

B^+T ee

Sa e c e a B- ee .

Dic i a ai a e i ea e . Lea e f a
d b - i ked i .

Re ai i g de ha e f i g c e:

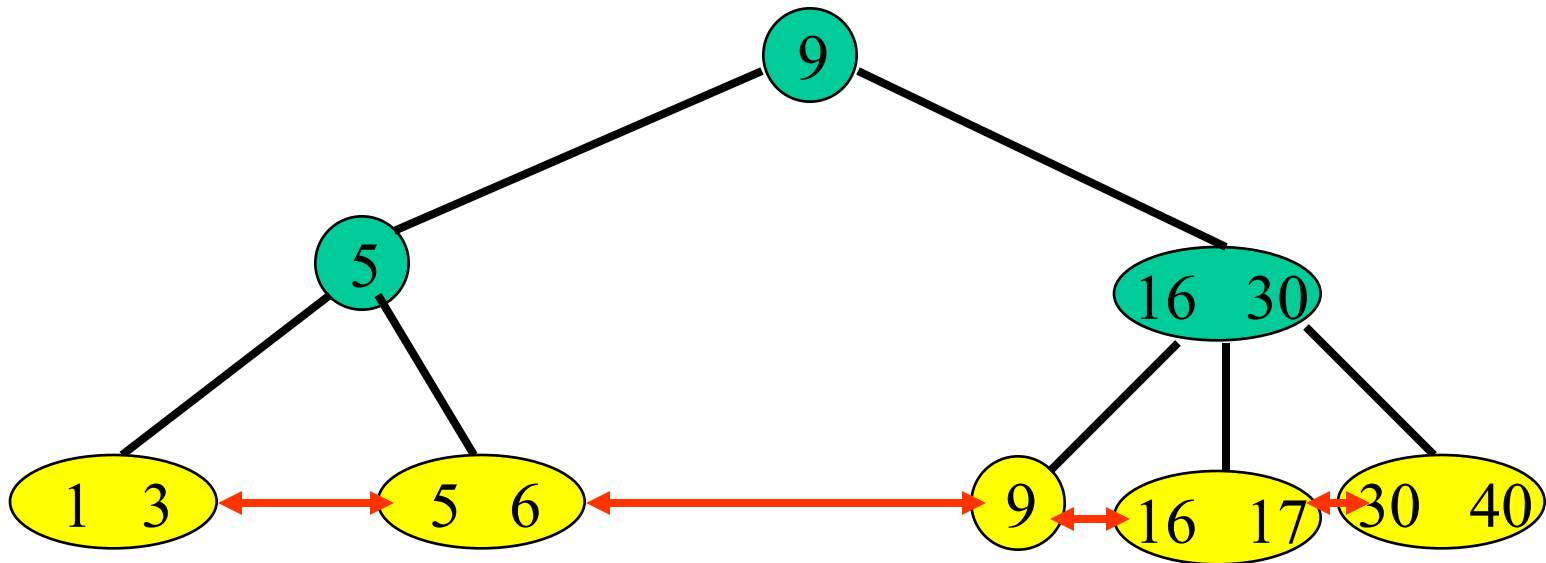
$$j a_0 k_1 a_1 k_2 a_2 \dots k_j a_j$$

$j =$ be fke i de.

a_i i a i e a b ee.

$k_i \leq$ a e ke i b ee a_i a d $>$ a ge
i a_{i-1} .

