

Swimming Experiment

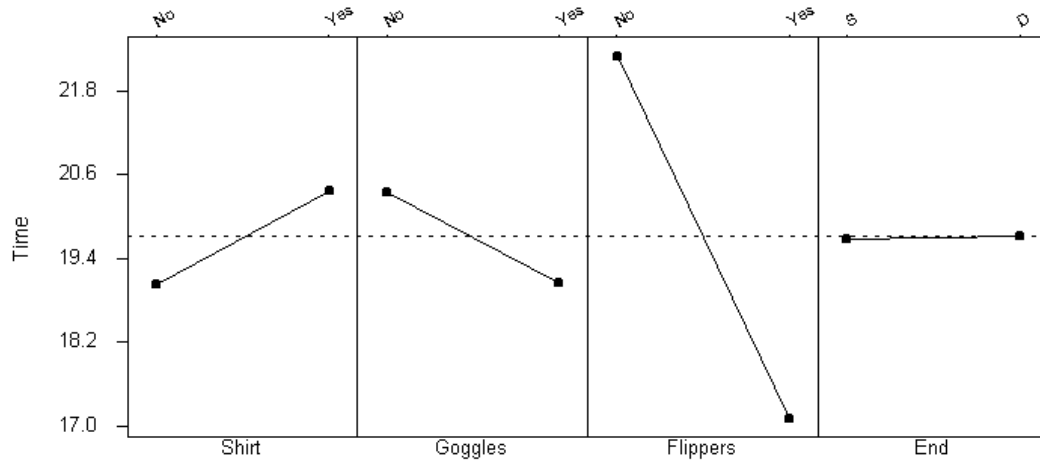
An experiment was performed by some statistics students in Australia on the time to swim 25 meters. There were four factors that were manipulated.

Factor	Low (-1)	High (+1)
A: Wearing Shirt	No	Yes
B: Wearing Goggles	No	Yes
C: Wearing Flippers	No	Yes
D: Starting End	Shallow	Deep

One person did all the swimming with enough time between laps to aid recovery. The order of the treatment combinations was randomized so that fatigue or other factors would not bias the results. Below are the data.

XA	XB	XC	XD	Time
-1	-1	-1	-1	22.31
+1	-1	-1	-1	24.29
-1	+1	-1	-1	19.96
+1	+1	-1	-1	22.02
-1	-1	+1	-1	17.30
+1	-1	+1	-1	17.70
-1	+1	+1	-1	16.55
+1	+1	+1	-1	17.32
-1	-1	-1	+1	22.72
+1	-1	-1	+1	24.33
-1	+1	-1	+1	20.32
+1	+1	-1	+1	22.49
-1	-1	+1	+1	16.85
+1	-1	+1	+1	17.38
-1	+1	+1	+1	16.31
+1	+1	+1	+1	17.46

Main Effects Plot (data means) for Time



Interaction Plot (data means) for Time

