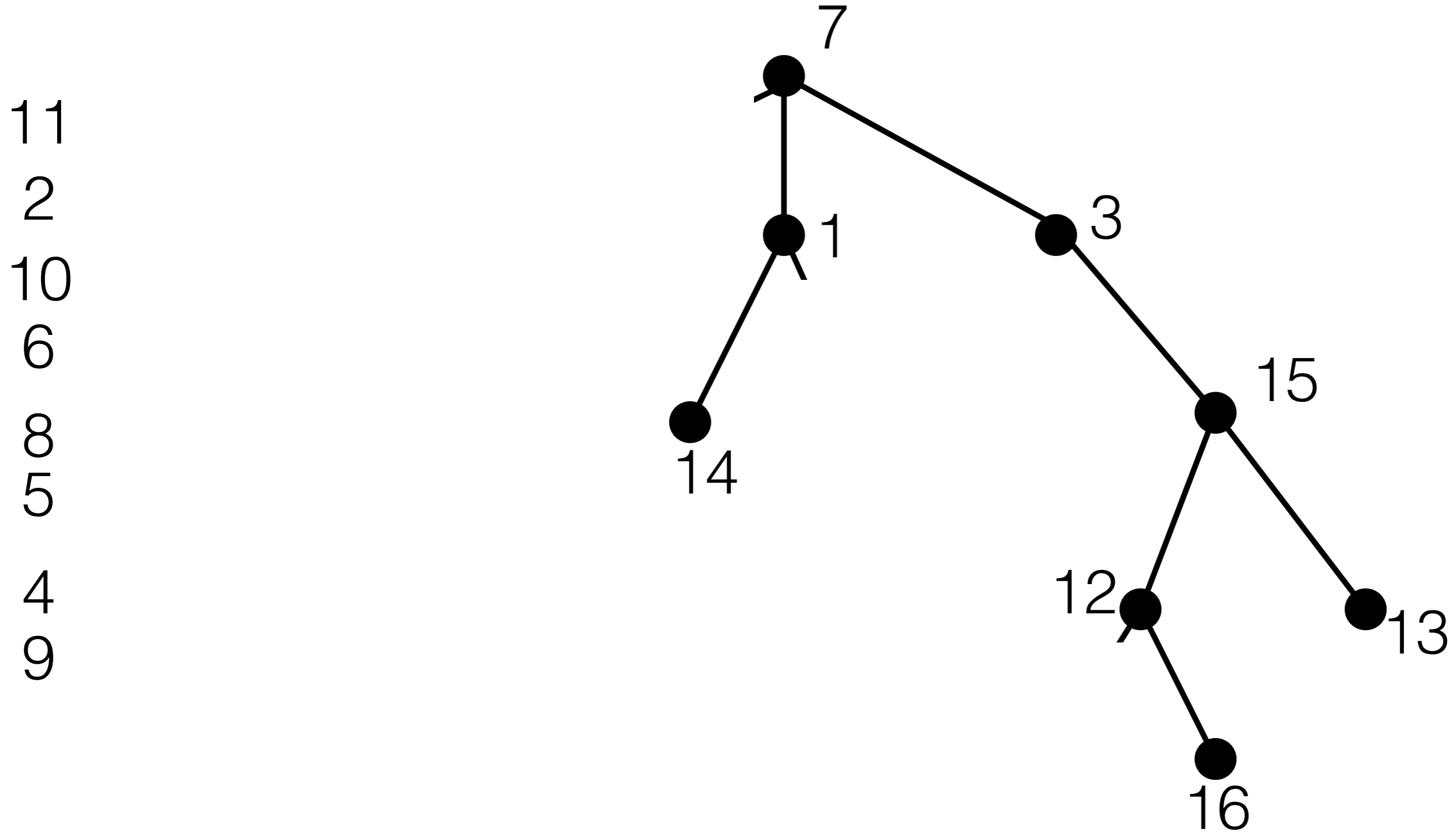
$$f(T) = (6 \ 2 \ 6 \ 2 \ 12)$$



