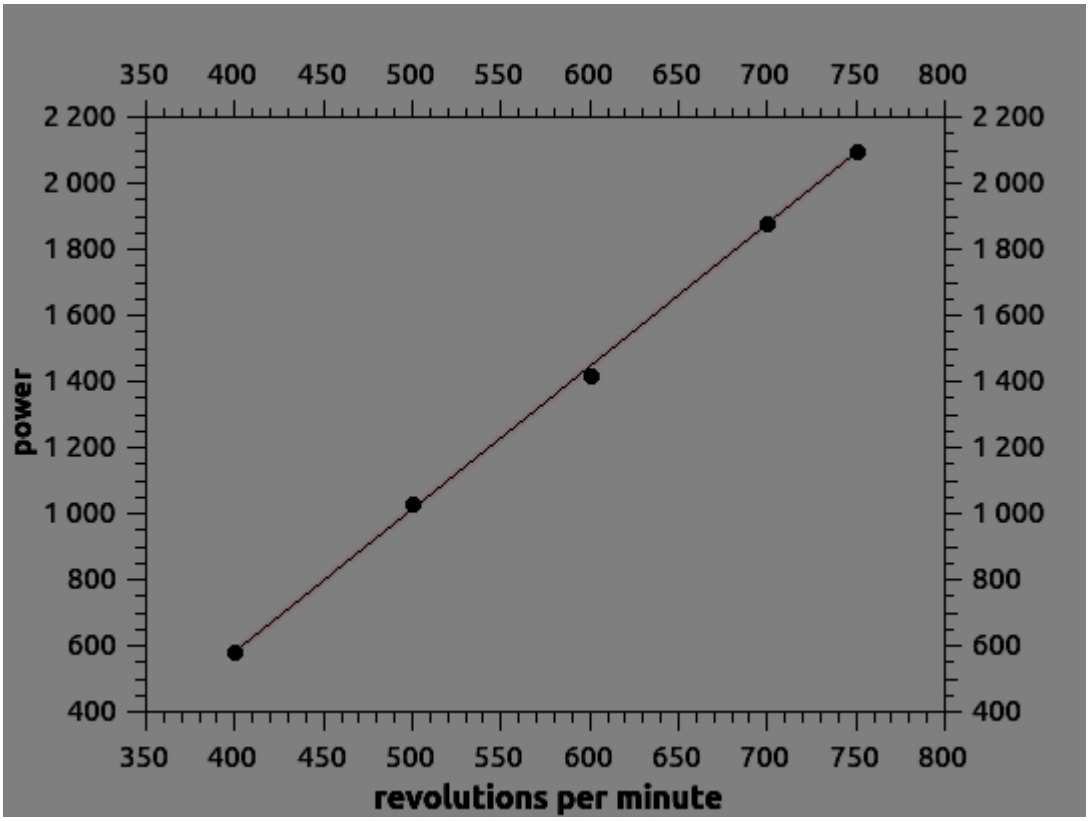
Answer on Question #46386 – Math – Statistics and Probability

The number of revolutions per minute (x) and power (y) hp of a diesel engine are tabulated below.
x 400 500 600 700 750
y 580 1030 1420 1880 2100
Obtain the regression equation for this data.

Solution



As we can see, linear equation will fit the data very good.
To fit the data, I used “QTIPLOT” program. This program uses Least squares method to find all the unknow parameters of the function.
Theoretical background can be found at https://en.wikipedia.org/wiki/Least_squares
So,

Y = A*X+B
B = -1,145792682926829e+03 +/- 3,796117376821738e+01

A = 4,318292682926829e+00 +/- 6,287686300104882e-02