Big Oh notation rules

1. if $\lim_{n\to\infty} \frac{f_1}{f_2} = c > 0 \rightarrow f_1 \; is \; O(f_2)$.
2. if $\lim_{n\to\infty} \frac{f_1}{f_2} = 0 \rightarrow f_1 \; is \; o(f_2)$.
3. if $\lim_{n\to\infty} \frac{f_1}{f_2} = c_1 > 0 \; and \; \lim_{n\to\infty} \frac{f_2}{f_1} = c_2 > 0 \rightarrow f_1 \; is \; \Theta(f_2)$.