related samples t-tests

1. A cross-cultural psychologist wants to know if providing counseling to Hmong refugees will help increase their self-esteem. Twelve refugees are tested on a measure of self-esteem before counseling is provided, and again after the counseling. The raw data is below:

esteem before	**esteem after**
10	14
16	12
20	17
13	18
15	21
16	26
12	19
14	12
15	19
13	21
14	13
15	19

Determine if self esteem significantly increases, use alpha = .05. What is the effect size? Please calculate a 95% confidence interval.

2. Johnson is interested in studying whether people rate their attraction to a speaker to be higher the second time they hear the speaker. Eight subjects listed to a speaker and rated their attraction to the speaker on a 1-15 scale. These same 8 subjects listened to the same speaker a second time, and again rated their attraction to the speaker on a 1-15 scale. Do multiple exposures to a speaker increase perceived attraction to that speaker? Test at alpha = .05. What is the effect size? Please calculate a 95% confidence interval.

perceived attraction

Time 1	**Time 2**
7	9
10	6
5	5
12	14
8	5
3	7
9	6
5	2

3. David and Emalee want to know whether graduate students become more distressed after having a meeting with Bryan Myers. Nine students rated distress on a 1-9 scale before and after each had a meeting with Bryan. Are students more distressed after the meetings? Test at alpha = .05. Please determine the effect size? Please calculate the 90% confidence interval.

Before Meeting	**After Meeting**
4	7
5	6
3	8
4	5
3	9
4	8
5	5
6	7
4	9