

Regression Analysis

R² 0.790
 Adjusted R² 0.729
 R 0.889
 Std. Error 0.849

n 10
 k 2
 Dep. Var. Time

$$S = \sqrt{\frac{SSE}{n-3}}$$

ANOVA table

| Source | SS | df | MS | F | p-value |
|------------|---------|----|--------|-------|---------|
| Regression | 18.9499 | 2 | 9.4749 | 13.13 | .0043 |
| Residual | 5.0501 | 7 | 0.7214 | | |
| Total | 24.0000 | 9 | | | |

$\sum(\hat{y}-\bar{y})^2$ (points to SS Regression)
 $\sum(y-\hat{y})^2/k$ (points to MS Regression)
 $\sum(y-\hat{y})^2/(n-k-1)$ (points to MS Residual)
 $SSE = \sum(y-\hat{y})^2$ (points to SS Residual)
 $n-k-1$ (points to df Residual)
 $n-1$ (points to df Total)

Regression output

| variables | coefficients | std. error | t (df=7) | p-value | confidence interval | |
|------------|--------------------------|------------|----------|---------|---------------------|-----------|
| | | | | | 95% lower | 95% upper |
| Intercept | b ₀ = 0.0367 | 1.3262 | 0.028 | .9787 | -3.0994 | 3.1727 |
| Km | b ₁ = 0.0562 | 0.0156 | 3.592 | .0088 | 0.0192 | 0.0931 |
| Deliveries | b ₂ = -0.7639 | 0.3053 | 2.502 | .0409 | 0.0419 | 1.4858 |

S_{b0}, S_{b1}, S_{b2}

| Observation | Time | Predicted | Residual |
|-------------|------|-----------|----------|
| 1 | 9.30 | 8.71 | 0.59 |
| 2 | 4.80 | 5.14 | -0.34 |
| 3 | 8.90 | 8.71 | 0.19 |
| 4 | 5.80 | 7.18 | -1.38 |
| 5 | 4.20 | 4.37 | -0.17 |
| 6 | 6.80 | 5.29 | 1.51 |
| 7 | 6.60 | 6.54 | 0.06 |
| 8 | 5.90 | 6.06 | -0.16 |
| 9 | 7.60 | 7.38 | 0.22 |
| 10 | 6.10 | 6.62 | -0.52 |

explained var = $\sum(\hat{y}-\bar{y})^2$
 unexp. var = $\sum(y-\hat{y})^2$