

Examples for interpreting the p-value in relation to the S-value

p		Surprisal value	Bits of information (nearest integer of S)	
as decimal	as fraction	$S = -\log_2(p)$	narrative	S times in a row head H
1	1	0	0 bits of information	-
0.75	$\frac{3}{4}$	0,42	0 bits of information	-
0.50	$\frac{1}{2}$	1	1 head on a toss of 1 coin	H
0.25	$\frac{1}{4}$	2	2 heads on a toss of 2 coins	HH
0.10	$\frac{1}{10}$	3.32	3 heads on a toss of 3 coins	HHH
0.05	$\frac{1}{20}$	4.32	4 heads on a toss of 4 coins	HHHH
0.01	$\frac{1}{100}$	6.64	6 heads on a toss of 6 coins	HHHHHH
0.005	$\frac{1}{200}$	7.64	8 heads on a toss of 8 coins	HHHHHHHH
0.001	$\frac{1}{1,000}$	9.97	10 heads on a toss of 10 coins	HHHHHHHHHH
0.0001	$\frac{1}{10,000}$	13.29	13 heads on a toss of 13 coins	HHHHHHHHHHHHHH
0.00001	$\frac{1}{100,000}$	16.61	17 heads on a toss of 17 coins	HHHHHHHHHHHHHHHHHH
0.000001	$\frac{1}{1,000,000}$	19.93	20 heads on a toss of 20 coins	HHHHHHHHHHHHHHHHHHHHHH
0	-	∞	Infinity bits of information	∞