



$$\text{Prob}(\text{red}) = \frac{r}{r+b}$$

If the current balls attract new ball, chance that it goes in one with more balls is greater.

Generate a random permutation of  $1 \dots n$ .



$$\text{Prob}(\text{red}) = \frac{r}{r+b} \quad \text{where middle is both red and blue}$$



Prob of where 1 is anywhere  
 Prob that it's in top 10% = 10%

R colors.



$$\text{Prob}(\text{next ball goes to bin } i) = \frac{\# \text{ balls in bin } i}{\text{total } \# \text{ balls}}$$