

Homework Assignment

16.1 The performance of a system being designed depends upon the following three factors:

- a. CPU type: 68000, 8086, 80286
- b. Operating system type: CPM, MS-DOS, UNIX
- c. Disk drive type: *A*, *B*, *C*

How many experiments are required to analyze the performance if

- a. There is significant interaction among factors.
- b. There is no interaction among factors.
- c. The interactions are small compared to main effects.

17.1 Analyze the 2^3 design shown in Table 17.10

- a. Quantify main effects and all interactions.
- b. Quantify percentages of variation explained.
- c. Sort the variables in the order of decreasing importance.

TABLE 17.10 A 2^3 Design

	<i>A</i> ₁		<i>A</i> ₂	
	<i>C</i> ₁	<i>C</i> ₂	<i>C</i> ₁	<i>C</i> ₂
<i>B</i> ₁	100	15	120	10
<i>B</i> ₂	40	30	20	50