E a e B+- ee

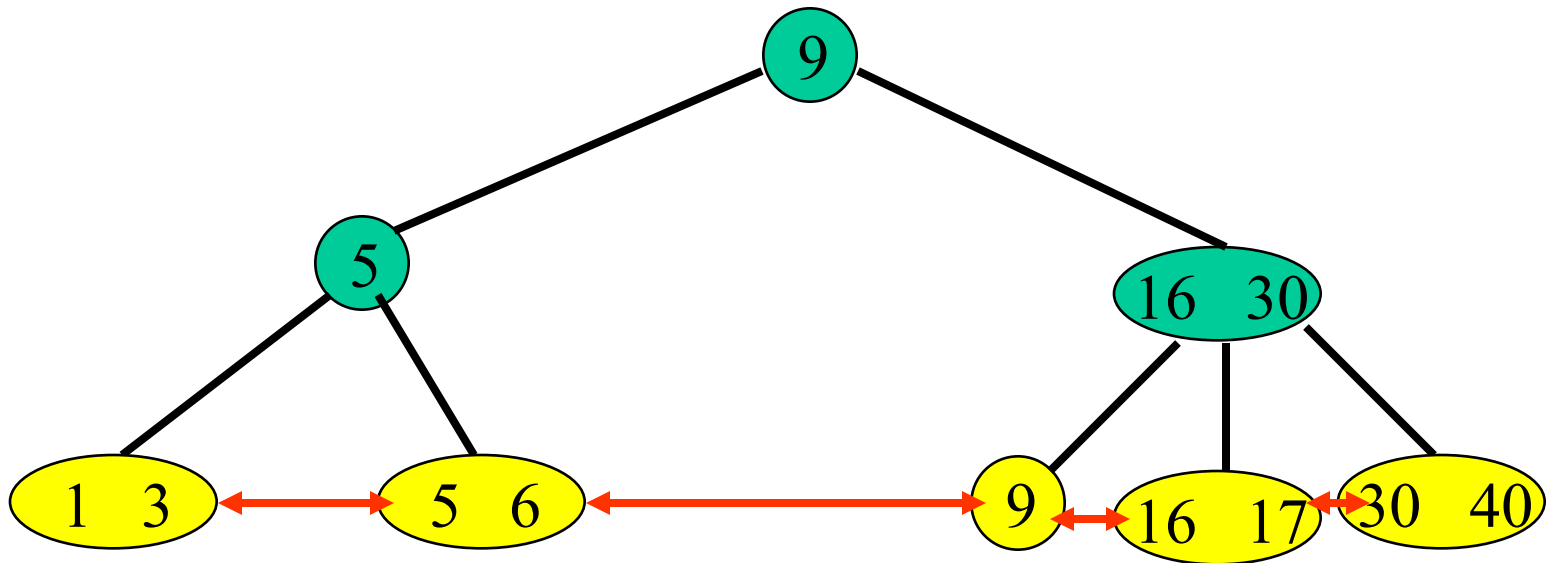


→ i de de



→ eaf/da a de

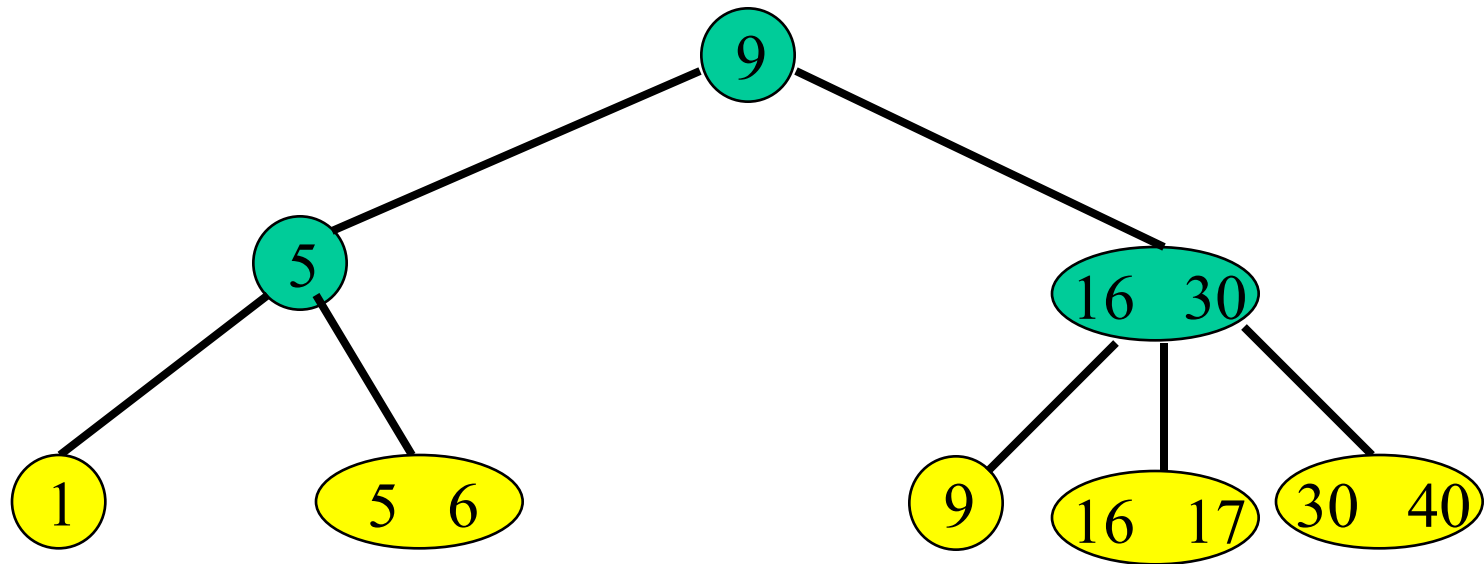
B+- tree Search



key = 5

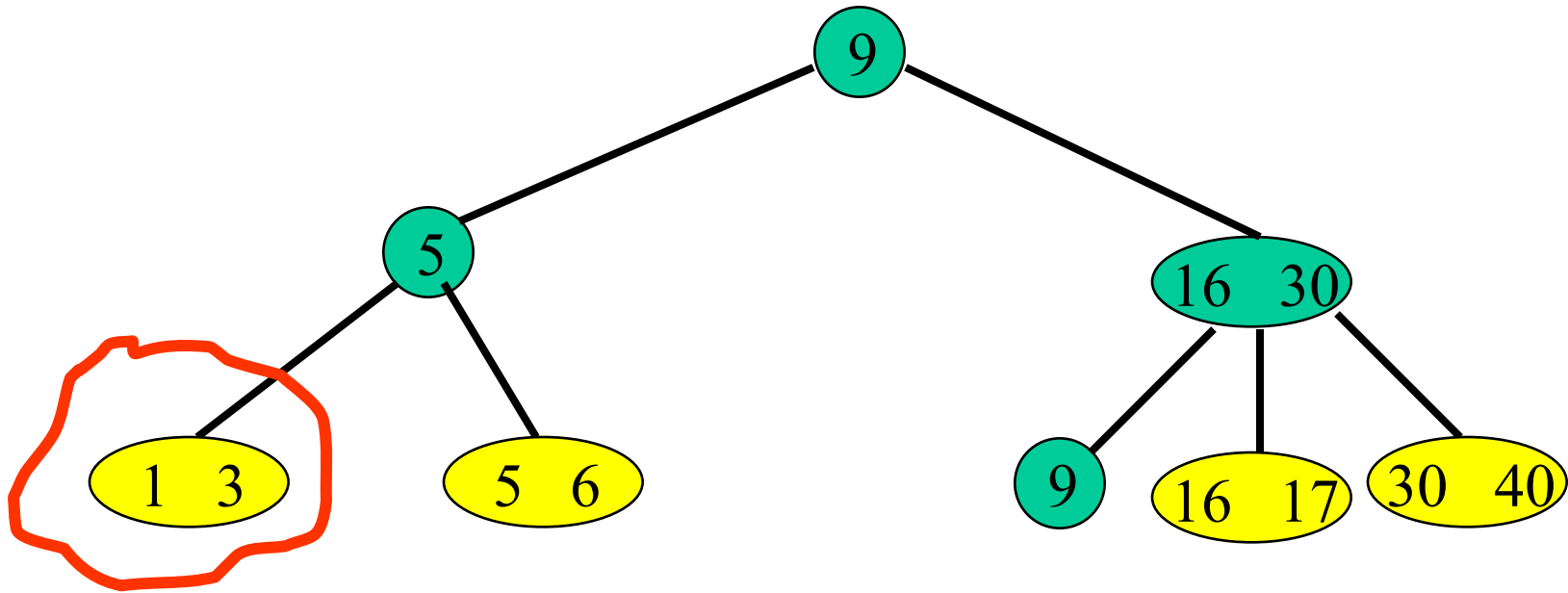
6 ≤ key ≤ 20

B+- ee I e



I e 10

I e



I e a ai i h ke = 2.

Ne ai g e i a 3- de.

I e I A 3- de

I e e ai ha he ke a e i
a ce di g de .

1 2 3

S i i de .

1

2 3

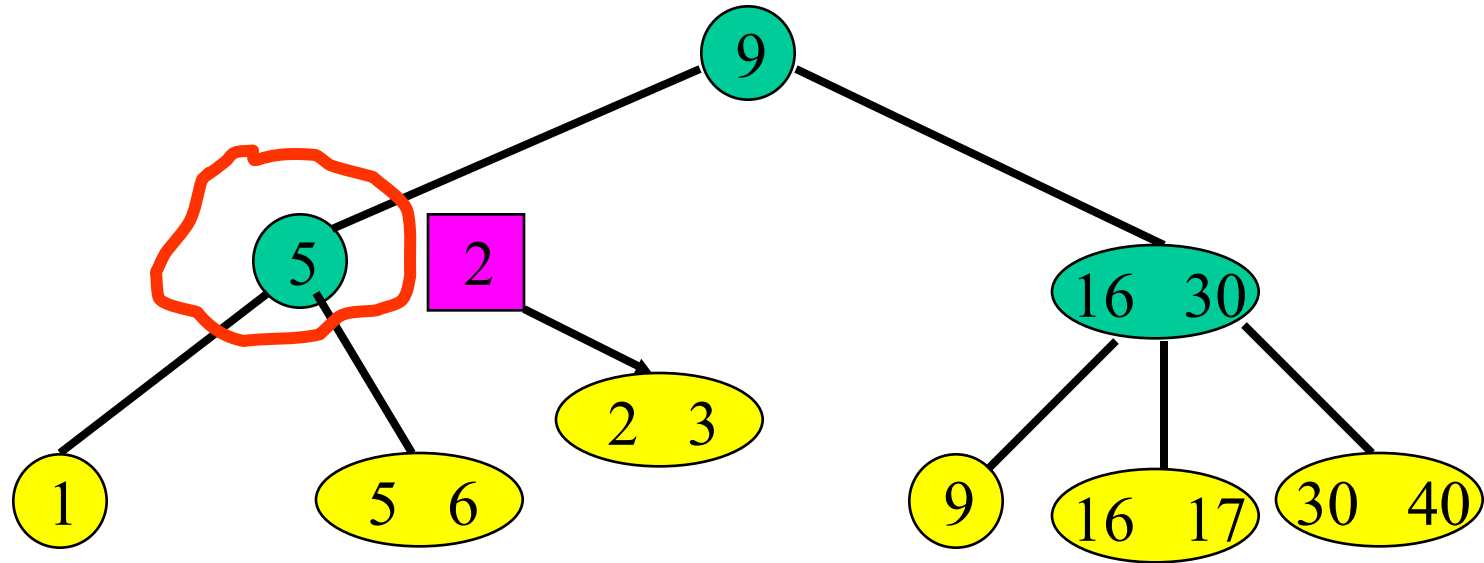
I e a e ke i e de a d i e
hi e de i a e .

