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Application exercise 4.3: Calculating power

Team name: _____

Lab section: 8:30 10:05 11:45 1:25 3:05 4:40

Write your responses in the spaces provided below. WRITE LEGIBLY and SHOW ALL WORK! Only one submission per team is required. One team will be randomly selected and their responses will be discussed and graded. Concise and coherent are best!

In a study of the periodical cicada (*Magicicada septendecim*), researchers measured the hind tibia lengths of the shed skins of 110 individuals. Results for males and females are shown in the accompanying table.

	TIBIA LENGTH (μm)		
GROUP	n	MEAN	SD
Males	60	78.42	2.87
Females	50	80.44	3.52

We want to test to see if there is a difference between the average tibia length of male and female cicadas. Calculate the power of the test to detect a difference 2 μm.