

$$x^n = x \cdot x^{n-1}$$

$$x^n = x^{n/2} \cdot x^{n/2}$$

$$\begin{array}{l}
 \Downarrow \\
 x^n \left\{ \begin{array}{l} \rightarrow x^{n/2} \cdot x^{n/2} \rightarrow n \rightarrow \text{even} \\ \rightarrow x^{n/2} \cdot x^{n/2} \cdot x \rightarrow n \rightarrow \text{odd} \end{array} \right. \\
 \Downarrow
 \end{array}$$

* Two recursive equation with condition

* This decreases complexity to logarithmic.