

(8 points : 12 minutes)

6. The form (tablets or liquid) of a sleeping aid medication may affect the speed at which the medication works. Use the results of the experiment below to test the claim that the average amount of time elapsed time) before patients fall asleep is 5 minutes longer for tablets than for liquid. It is interesting but not especially important that the variation in time was about the same for both tablets and liquid. The six patients who participated in the study did not like the flavor of the liquid. (Use a 0.05 significance level for this test.)

H₀: _____

H₁: _____

Elapsed Time Before Sleep (minutes)		
Patient	Tablet	Liquid
1	30.4	28.2
2	18.0	17.3
3	29.1	25.7
4	19.2	17.7
5	23.9	23.6
6	22.5	19.1
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\bar{x} =	23.85	21.93
s =	5.06	4.55
n =	6	6

(6 points : 7 minutes)

7. A company makes a sleep aid medication. They are interested in making a liquid version of their popular tablets, but some patients say liquid formulas usually taste bad. Use the following data to prepare a 98% confidence interval for the difference between the proportion of taste testers who say that Formula "A" tastes "bad" and the proportion of taste testers who say Formula "B" tastes "bad".

	Taste Test Result		Total
	Good	Bad	
Formula A	387	13	400
Formula B	354	46	400