

## Aufgabe 18.1

### Analysis of a 2<sup>2</sup> 3 Design

	Processor A	Processor B	Factor A
Workload I	41.16, 39.02, 42.56	63.17, 59.25, 64.23	
Workload J	51.5, 52.5, 50.5	48.08, 48.98, 47.1	
Factor B			

### 2<sup>2</sup> 3 Design

Exp. No	Effect				Measured Response			Estimated Response	Errors		
	I	A	B	AB	yi1	yi2	yi3	Mean y	ei1	ei2	ei3
1	1	-1	-1	1	41.16	39.02	42.56	40.91	0.25	-1.89	1.65
2	1	1	-1	-1	63.17	59.25	64.23	62.22	0.95	-2.97	2.01
3	1	-1	1	-1	51.50	52.50	50.50	51.50	0.00	1.00	-1.00
4	1	1	1	1	48.08	48.98	47.10	48.05	0.03	0.93	-0.95
<b>Main Effects</b>		202.68	17.86	-3.58	-24.75	Total			<b>SSE=</b>	<b>22.12</b>	
<b>Main Effects</b>		<b>50.67</b>	<b>4.46</b>	<b>-0.89</b>	<b>-6.19</b>	Total/4					
Main pow 2=SST		19.93	0.80	38.29	=			<b>59.01</b>			
<b>% Main Effects without Error</b>		<b>33.77%</b>	<b>1.35%</b>	<b>64.88%</b>							
Main pow 2 * 2 <sup>2</sup> * 3=SST		239.15	9.59	459.42	22.12	=			<b>730.28</b>		
<b>% Main Effects with Error</b>		<b>32.75%</b>	<b>1.31%</b>	<b>62.91%</b>	<b>3.03%</b>						

Sorted with decreasing effect: AB A E B

-> Interactions explain 62.9% of Variation, the Effect of the Workload is not significant (less than error)