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

1. What is the research's hypothesis?

_____Viewing a fashion magazine affects the number of dresses tried on for a wedding.

_____

2. What is the null hypothesis?

____Viewing a fashion magazine does not affect the number of dresses tried on for a wedding._____

3. What is the independent variable? _____viewing of the fashion magazine._____

4. What is the dependent variable? _____the number of dresses tried on for a wedding_____

5. What is the name of the *research design*?_____within-subjects design_____

6. What is the appropriate *hypothesis test* to analyze these data? _____paired samples t-test_____

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

T-Test

[DataSet0]

Paired Samples Statistics

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

Paired Samples Correlations

		N	Correlation	Significance One-Sided p	Significance Two-Sided p
Pair 1	VAR00001 & VAR00002	5	.410	.246	.493

Paired Samples Test

		Paired Differences					t	df	Significance One-Sided p	Significance Two-Sided p
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	95% Confidence Interval of the Difference Upper				
Pair 1	VAR00001 - VAR00002	1.20000	2.94958	1.31909	-2.46238	4.86238	.910	4	.207	.414

Paired Samples Effect Sizes

			Standardizer[a]	Point Estimate	95% Confidence Interval Lower	95% Confidence Interval Upper
Pair 1	VAR00001 - VAR00002	Cohen's d	2.94958	.407	-.533	1.303
		Hedges' correction	3.69675	.325	-.425	1.039

a. The denominator used in estimating the effect sizes.
Cohen's d uses the sample standard deviation of the mean difference.
Hedges' correction uses the sample standard deviation of the mean difference, plus a correction factor.

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 _____

(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 trying on wedding dresses before viewing a fashion magazines was M = 4.6 with a SD= 2.07. The mean for trying on wedding dresses after viewing fashion magazines was M= 5.8 with a SD=3.11. Our data supports that fashion magazines did not have an effect on wedding dresses tried on t(4)=.910, _p>.05

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

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