2

1

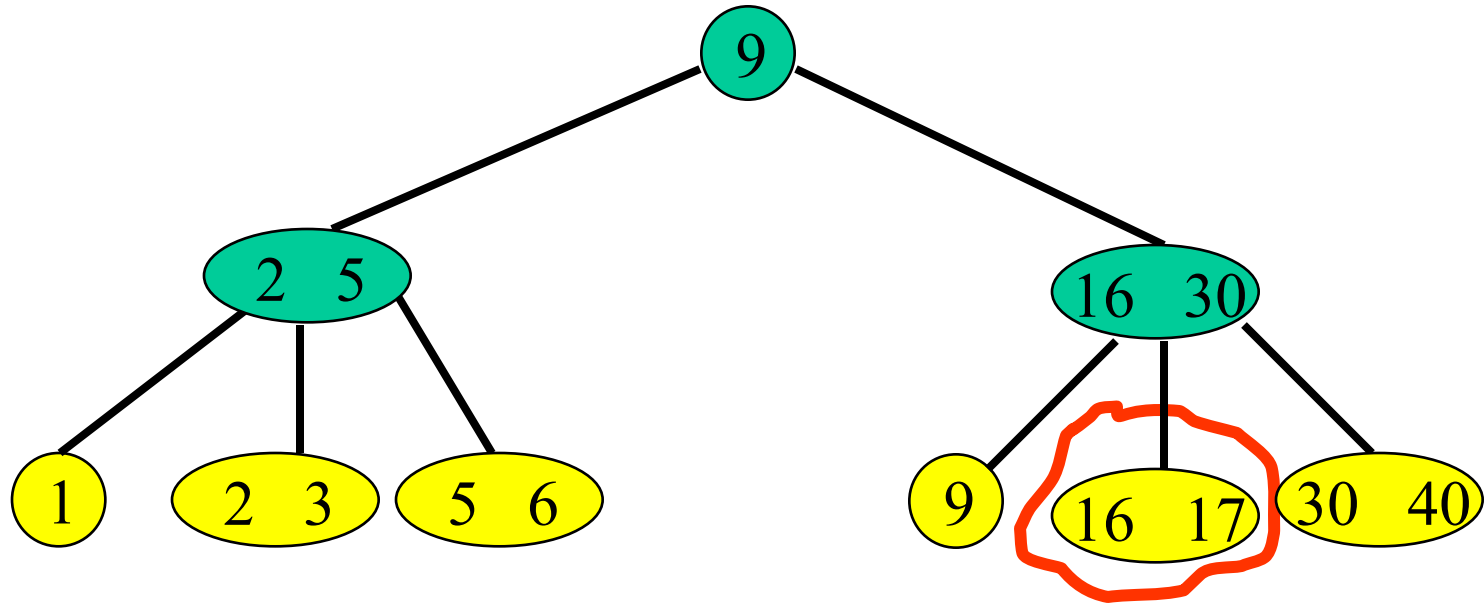
2 3

I e



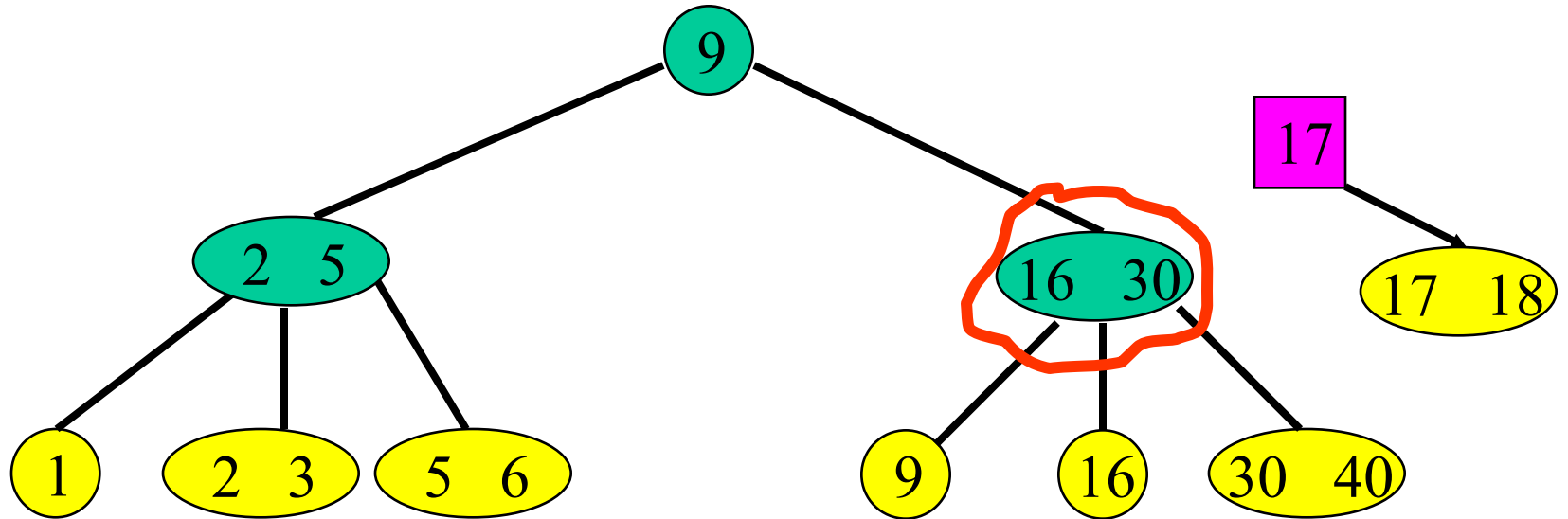
I e a i de e 2 a i e i a e .

I e



N , i e a ai i h ke = 18.

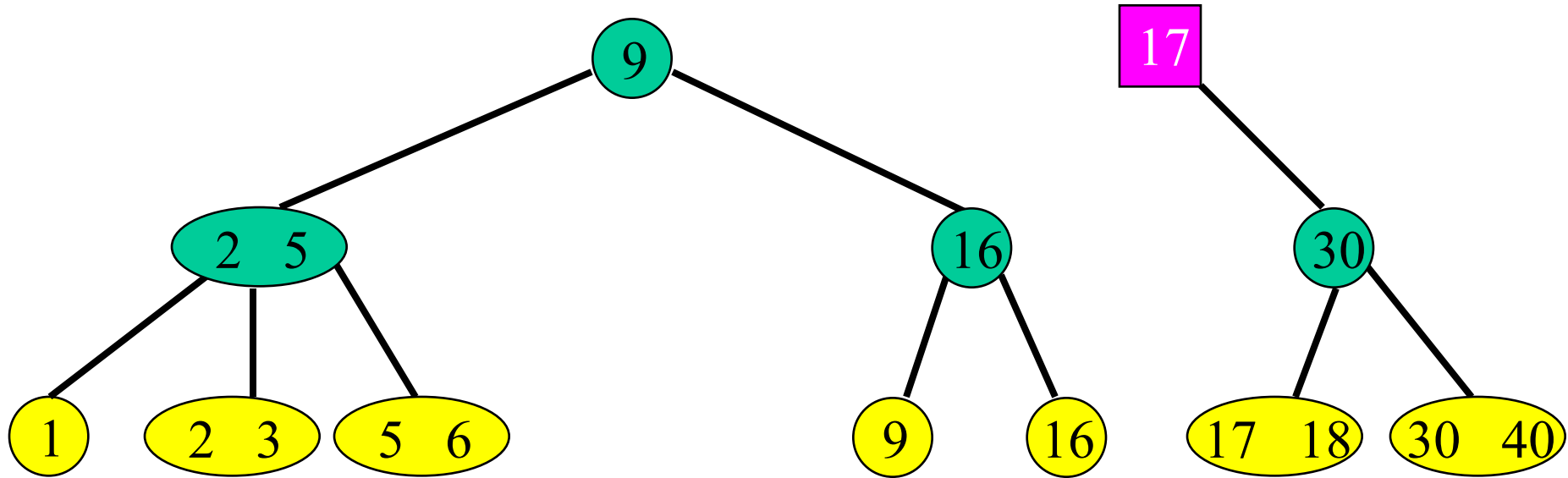
I e



N , i e a ai i h ke = 18.

I e a i de e 17 a i e i a e .

