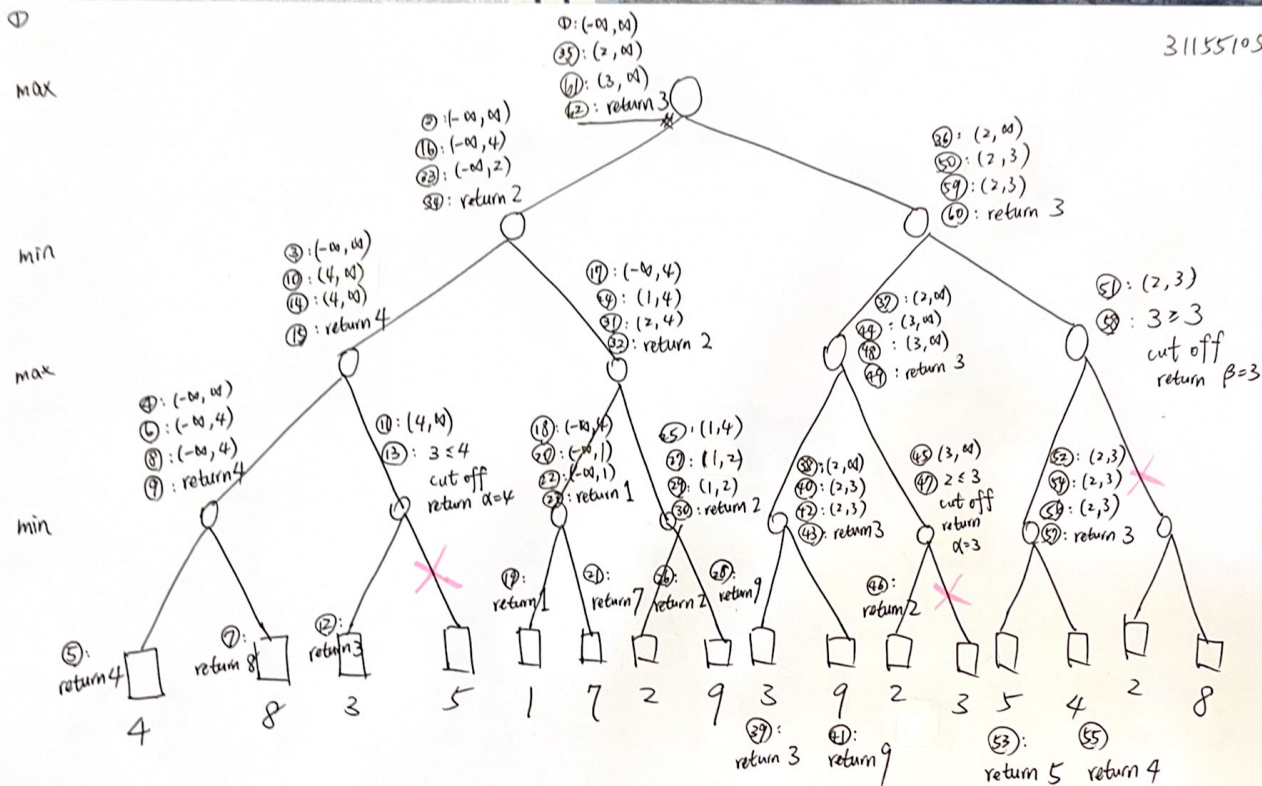
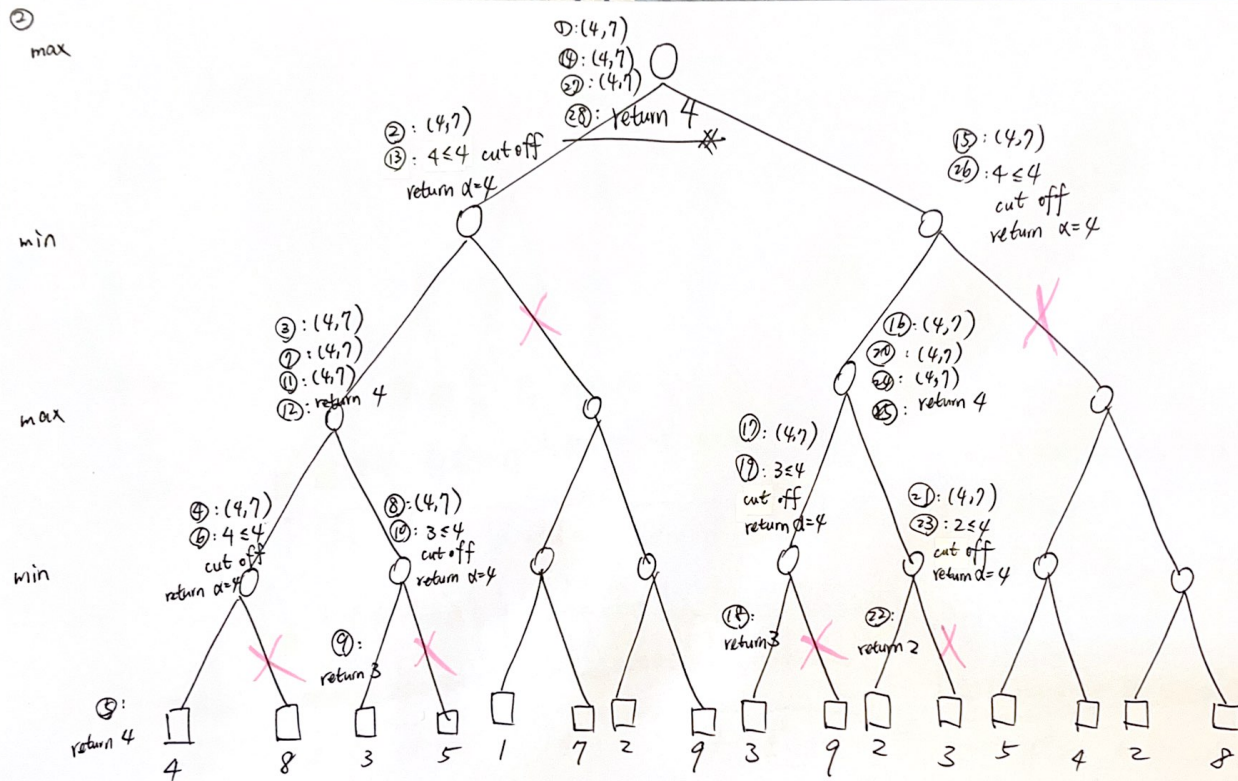


