AS2 (Assignment 2, Unit 5): Dependent Measures t-test

Please write your answers in red ☺

An investigator is interested in whether the number of dresses tried on in a department store for a wedding will be affected by viewing a fashion magazine. A sample of 5 women was measured on how many dresses each tried on before and after viewing a fashion magazine. The before-and-after scores are as follows:

Subject	Before	After
1	6	2
2	5	7
3	9	6
4	1	3
5	8	5

l. What is the research's hypothesis? Viewing a fashion magazine will have an effect on the number of dresses tried on in a department store for a wedding.

2. What is the null hypothesis? Viewing a fashion magazines will not have an effect on the number of dresses tried on in a department store for a wedding.

3. What is the independent variable? Effect: Viewing a fashion magazine

4. What is the dependent variable? The cause: The number of dresses tried on in a department store for a wedding.

5. What is the name of the *research design*? Within-Subject Design

6. What is the appropriate *hypothesis test* to analyze these data? Dependent measures t-test

7. Please run the appropriate SPSS analysis and cut and paste your results here:

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	VAR00001	4.6000	5	2.07364	.92736
	VAR00002	5.8000	5	3.11448	1.39284

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	VAR00001 - VAR00002	-1.20000	2.94958	1.31909	-4.86238	2.46238	-.910	4	.414

8. Based on your SPSS results, please answer the following questions:

(a) What decision did you make? Reject or fail to reject the null? Fail to reject Ho

(b) Please write your "statistical statement": t (4)= -.910, P>.05

(c) Please interpret the results of your analysis "in words" and relating DIRECTLY back to the research question.

The mean for viewing a fashion magazine BEFORE trying on a wedding dress was 5.80 with a SD= 3.11. The mean for viewing a fashion magazine AFTER trying on a wedding dress was 4.60 with a SD= 2.07. Our data was not significant, and the numbers of dresses tried on for a wedding had no effect on viewing fashion magazines. t(4)= .-910, P>.05.

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(d) Is there a probability of Type I error? Yes _____ No_____

(e) Is there a probability of Type II error? Yes_____ No_____