Rank the following functions by increasing order of growth

$$f_1 = n^2$$

$$f_2 = n$$

$$f_3 = n \log n$$

$$f_4 = 2^n$$

2 , 3 , 1 , 4

Rank the following functions by increasing order of growth

$$f_1(n) = 2^{2^{1000000}}$$
$$f_2(n) = 2^{100000n}$$
$$f_3(n) = \binom{n}{2}$$
$$f_4(n) = n\sqrt{n}$$

$$1, 4, 3, 2$$

$$n^2 \in \Omega(\log n) \quad ? \quad \text{True}$$

$$n \in O(\log n) \quad ? \quad \text{False}$$

$$\log n \in \Theta(\sqrt{n}) \quad ? \quad \text{False} \quad \log n \notin \Omega(\sqrt{n}) \quad \log n \in O(\sqrt{n})$$