$$P(X=k) = {}^{N}C_{k} (p)^{k} \cdot (q)^{(N-k)}$$

$N = 5$

$k = 1$

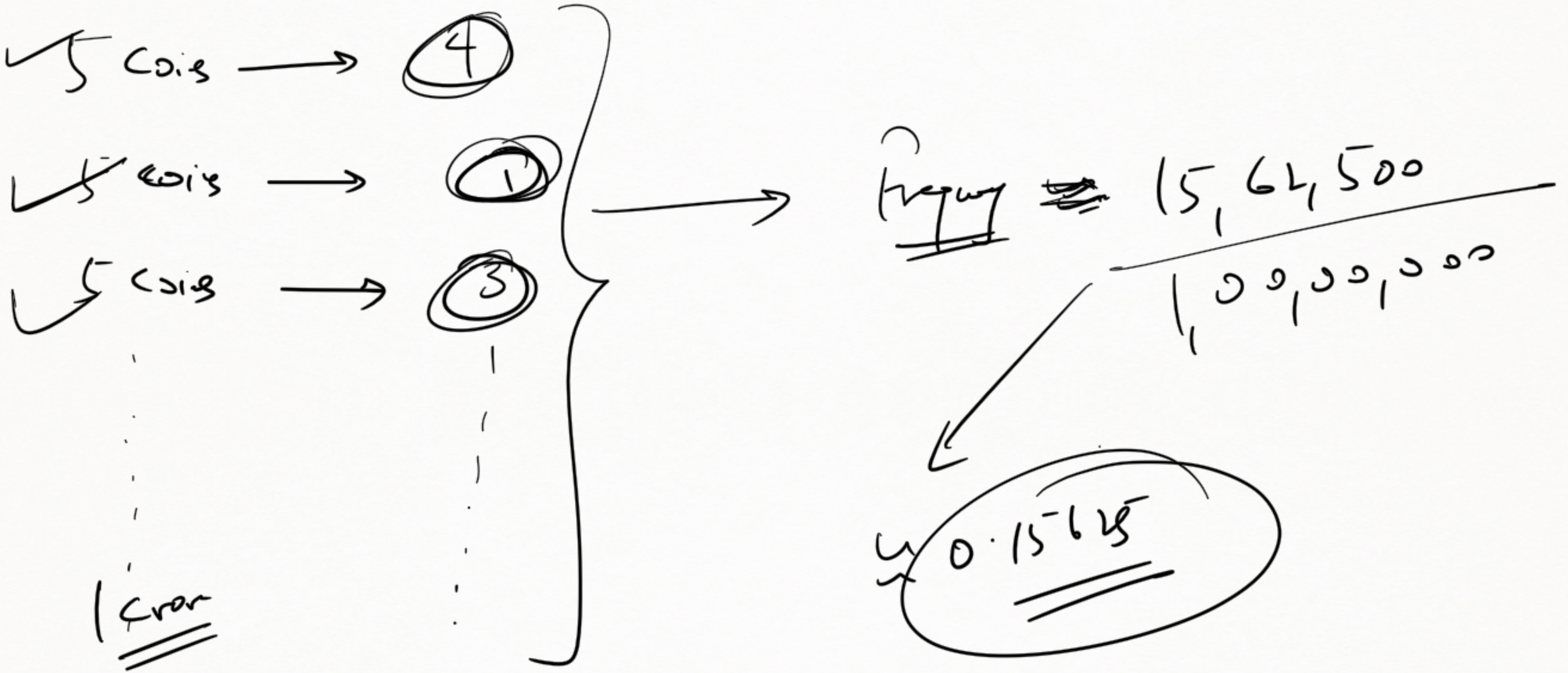
$p = \frac{1}{2} = 0.5$

$$P(X=1) = {}^{5}C_{1} \cdot (0.5)^{1} \cdot (0.5)^{4}$$

$$= 5 (0.5)^{5}$$

$$= 0.15625$$

Limiting value


5 Coins
4
1 Coins
1
3 Coins
3
1 Crore
