

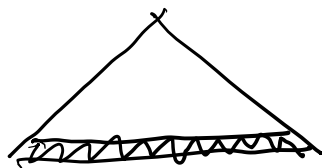
Bottom level is  $B$

$(\# \text{ branches})^{\text{level}}$  nodes  
at any level.

Confirm by drawing a tree  
with 4<sup>th</sup> branches.

$$\# \text{ of levels} = B + 1$$


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nodes at level  $B$   
are called "leaves"

If you know the  $\#$  of leaves,  
you can find  $B$

$$(\# \text{ branches})^B = \# \text{ leaves}$$

$$B = \log \# \text{ leaves}$$

Verify this by drawing  
many trees.