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 Fashion Magazines will affect the number of dresses tried on in a department store for a wedding.

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2. What is the null hypothesis?

Viewing fashion Magazine will not affect the number of dresses tried on in a department store for a wedding,

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3. What is the independent variable? ___Fashion Magazine_____

4. What is the dependent variable? _____Number of dresses tried on.

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

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

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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	Significance	
					95% Confidence Interval of the Difference					
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			One-Sided p	Two-Sided p
Pair 1	VAR00001 - VAR00002	-1.20000	2.94958	1.31909	-4.86238	2.46238	-.910	4	.207	.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? _failed to reject the Hypothesis.

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(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 number for the number of dresses tried on before viewing the fashion magazine was M = 5.8 with a SD = 3.114. The mean number for the number of dresses tried on after viewing the fashion magazine was M = 4.6 with a SD = 2.073. The data failed to reach a significance. t(4) = -910, P>.05

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

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

____ No_____