



$$\text{mid} = \frac{l+r}{2} = \frac{0+num-1}{2}$$

$$\text{mid} = \frac{1+2}{2}$$

(0~9) $\rightarrow \frac{0+9}{2} = 4$

k=0

$$\frac{0+4}{2} = 2$$

merge

$$\frac{0+2}{2} = 1$$

$$\frac{1+2}{2} = 1$$

$$\frac{1+1}{2} = 1$$

$$\frac{0+1}{2} = 0$$

~~$\frac{0+0}{2} = 0$~~
return

~~return~~

