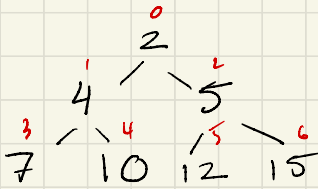


## Binary Tree



## Array

$i = 0 \ 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8$   
2, 4, 5, 7, 10, 12, 15

Parent node:

$$\left\lfloor \frac{i-1}{2} \right\rfloor$$

$$\left\lfloor \frac{5-1}{2} \right\rfloor = 2$$

child node:

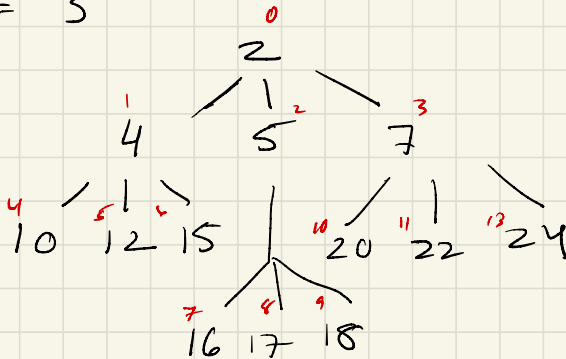
$$\text{left} : (2 \times i) + 1$$

$$\text{right} : (2 \times i) + 2$$

## D-ary Tree

$$D = 3$$

$i = 0 \ 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8 \ 9$   
2, 4, 5, 7, 10, 12, 15, 16, 17, 18  
20, 22, 24



Parent node:

$$\left\lfloor \frac{i-1}{D} \right\rfloor$$

$$\frac{8-1}{3} = \frac{7}{3} = 2$$

child node

$$(k \times i) + C$$

$$(3 \times 2) + 2 = 8$$

# of the  
could you  
want