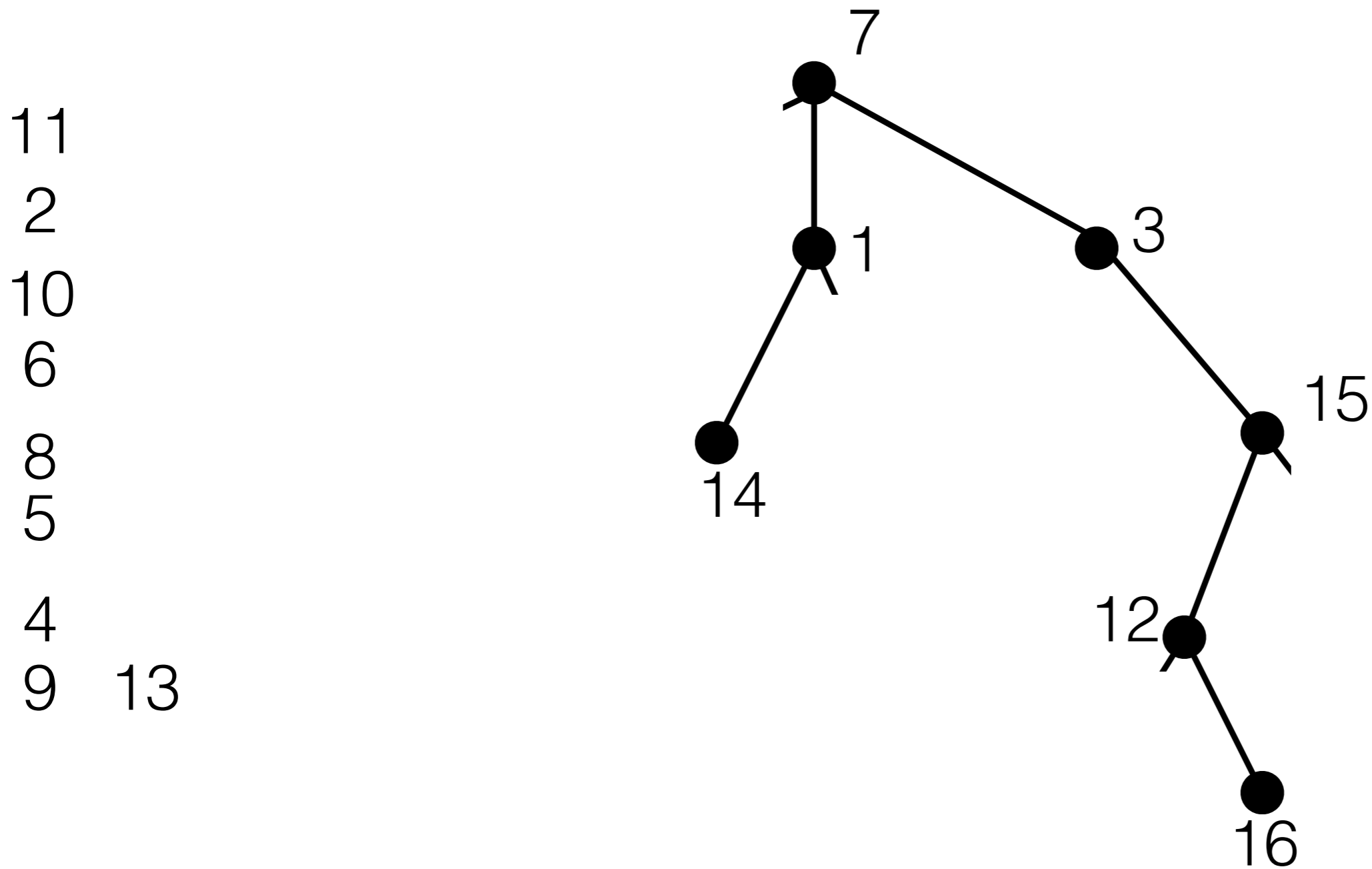
$$f(T) = (6 \ 2 \ 6 \ 2 \ 12 \ 2)$$



$$f(T) = (6 \ 2 \ 6 \ 2 \ 12 \ 2 \ 7)$$



