

ANSWER THE FOLLOWING QUESTIONS USING PARAMETRIC AND NONPARAMETRIC METHODS

The table on the right shows BMI measured at two points in time in two groups of ten women each. The heavy smokers were once smoked 1+ pack per day, but have stopped smoking.

Never Smoked			Heavy Smokers		
ID	BMI at baseline	BMI at 6 years	ID	BMI at baseline	BMI at 6 years
1	26.5	29.3	11	25.6	31.1
2	33.8	32.9	12	24.4	27.6
3	27.6	25.5	13	31.0	36.6
4	24.4	28.3	14	20.4	20.8
5	21.6	23.3	15	22.3	23.2
6	32.3	37.1	16	22.2	23.8
7	31.9	35.4	17	20.8	26.1
8	23.0	24.8	18	23.5	31.0
9	31.2	30.4	19	26.6	29.2
10	36.3	37.1	20	23.0	24.0

8.180 What test can be used to assess if the mean BMI has changed among heavy-smoking woman 6 years after quitting smoking?

8.181 Implement the test in problem 8.180 and report a p-value.

8.182 What test can be used to assess if the mean change in BMI over 6 years is different between women who stopped smoking and the women who never smoked?

8.183 Implement the test in problem 8.182 and report a p-value.

The following table shows counts of lymph nodes made by two different doctors on a group of 32 patients. Row 1 contains patient numbers. Row 2 contains readings made by doctor A, row 3 by doctor B.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
4	17	3	11	12	5	5	6	3	5	9	1	5	8	7	8	4	12	10	9	5	3	12	5	13	12	6	19	8	15	6	5
1	9	2	13	9	2	6	3	0	0	6	1	4	4	7	6	1	9	7	11	0	0	12	1	9	6	9	9	4	9	1	4

Is there a difference between the counts made by the two doctors?