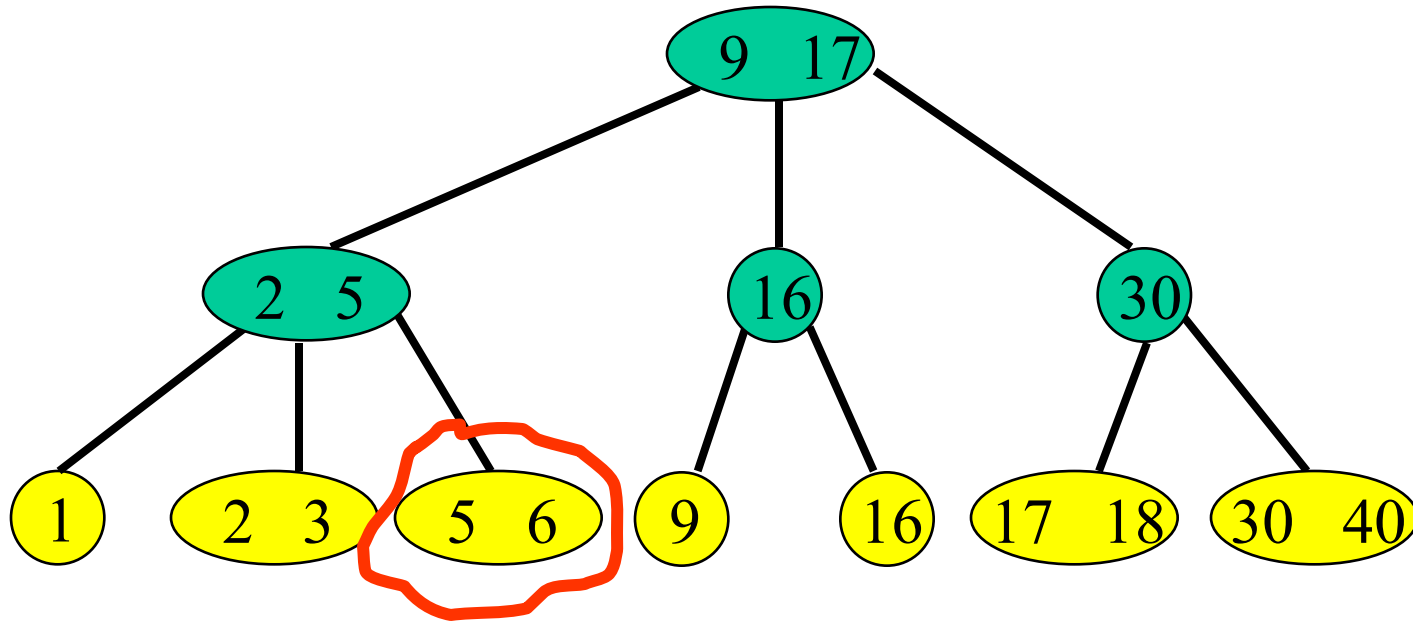
I e



N , i e a ai i h ke = 18.

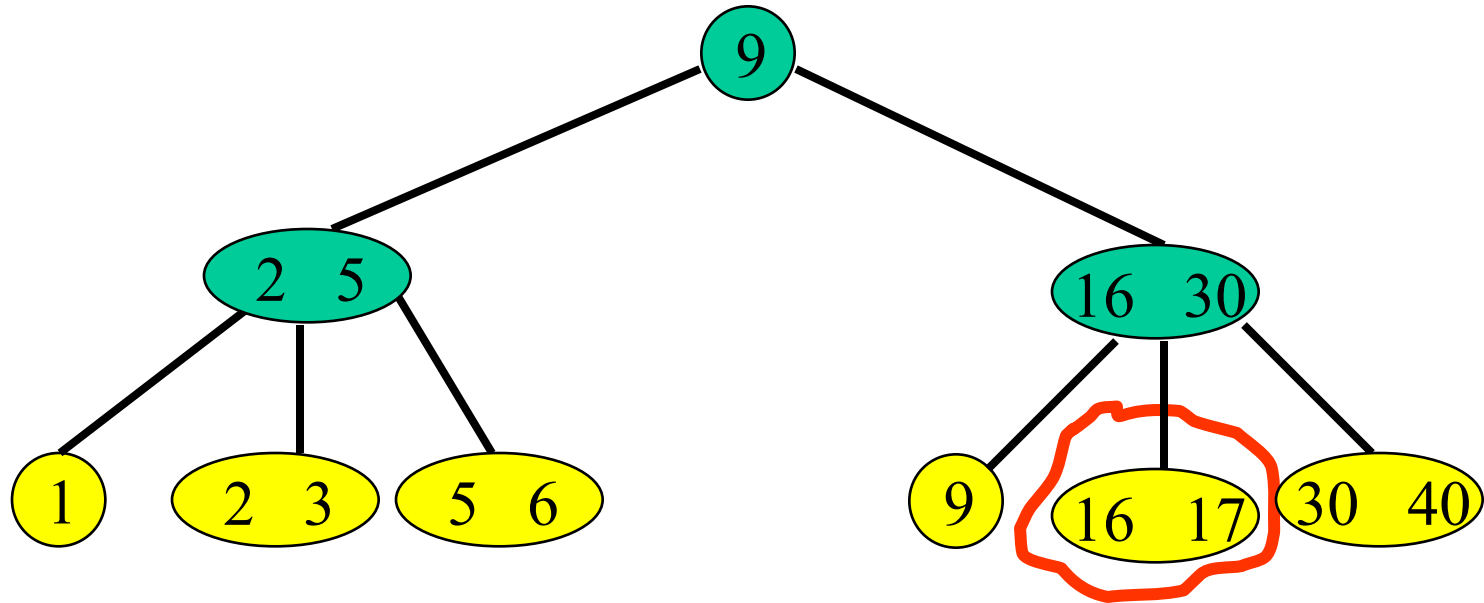
I e a i de e 17 a i e i a e .

I e



N , i e a ai i h ke = 7.

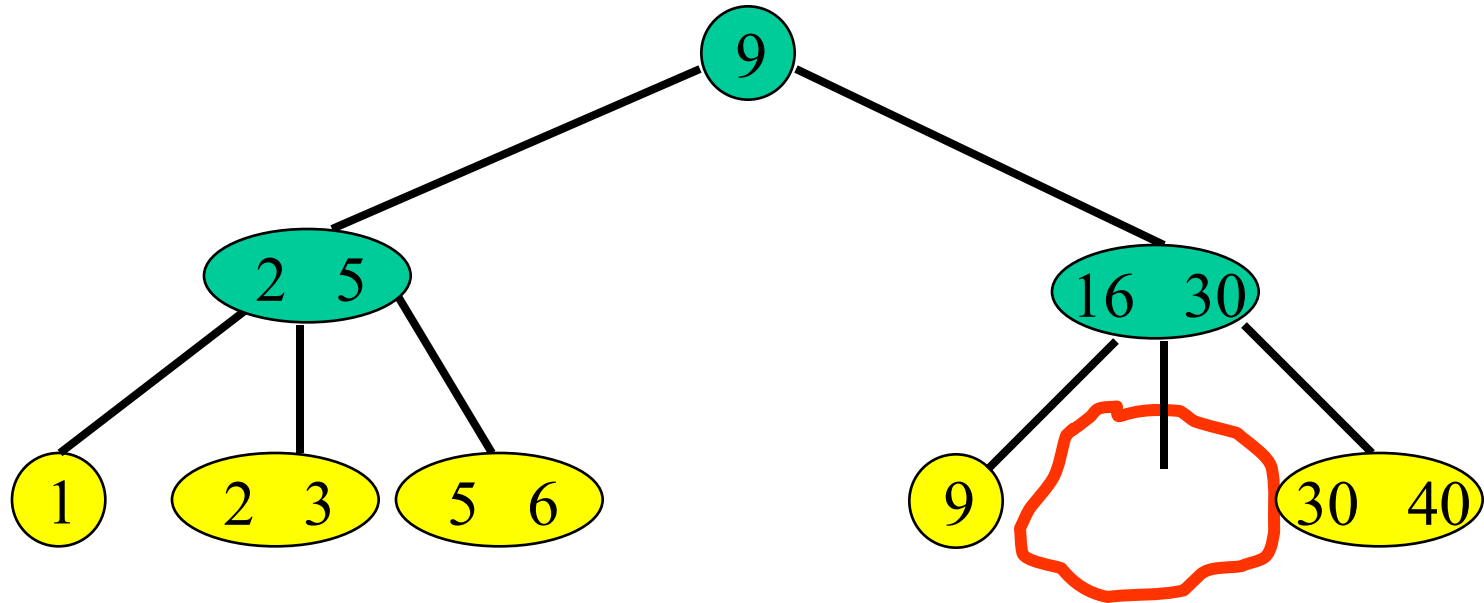
De e e



De e e ai i h ke = 16.

