A. You have a perfectly random groups of 36 students each. The first group took IQ test and scored 100 points on average with SD 15. The other 36 students group was shown movie about smart people under 18 who achieved amazing things just because they weren't afraid to try. Then they took the IQ test and scored 109 with SD of 15. Can you say that the movie changed. Can you say that that movie temporarily increases people's ability to solve IQ tests. What problems might the experimental design have?

B. The extraversion scale is done in a way that average score is 10 and SD is 2. Your hypothesis is, that teachers are more neurotic than average population. You collect sample of 69 willing teachers and get score of 10.6 and SD of 1.8. Can you say that they are significantly more neurotic than other people.

C. Then you decided to compare it to fireman. You measured fireman group, got mean 9.2 and SD 2.2. Can you say teachers are more neurotic than fireman? If you found significant difference, can you say, that more neurotic people choose to do teaching whereas more calm people choose to be fireman? Or is there a problem with such claim?

D. The average number of mistakes in Ray figure for healthy person is 3.6 and SD is 0.25. Your grandma had on average 3.9 mistakes over 10 trials. Should you be worried? If you really find there is some problem, what you think you can do?

BIG ONE
You measured how people estimate time during different activities. People watched a movie or sat in an empty room. Calculate means and SD and decide, if one of those activities is perceived significantly differently.

Movie	+43	12	45	25	13	-9	14	-15	20	23	27	40	-30	50	-2
Sitting	-12	40	-30	20	29	38	49	-5	0	29	33	34	29	-6	4

BIG TWO
Two groups were tested on their agreeableness and willingness to help after watching helping video. Below are numbers of pencils picked up by students if they saw the movie or didn't. Decide, if watching the movie helped.

Saw	4	7	4	1	4	1	4	8	5	6	5	6	7	0	1
Didn't	1	0	3	4	2	6	3	8	8	1	2	3	1	2	4

BIG THREE
Two situations were compared on a crossing. Either two people were standing there, or more than two people. Time measured until somebody pressed the button was measured. Below are the times. Decide, if the size of the group matters in that decision.

Two	5	4	27	12	0	0	14	16	17	2	3	4	5	14	3
More	10	12	20	23	10	14	0	0	18	14	12	13	30	10	11