

## JMP Output for Strength of Weld Data

Energy	Force	Strength	Run Order	CodeEnergy	CodeForce
20	5	36	7	-1	-1
20	5	40	8	-1	-1
20	5	40	13	-1	-1
20	5	46	14	-1	-1
30	5	44	1	1	-1
30	5	50	10	1	-1
30	5	50	16	1	-1
30	5	54	11	1	-1
20	9	24	12	-1	1
20	9	27	15	-1	1
20	9	30	9	-1	1
20	9	33	5	-1	1
30	9	65	2	1	1
30	9	68	6	1	1
30	9	71	4	1	1
30	9	74	3	1	1

### Response Strength

#### Summary of Fit

Rsquare	0.949206
RSquare Adj	0.936508
Root Mean Square Error	4
Mean of Response	47
Observations (or Sum Wgts)	16

#### Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	3	3588.0000	1196.00	74.7500
Error	12	192.0000	<b>16.00</b>	Prob > F
C. Total	15	3780.0000		<.0001

Pooled estimate of variance

#### Parameter Estimates

Term	Estimate	Std Error	t Ratio	Prob> t
Intercept	47	1	47.00	<.0001
CodeEnergy	<b>12.5</b>	1	<b>12.50</b>	<.0001
CodeForce	<b>2</b>	1	<b>2.00</b>	0.0687
CodeEnergy*CodeForce	<b>8</b>	1	<b>8.00</b>	<.0001

#### Half Effects

#### t Test Statistics