1. Error got smaller as number of subintervals increased.

$$\frac{err_1}{err_2} \approx \left(\frac{n_2}{n_1}\right)^p$$

$$\log\left(\frac{err_1}{err_2}\right) \approx p \log\left(\frac{n_2}{n_1}\right)$$

$$p \approx \frac{\log(err_1 / err_2)}{\log(n_2 / n_1)}$$

$p = 2$

2. The runtime increased as the number of intervals increased.

$$q \approx \frac{\log(T_1 / T_2)}{\log(n_1 / n_2)} \approx 1.01 \text{ seconds}$$