N e: de e e ai i a a i a eaf.

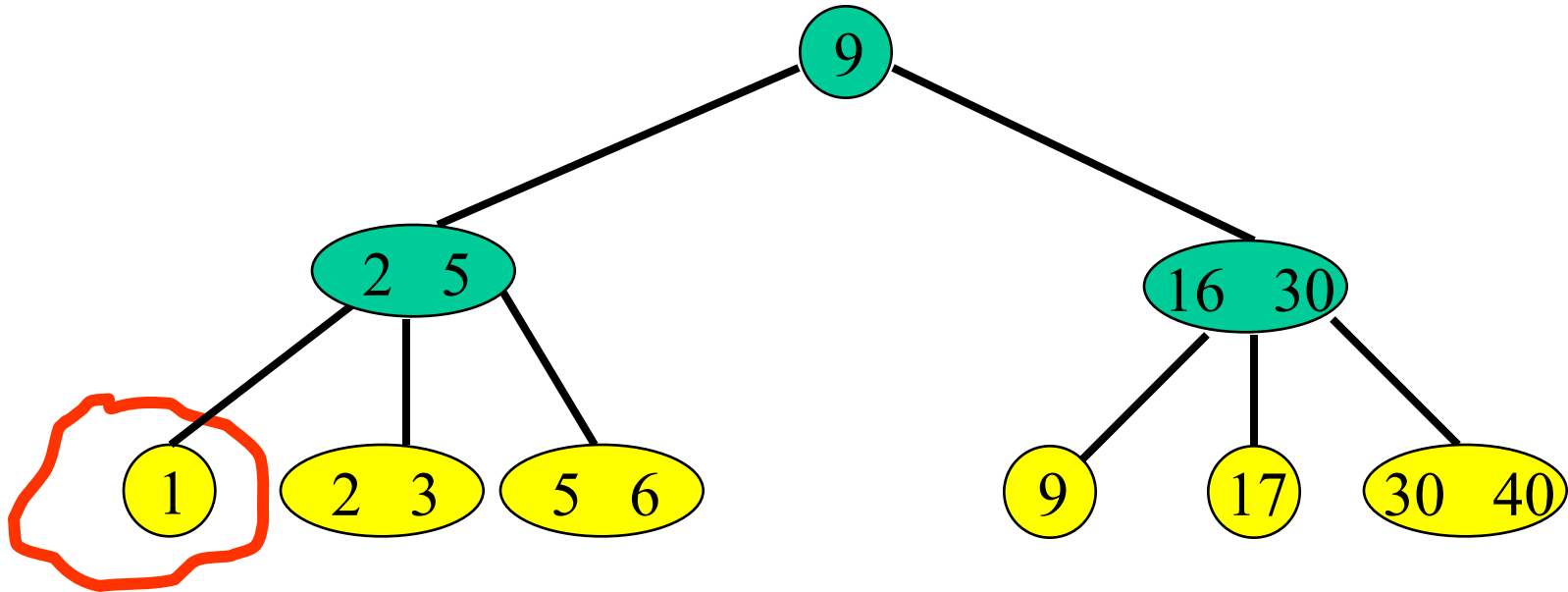
De e e



De e e ai i h ke = 16.

N e: de e e ai i a a i a eaf.

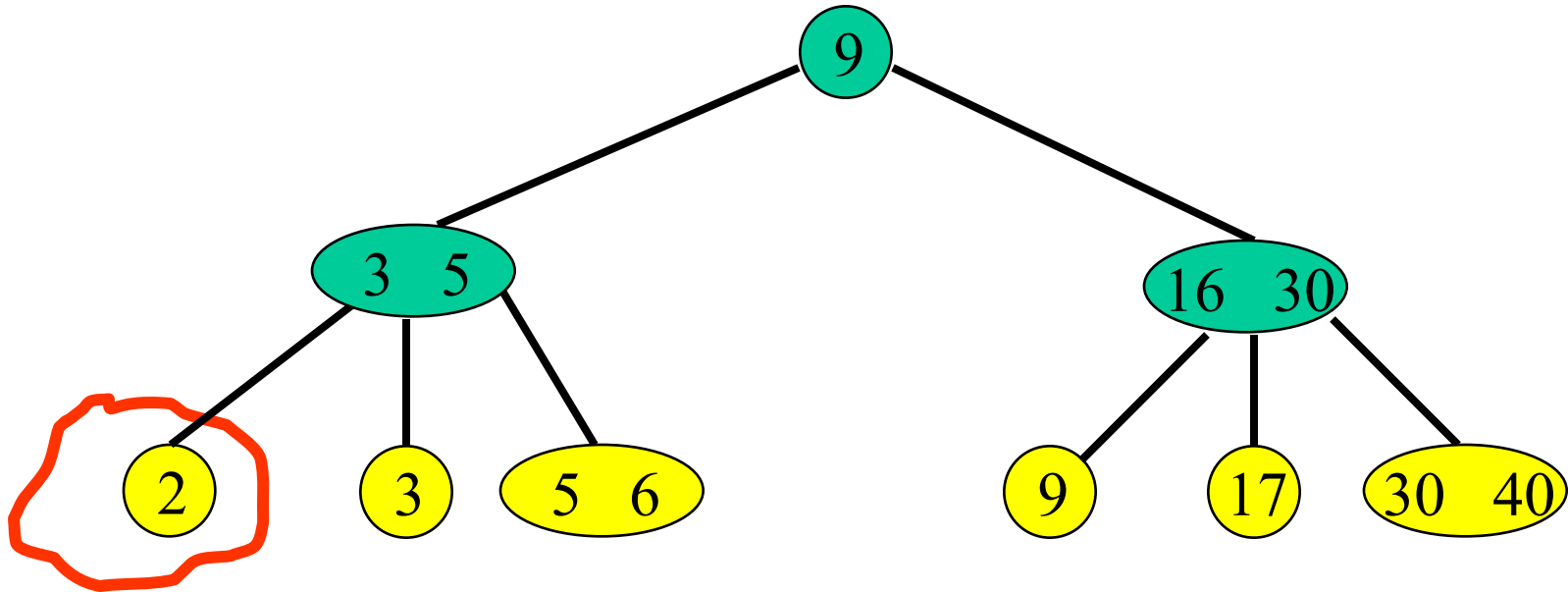
De e e



De e e ai i h ke = 1.

Ge $\geq$ 1 f ib i g a d da e a e ke .

