1. dependent = strength  
   indep = const, 1, agg, add, temp, cure

2. The estimated strength for a mix  
   agg = .3  
   add = 6.3  
   temp = 47  
   cure = 12  
   is \( \hat{y} = \sum \hat{b} x = 28.2 \ 1 + 1.22 \ .3 + 2.31 \ 6.3 + .26 \ 47 + .36 \ 12 = 59.659 \)

   In[90]= \{28.2, 1.22, 2.31, 0.26, 0.36\} \cdot \{1, 6.3, 47, 12\}
   Out[90]= 59.659

3. Fraction of \( s_y^2 \) explained by regression on the independent variables is \( R^2 = 0.64 \).

   In[91]= .8^2
   Out[91]= 0.64

4. If the plot is elliptical the distribution \( y \) for every specification of the independent variables is normal with mean = 59.659

   \[ \text{sd} = \sqrt{1 - .8^2} \] \( s_y = 0.6 \) \( s_y \) (\( s_y \) was not given)

5. For large n, if the normal probability plot of the residuals \( y - \hat{y} \) is close to a straight line this is sometimes taken as evidenced that the CI to follow can be employed.

6. 95% CI for betaHatcure = 0.36 + - 1.96 Sqrt[78.79] = {-17.0377, 17.7577} if the sample size is large and specified assumptions on the errors of regression are made.

   In[93]= 0.36 + {-1, 1} 1.96 Sqrt[78.79]
   Out[93]= {-17.0377, 17.7577}