Project Data Summary

Group Project on Knocking

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(All participate in each section. Assignments are what we are in charge of and then we lead the others in knowing what to do.)

Perform the Experiment:
The experiment was performed on Friday, November 20, and it took two and a half hours. During the experiment Christian ran the engine and showed everyone how to use it. Jason and Rex mixed the right concentration of fuel during for each run while performing the experiment. Jon and Jesse adjusted the air/fuel ratio, and Joe took down the measurements for every run.

Experiment Results:

Run #	Air/fuel ratio	Octane level (Fuel Resv.)	Replicate	Amount of Knocking
1	Lean	Booster #1	1	30
2	Rich	Booster #2	1	58
3	Stoichiometric	Regular	1	82
4	Lean	Regular	1	75
5	Stoichiometric	Booster #1	1	70
6	Lean	Booster #1	2	30
7	Lean	Booster #2	1	55
8	Stoichiometric	Booster #2	1	75
9	Rich	Booster #1	1	46
10	Lean	Regular	2	72
11	Rich	Regular	1	61
12	Rich	Regular	2	64
13	Stoichiometric	Booster #2	2	76
14	Lean	Booster #2	2	58
15	Rich	Booster #1	2	43
16	Stoichiometric	Regular	2	85
17	Stoichiometric	Booster #1	2	70
18	Rich	Booster #2	2	57

The reproducible code was submitted via Learning Suite.

Summary Statistics:

Table of Means

	Regular	Booster #1	Booster #2	
Lean	73.5	30	56.5	53.3
Rich	62.5	44.5	57.5	54.8
Stoichiometric	83.5	70	75.5	76.3
	73.2	48.2	63.2	

Table of Standard Deviations

	Regular	Booster #1	Booster #2
Lean	2.121	0.000	2.121
Rich	2.121	2.121	0.707
Stoichiometric	2.121	0.000	0.707