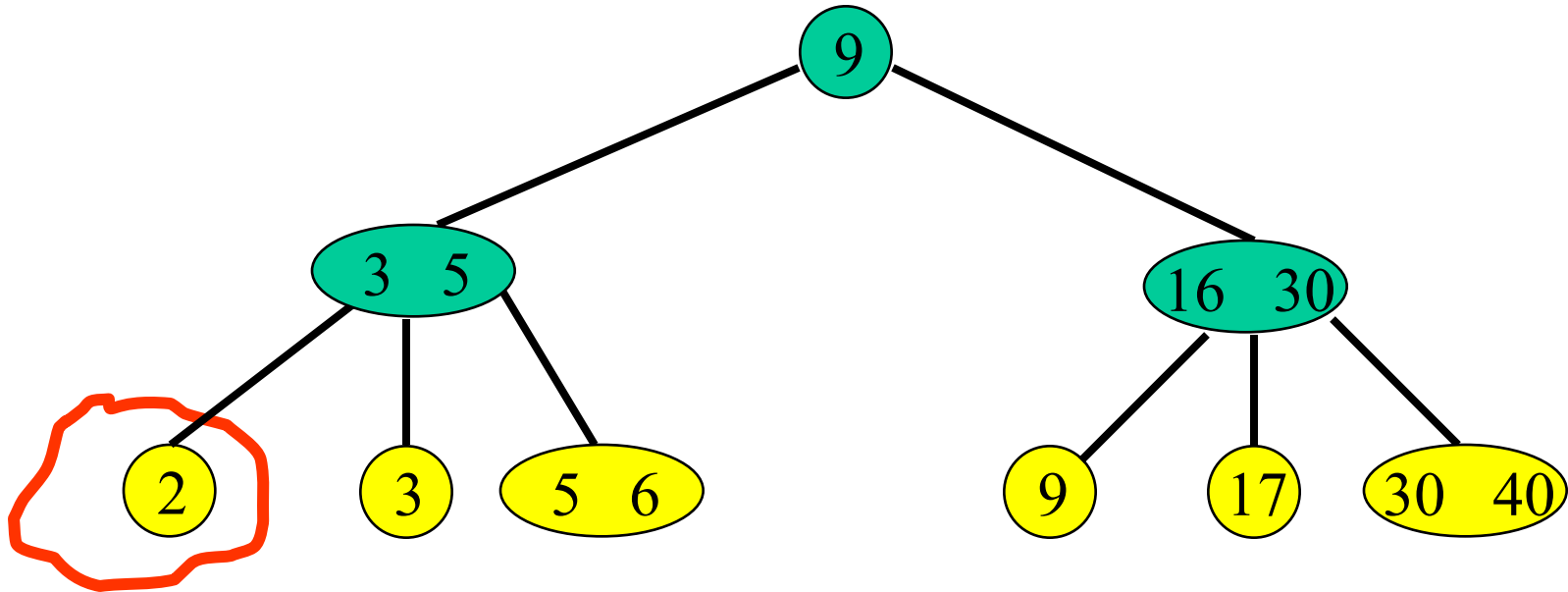
De e e



De e e ai i h ke = 1.

Ge >= 1 f ib i g a d da e a e ke .

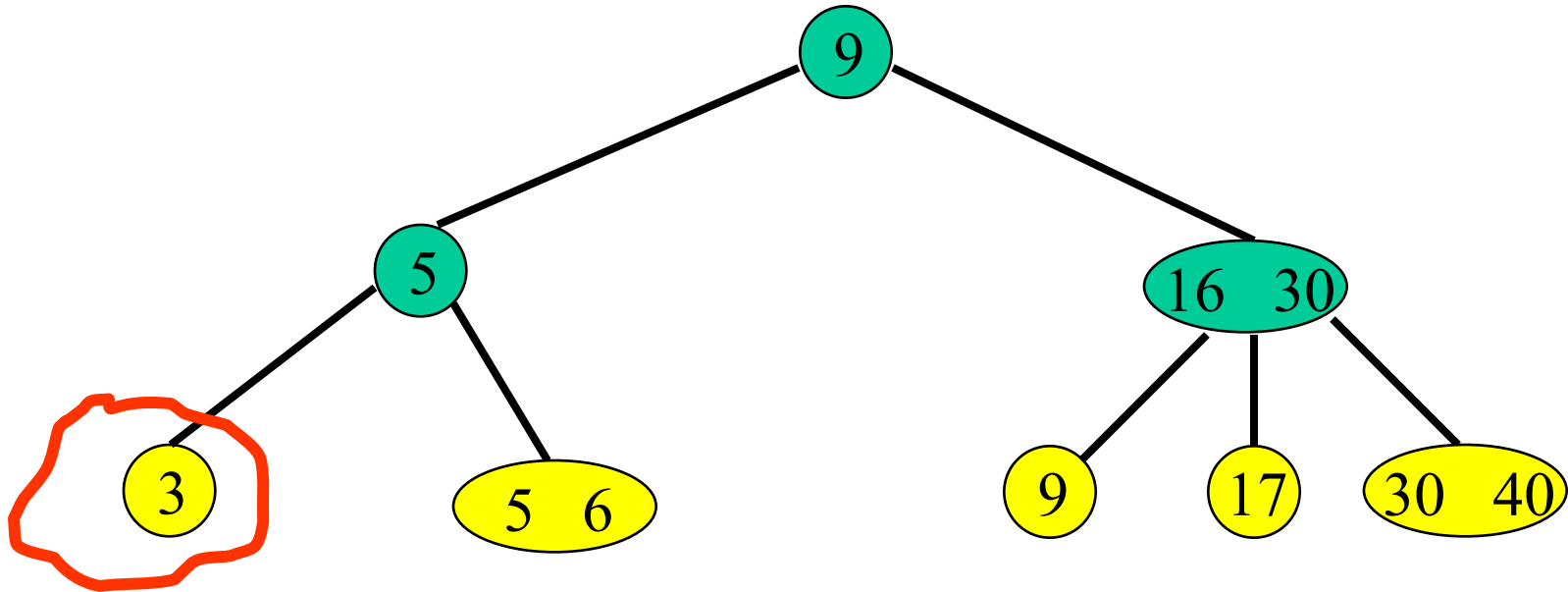
De e e



De e e ai i h ke = 2.

Me ge i h ib i g, de e e i -be ee ke i a e .

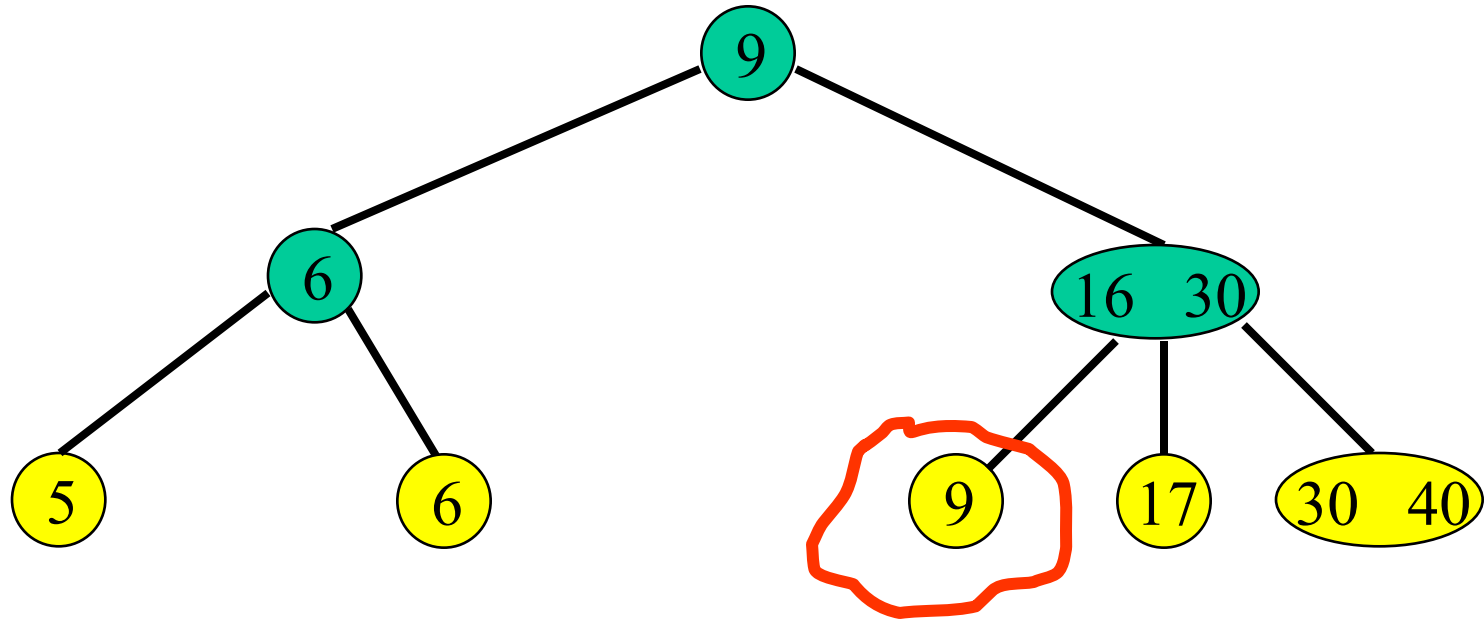
De e e



De e e ai i h ke = 3.

