

Frogs 4 - models spreadsheet

	A	B	C	D	E	H	I
1	No. of detections:	x1 = 6		x2 = 3			
2		no of trials =	10				
3		Model 1 (same p)		p1 = p2 =	0.45		
4		Day 1	Day 3	overall			
5	No. of detections:	6	3		9		
6		0.1596	0.1665		0.0266		
7					-3.628		
8					1		
9					9.256		
10		Model 2 (different p)		p1 = 0.60	p2 = 0.30		
11		Day 1	Day 3				
12	No. of detections:	6	3				
13		0.2508	0.2668		0.0669		
14					-2.704		
15					2		
16					9.408		
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1. Insert activity results.

3. Formula for $p1 = p2$:
= D5 / (2 * C2)

2. Insert number of trials.

5. Overall likelihood:
=B6 * C6

8. Formula for log(llh):
=LN(D6)

4. Formula for likelihood:
=BINOMDIST(B5, C2, E3, FALSE)

9. Insert no. of parameters

0.0266 <- likelihood
-3.628 <- log likelihood
1 <- number of parameters
9.256 <- AIC

10. Formula for AIC
=2*D8 - 2*D7

6. Formula for $p1$:
= B12 / C2

7. Formula for likelihood:
=BINOMDIST(B12, C2, E10, FALSE)

0.0669 <- likelihood
-2.704 <- log likelihood
2 <- number of parameters
9.408 <- AIC

11. Difference in AIC:
= D16 - D9

Difference in AIC = 0.1520