**Exercício para entregar na próxima semana.**

A study determined the number of cavity-­‐free children per 100 children in 16 North American cities  
BEFORE and AFTER public water fluoridation projects. Data are shown on the next page and are linked to  
the course calendar.  
(A) Calculate the mean and standard deviation for the cavity-­‐free rates before fluoridation.  
(B) Calculate the mean and standard deviation for the cavity-­‐free rates after fluoridation.  
(C) Calculate the mean and standard deviation for change (DELTA) in cavity-­‐free rates.  
(D) Test the change for statistical significance. Show all steps (hypothesis statements, test statistic, p value, brief interpretation using the model language in the chapter).

(E) Write a technical report to delivery in the next week.

FLUORIDE data

|  |  |
| --- | --- |
| BEFORE | AFTER |
| 49,2 | 18,2 |
| 30,0 | 21,9 |
| 16,0 | 5,2 |
| 47,8 | 20,4 |
| 3,4 | 2,8 |
| 16,8 | 21,0 |
| 10,7 | 11,3 |
| 5,7 | 6,1 |
| 23,0 | 25,0 |
| 17,0 | 13,0 |
| 79,0 | 76,0 |
| 66,0 | 59,0 |
| 46,8 | 25,6 |
| 84,9 | 50,4 |
| 65,2 | 41,2 |
| 52,0 | 21,0 |