

MA 137 Worksheet #5

Sections 1.4 and 2.1

9/1/20

1. Given $(x_1, y_1) = (2, 37)$ and $(x_2, y_2) = (5, 52)$ on a doublelog plot, graph the line and determine the functional relationship of x and y .
2. For $B = 1.412A^{0.73}$, use a suitable logarithmic transformation of A and B so that the resulting relationship is linear. What is the linear relationships that you found? Graph the resulting linear relationship in the appropriate plot below. Mark your choice clearly and make your plot accurate!
3. Find a formula for the general term a_n of the sequence $\frac{4}{10}, \frac{9}{17}, \frac{16}{26}, \frac{25}{37}, \frac{36}{50}, \dots$ starting with a_1 .
4. The sequence $\{a_n\}$ is recursively defined by $a_{n+1} = \frac{1}{3}a_n + \frac{5}{6}$ with $a_0 = 6$.
Find a_n for $n = 1, 2, 3, 4$.