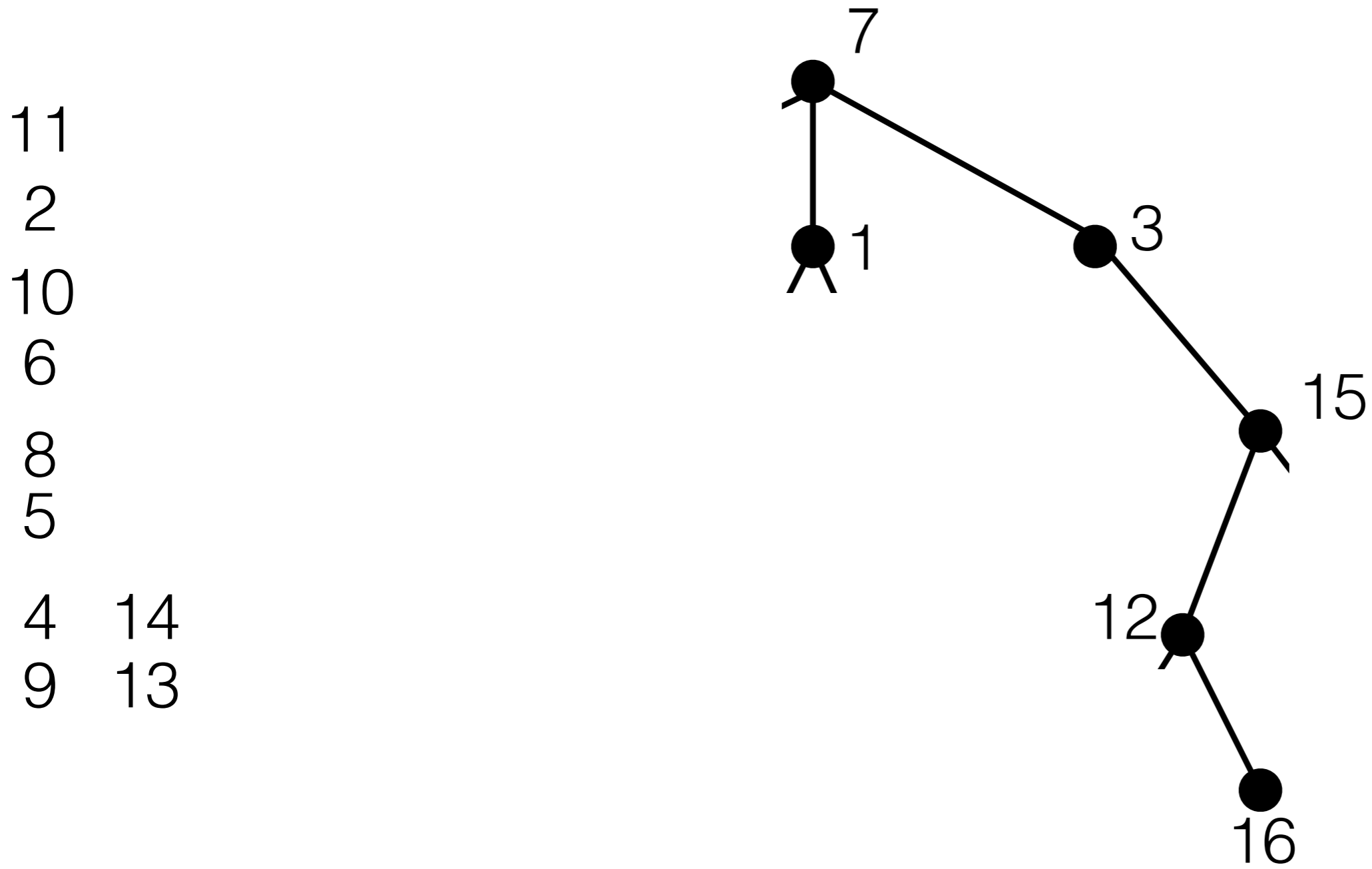
$$f(T) = (6 \ 2 \ 6 \ 2 \ 12 \ 2 \ 7 \ 1)$$