Prob = 15,64,500 / 1,00,00,000
0.1564

$$P(X=2) = {}^{5}C_{2}\,(p)^{2}\cdot(q)^{(5-2)}$$

$p = 0.65$ $\quad q = 0.35$

$$y = f(x)$$

$$y = P(X=2) = {}^{5}C_{2}\,(p)^{2}\cdot(q)^{(5-2)}$$

$$x = f^{-1}(y)$$

$\theta = 30^\circ$

$y = \sin 30^\circ = \frac{1}{2}$

$x = f^{-1}(y)$

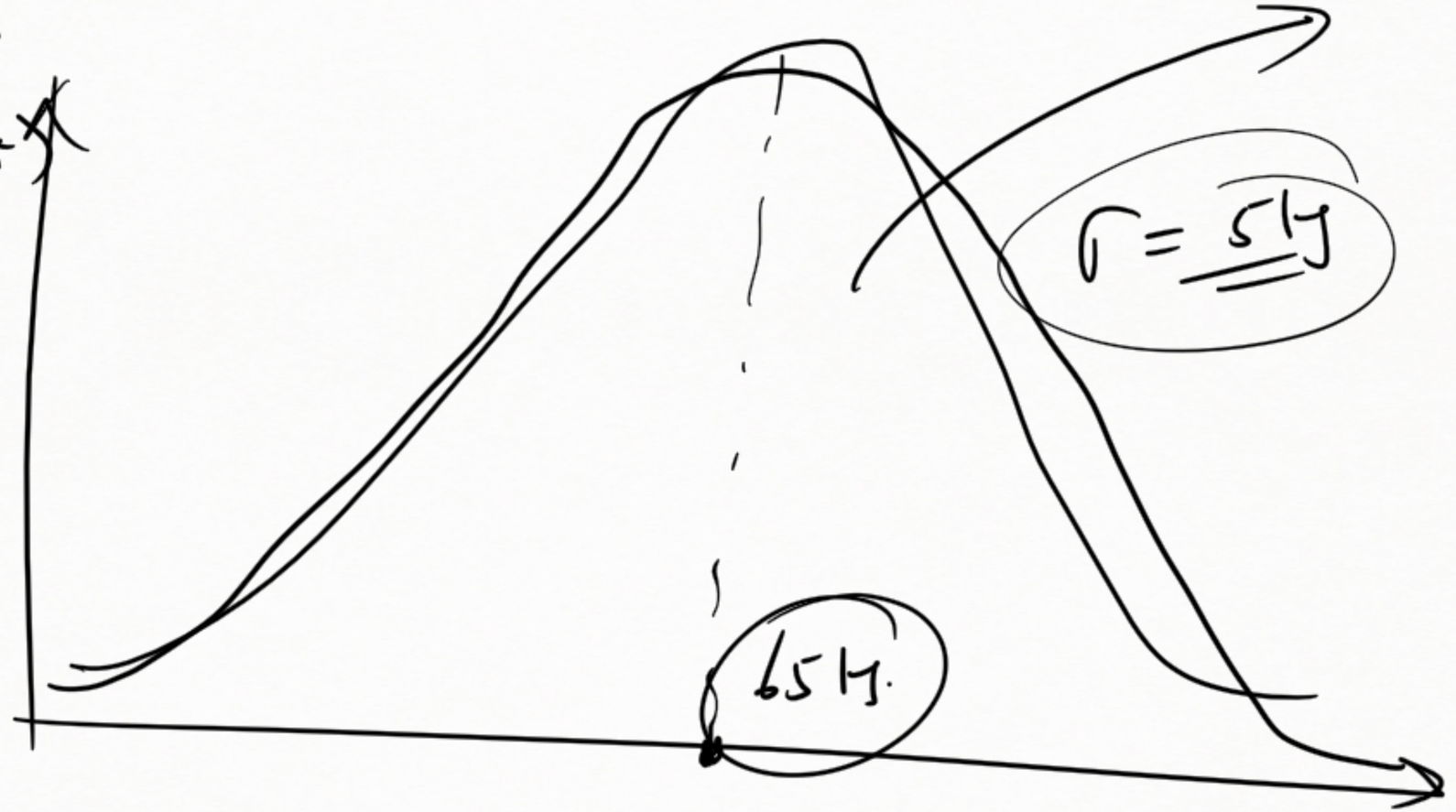
$h = f^{-1}(y)$

$x = \sin^{-1}\left(\frac{1}{2}\right)$

$y = P(x=2) = {}^{5}C_2 (b)^2 \cdot (q)^{(5-2)}$

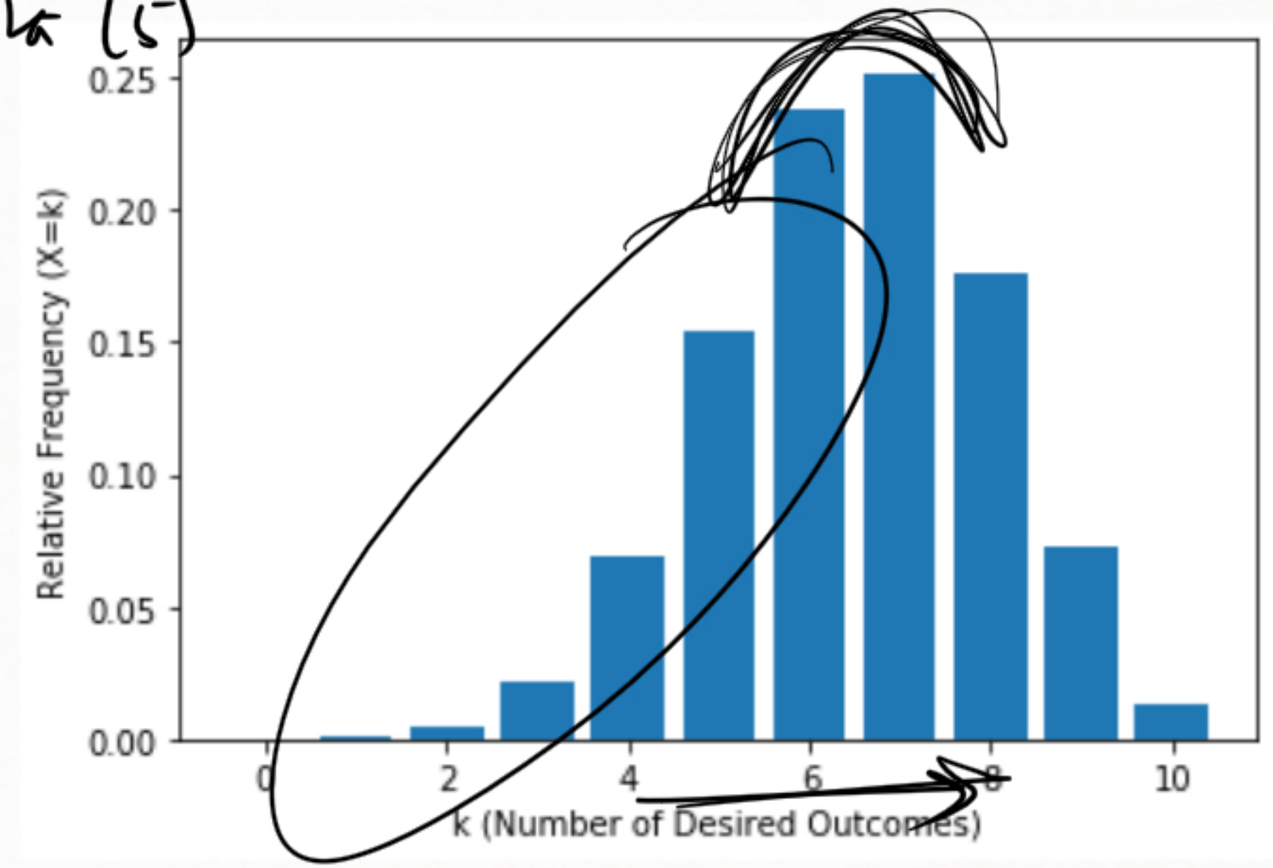
$$\varphi = P(X=2) = \binom{5}{2} \left(\frac{6}{11}\right)^2 \cdot \left(\frac{5}{11}\right)^{(5-2)}$$

