

Binomial Distribution Worksheet

$n = 5$; $p = 0.7$; let X = number of successes.

i	Probability of i successes followed by $(n-i)$ failures	List all possibilities with i successes	Number of ways with i successes	Probability of i successes
0	$.3^5 = .00243$	F F F F F	1	.00243
1	$.7 \cdot .3^4 = .00567$	F F F F S F F F S F F F S F F F S F F F S F F F F	5	.02835
2	$.7^2 \cdot .3^3 = .01323$	S F F S S F F S F S F S F F S S F F F S F F S S F F S F S F S F F S F F S S F F S F S F F S S F F F	10	.1323
3	$.7^3 \cdot .3^2 = .03087$	S S F F F F S F S S S F F S S F S S F S S F S F S S S F F S F S S S F S F S S F S S F S F S S S F F	10	.3087
4	$.7^4 \cdot .3 = .07203$	F S S S S S F S S S S S F S S S S S F S S S S S F	5	.36015
5	$.7^5 = .16807$	S S S S S	1	.16807

sum of probabilities:

1