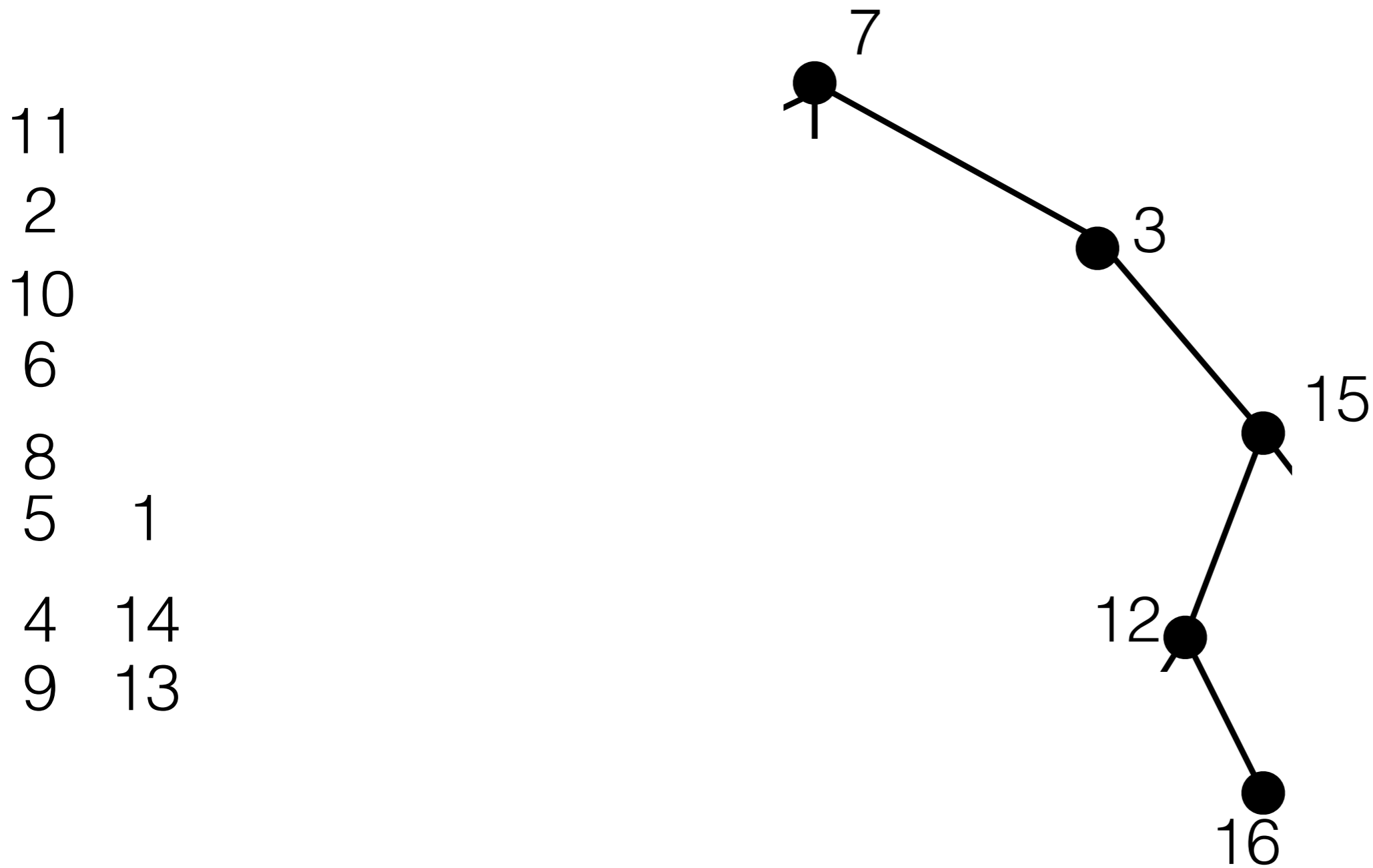
11
2
10
6
8
5
4
9

13

$$f(T) = (6 \ 2 \ 6 \ 2 \ 12 \ 2 \ 7 \ 1 \ 15)$$



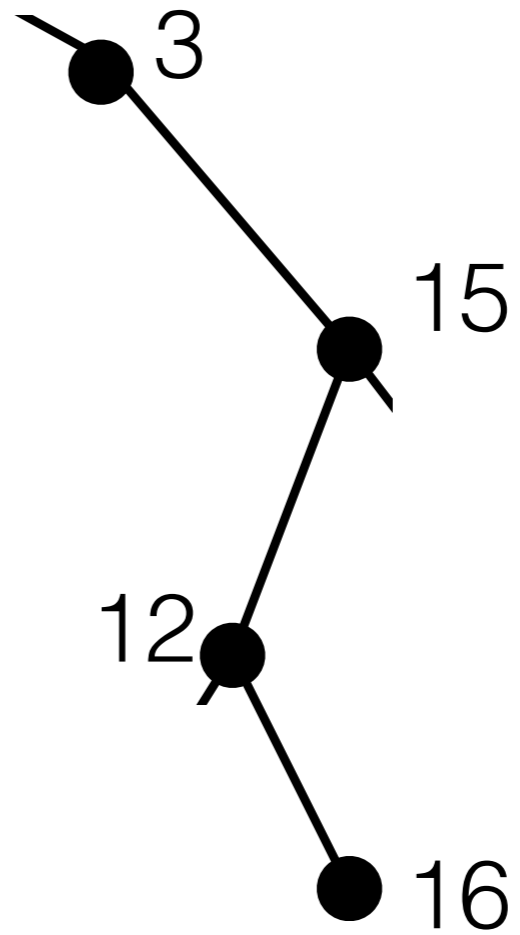
$$f(T) = (6 \ 2 \ 6 \ 2 \ 12 \ 2 \ 7 \ 1 \ 15 \ 1)$$



11
2
10
6
8
5 1
4 14
9 13

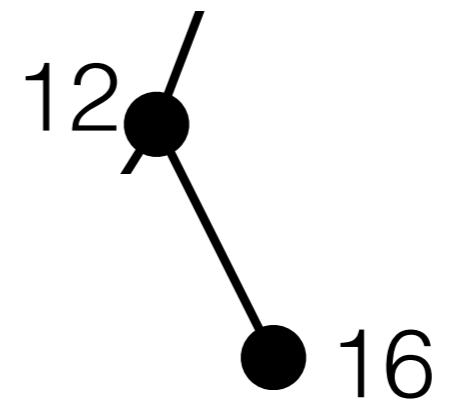
$$f(T) = (6 \ 2 \ 6 \ 2 \ 12 \ 2 \ 7 \ 1 \ 15 \ 1 \ 7)$$

11
2
10
6 7
8
5 1
4 14
9 13



$$f(T) = (6 \ 2 \ 6 \ 2 \ 12 \ 2 \ 7 \ 1 \ 15 \ 1 \ 7 \ 3)$$

11
2 15
10 3
6 7
8
5 1
4 14
9 13



$$f(T) = (6 \ 2 \ 6 \ 2 \ 12 \ 2 \ 7 \ 1 \ 15 \ 1 \ 7 \ 3 \ 15 \ 12)$$

How to reconstruct a tree from a code

$$f(T) = (6, 2, 1, 1, 3, 4)$$

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Strategy: Write down list of vertices

$$\text{Vertex List} = \{1,2,3,4,5,6,7,8\}$$

How to reconstruct a tree from a code

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Strategy: Write down list of vertices

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Strategy: Iteratively look at least vertex v missing from code and join it to leftmost entry L in code. Then remove v from vertex list and L from code.