

## TREE-INSERT( $z$ )

$y \leftarrow \text{nil}$

$x \leftarrow \text{root}[T]$

while  $x \neq \text{nil}$

do  $y \leftarrow x$

if  $\text{key}[z] < \text{key}[x]$

then  $x \leftarrow \text{left}[x]$

else  $x \leftarrow \text{right}[x]$

$p[z] \leftarrow y$

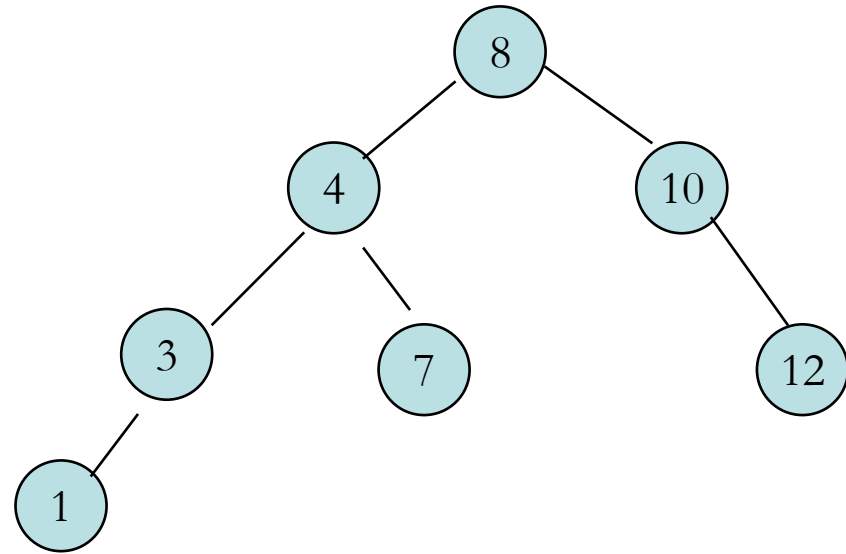
if  $y = \text{nil}$

then  $\text{root}[T] \leftarrow z$

else if  $\text{key}[z] < \text{key}[y]$

then  $\text{left}[y] \leftarrow z$

else  $\text{right}[y] \leftarrow z$



La complejidad es de  $O(h)$