TD 02 : Full factorial 2^3

A biomedical engineer is designing a new pump for the intravenous delivery of a drug. The pump should deliver a constant quantity or dose of the drug over a specified period of time. She must specify a number of variables or design parameters. Among these are the diameter and length of the cylinder, the fit between the cylinder and the plunger.

N ° essai	diameter	length	fit	reponse
1	-1	-1	-1	11,76
2	1	-1	-1	12,55
3	-1	1	-1	7,89
4	1	1	-1	8,20
5	-1	-1	1	12,35
6	1	-1	1	13,98
7	-1	1	1	7,25
8	1	1	1	10,10

1. What is the response here?
2. Specify the interaction between the factors
3. Determine the effects of each factor
4. Give the interpretation of plot effects