Ge >= 1 f ib i g a d da e a e ke .

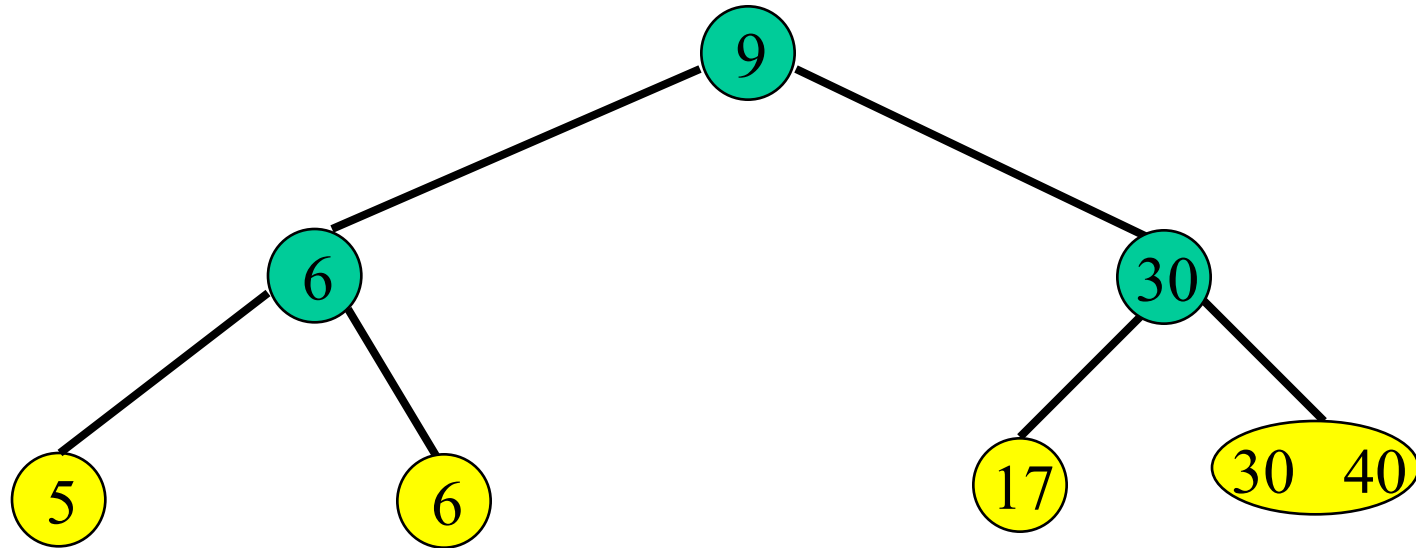
De e e



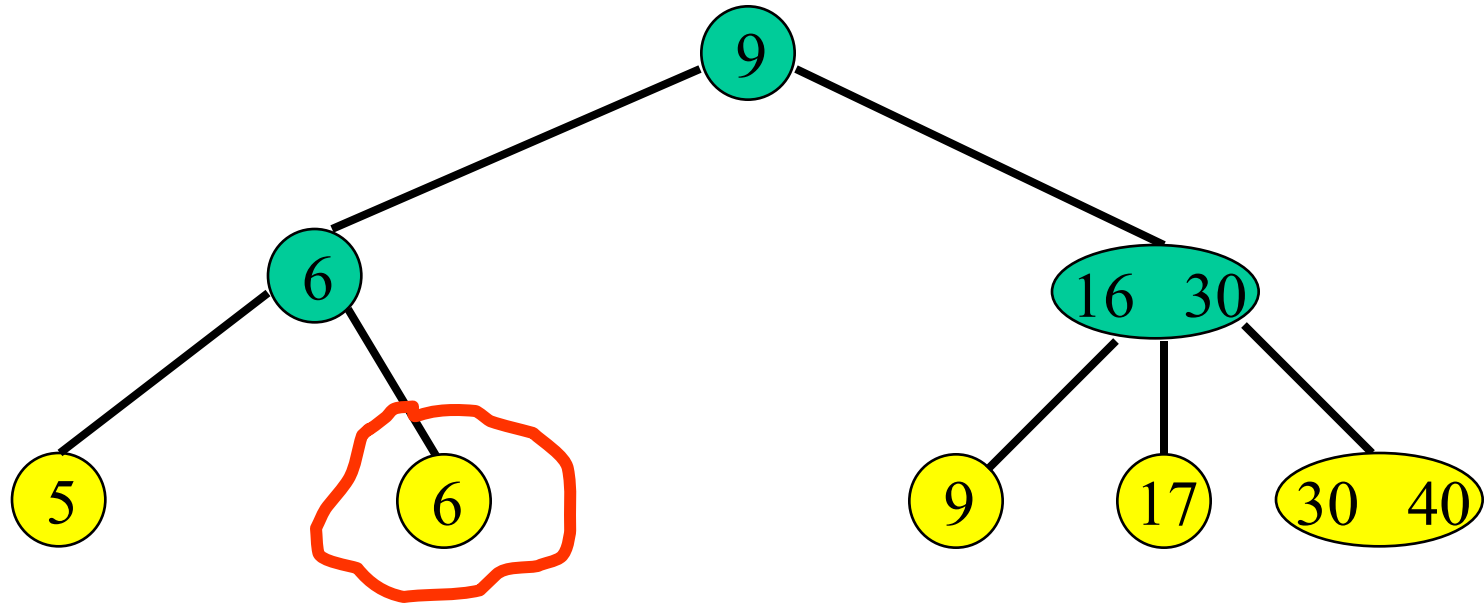
De e e ai i h ke = 9.

Me ge i h ib i g, de e e i -be ee ke i a e .

De e e



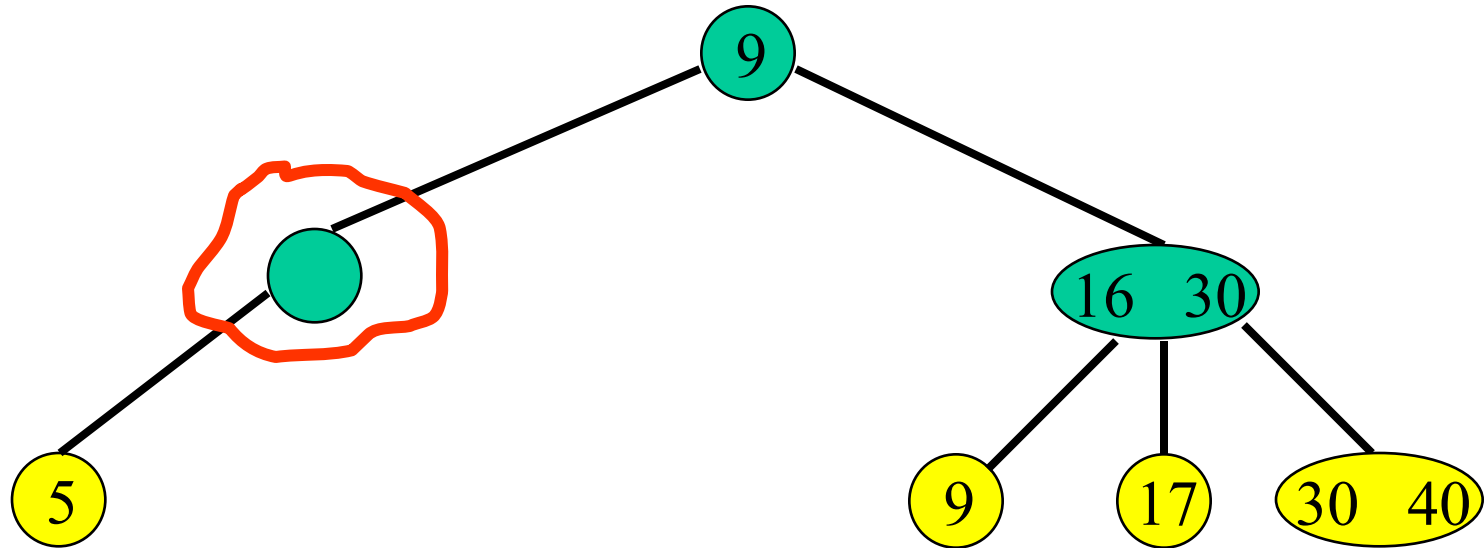
De e e



De e e ai i h ke = 6.