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③

$d=3$

$k=1$

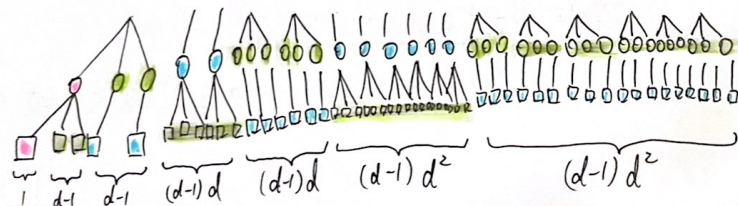
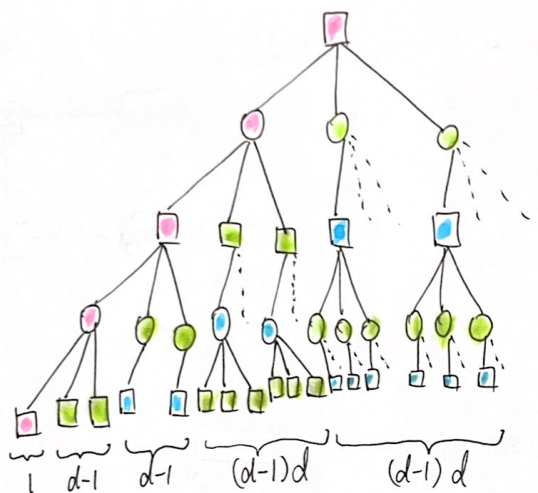
$k=2$

$k=3$

$k=4$

$k=5$

$k=6$



$$\begin{aligned} & 1 + (d-1) + (d-1) + (d-1)d + (d-1)d \\ \Rightarrow & = 1 + 2(d-1)(1 + d + \dots + d^{\frac{k}{2}-1}) \\ & = 1 + 2 \times \frac{d^{\frac{k}{2}} - 1}{d - 1} = 2d^{\frac{k}{2}} - 1 \end{aligned}$$

$$\begin{aligned} & \text{if } k=4 \\ & \boxed{1 + (d-1) + (d-1) + (d-1)d + (d-1)d + (d-1)d^2 + (d-1)d^2} \\ \Rightarrow & = 2d^{\frac{k}{2}} - 1 + (d-1)d^{\frac{k}{2}} + (d-1)d^{\frac{k}{2}} \\ & = 2d^{\frac{k}{2}} - 1 + 2d^{\frac{k+2}{2}} - 2d^{\frac{k}{2}} \\ & = 2d^{\frac{k+2}{2}} - 1 \end{aligned}$$

—* proof by induction