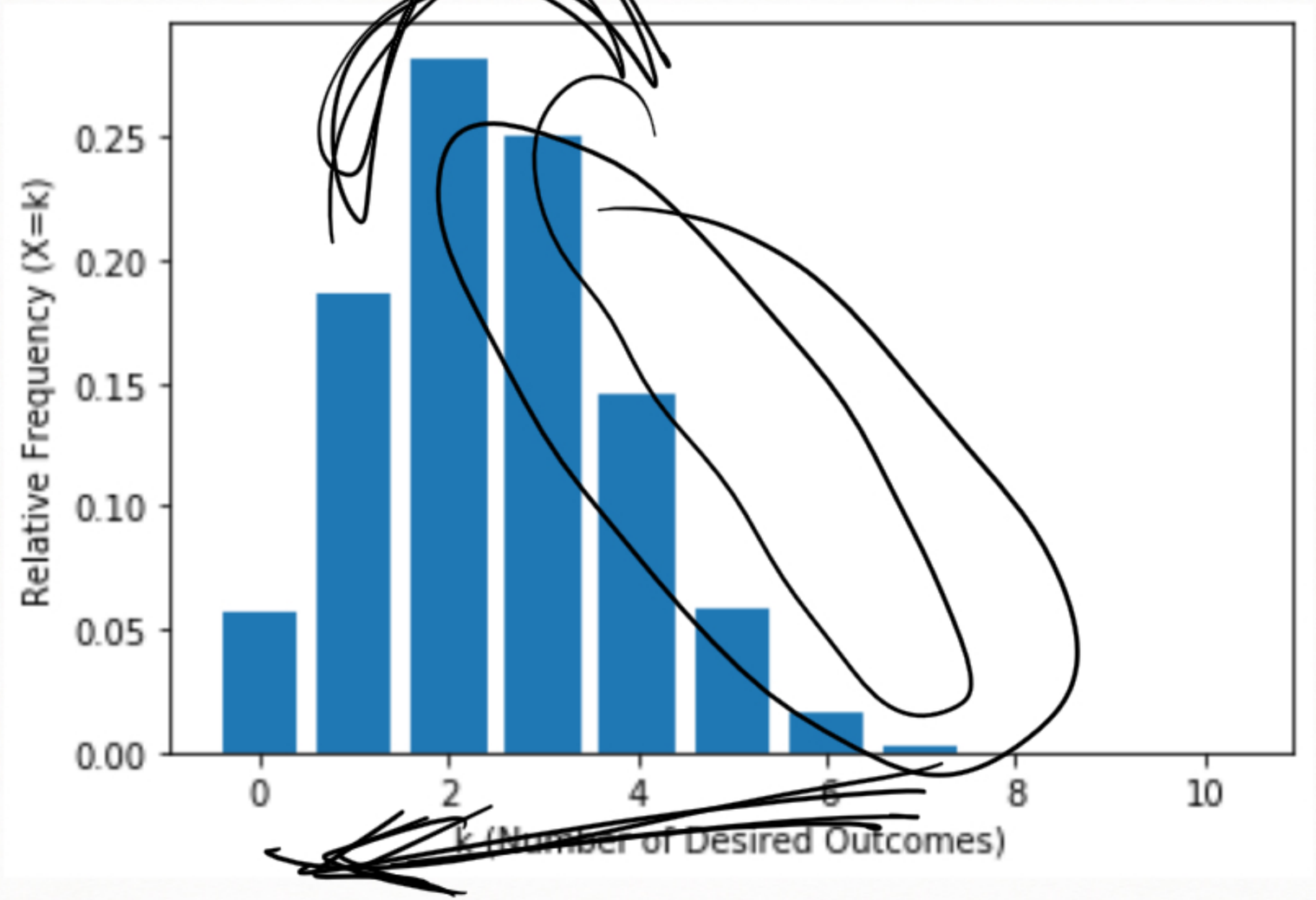
$P(X=k)$



$$P(X = 7 \mid 7) = \frac{1}{\sqrt{2\pi}(5)} e^{-\frac{(7 - 6.5)^2}{2(5)^2}} = \cdot 0$$

10




Relative Frequency (X=k)
0.25
0.20
0.15
0.10
0.05
0.00
0
2
4
6
8
10
k (Number of Desired Outcomes)