Confidence rating task

Simulate 100 trials from an unequal variance observer with $\mu_s = 2$ and $\sigma_s = 1.5$ in a confidence rating task where the observer can respond 'yes', 'no' and 'maybe'. Fit the unequal observer model to your simulated data.

Can you find the correct values for μ_s and σ_s?

Compare your solution to this problem with your solution to the unequal variance model problem in Homework 1_2

Problem Psychometric Function

An observer responds according to a psychometric function shaped like a cumulative Gaussian probability function in a signal detection task. The table lists the number of yes-responses out of 50 trials for five stimulus levels given in arbitrary units.

Stimulus level	0.4	0.9	1.2	1.7	2.3
Number of yes Responses	1	6	13	32	49

Fit the psychometric function to the data using the maximum likelihood principle. You can use any numerical optimization routine that you like.

- What are the estimates of the parameters of the psychometric function?

- In a follow-up experiment we use only intensity levels 1 and 2. The task of the observer is to say whether the intensity level is 'high' or 'low'. What value do we expect for the sensitivity (*d*')?