Sol. 1

I measured the signal strength of Access Point using an app named ""Wifi Analyzer" and "Acrylic Wi-fi Analyzer" from 4 orientations and as expected no change in signal strength was observed when orientations were changed at the same distance.

Slope of best fit line = -20.529
Path Loss exponent(n) = 20.529/10 = **2.0529**

Variance of RSSI vs RSSI on best fit line =

$$(\sum_i (RSSI - RSSI from best fit line))^2/84 = 0.877$$

Sol. 2

Distance Estimation :
Distance / Range = $10^{-(P-P_{d=1})/10n}$
$=> 10^{(-46.314-P)/20.529}$

$AverageError = \sum_i (abs(dist - distEstimate))/84 = 0.363$