

(6 points; 8 minutes)

12. Two random samples of arthritis pain sufferers are treated with pain relieving creams. The first sample of people use "Cream A" and the second sample of people uses "Cream B". Use the results below to construct a 98% confidence interval for the difference between the proportions of people who reported that the cream they used made the pain less.

	Cream A	Cream B
Less Pain	38	51
Not less	12	9
Total	50	60

(7 points; 8 minutes)

13. A random sample of arthritis pain sufferers is treated with two pain relieving creams. Each person uses "Cream A" for a month and "Cream B" for a month (in a random order). Use the data below to test the claim that "Cream B" relieves pain better than "Cream A". (Use a 0.05 significance level for the test.)

Person	Pain Level Reported Using Cream	
	A	B
1	7	9
2	6	5
3	9	7
4	1	2
5	4	5