Me ge i h ib i g, de e e i -be ee ke i a e .

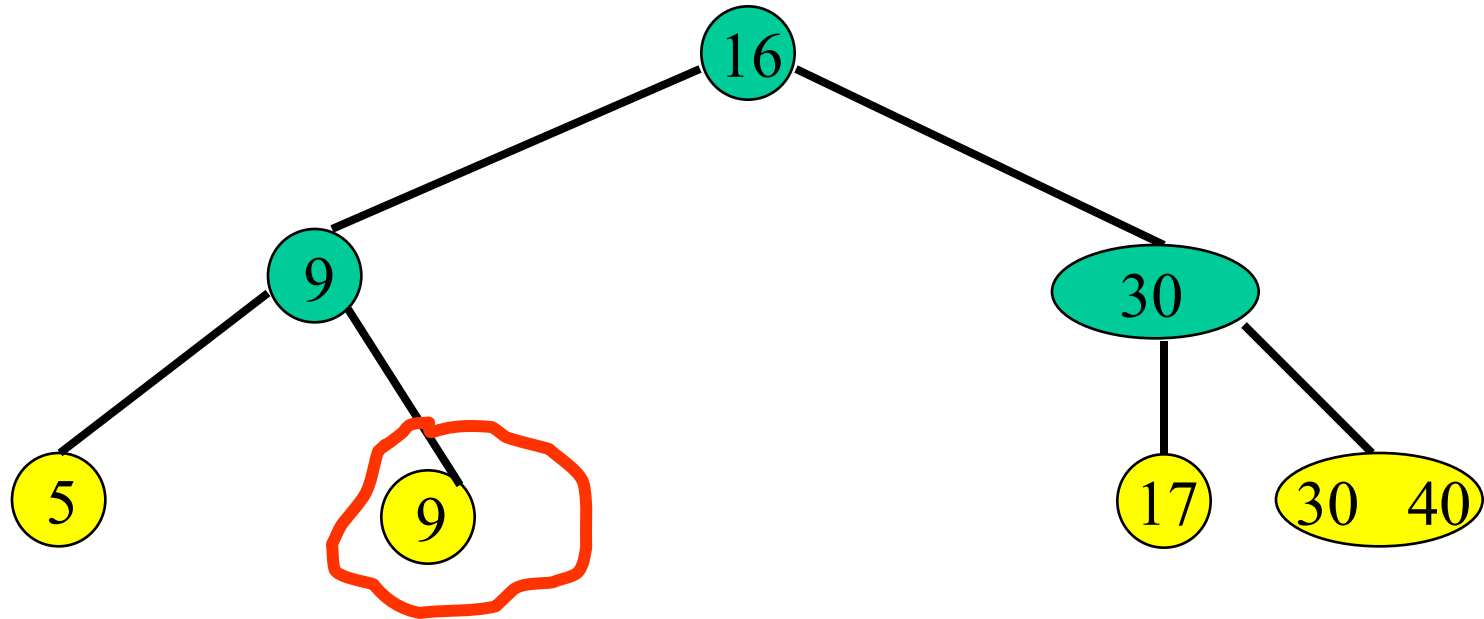
De e e



I de de bec e deficie .

Ge ≥ 1 f ib i g, e a e a e , ge
a e ke .

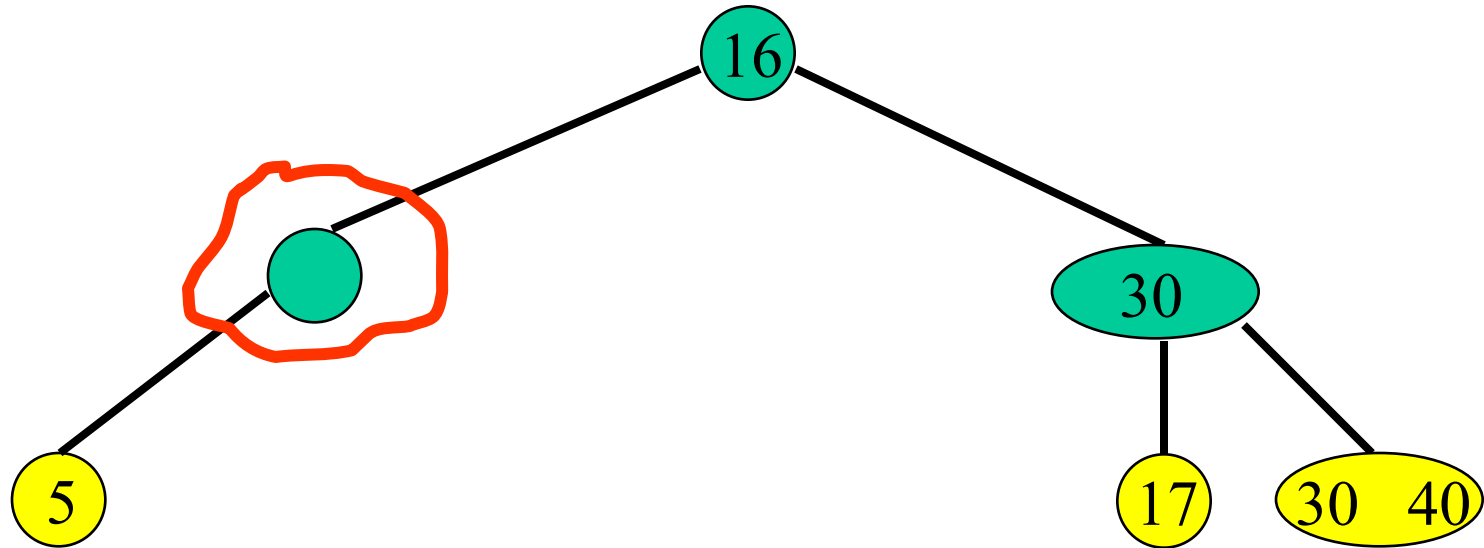
De e e



De e e 9.

Me ge i h i b i g, de e e i -be ee ke i a e .

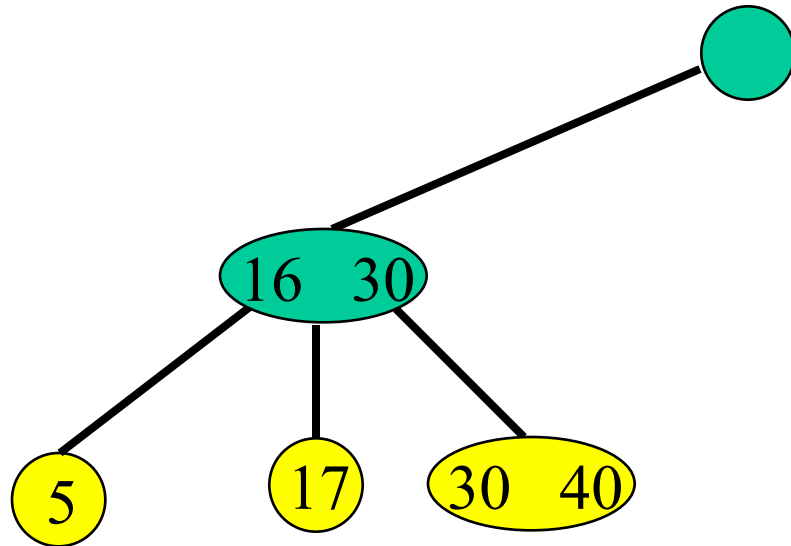
De e e



I de de bec e deficie .

Me ge i h i b i g a d i -be ee ke i a e .

De e e



I de de bec e deficie .

I he ; di ca d.