

## Skewness

### 1 R3O3

We can demonstrate our conclusion by proving that Equation (8), when compared to the corresponding expression on the right-hand side, is a monotonically decreasing function with respect to  $\rho$ . It can be found that  $0 < \chi < 1$  because it represents the fraction of low-degree vertices. Thus, we can get:

$$0 < 1 - \chi < 1 - \left(\chi - \frac{i-1}{|V|}\right) < 1 - \left(1 - \chi + \frac{\chi|V|-1}{|V|}\right) < 1 \quad (1)$$

By the properties of the exponential function, we can conclude that the function decreases monotonically with an increase in  $\rho$ .