Materials discussed on 4/10

We have discussed the following.

1. We show that $\cos(z^{1/2})$ is of order $1/2$ without considering the zeros but estimating the sup instead.

2. Let $F(z) = \sum_{n=1}^{\infty} a_n z^n$ be an entire function of finite order. Suppose F is of order ρ, then

$$\limsup_{n \to \infty} |a_n|^{1/n} n^{1/\rho} < \infty.$$

3. Show that $\sum \frac{z^n}{(n!)^{\alpha}}$ is an entire function of order $1/\alpha$.