

Power Regression using Microsoft Excel

A power equation has the general form: $y = bx^m$

Power data will exhibit a straight-line relationship when both the x values and the y values are graphed on log scales.

Problem 3.8 - Plot R vs A and find a power formula that expresses R in terms of A
Resistance vs Area for an Electrical Conductor

Measured data from textbook:

Area, A (sq. mm)	Resistance, R (milliohms per meter)
0.021	505
0.062	182
0.202	55.3
0.523	22.2
1.008	11.3
3.320	4.17
7.290	1.75

- 1) Graph the data using an xy (scatter) plot
- 2) Right-click on the data points or line on the graph and select "Add trendline"
- 3) Pick "Power" for the type of trendline
- 4) Under the Options tab add checks to display the equations and R squared
- 5) Change the x-axis and y-axis to use log scales (right click on the axis)

