A team of cognitive psychologists studying the effects of sleep deprivation on short-term memory decay had eight participants stay in a sleep lab for two days. Four participants were randomly assigned to a condition in which they were not permitted to sleep during that period, while the other four participants were allowed to sleep when they wanted to. At the end of the two days, the participants completed a short-term memory task that yielded the results in the table that follows. Using the .05 significance level, did sleep deprivation reduce short-term memory?

Mean Number of Letters Remembered

Sleep Deprived Normal Sleep

7 9

8 8

7 11

9 7

