



$$F\left(\sum_{i=1}^n m_i x_i\right) = F(X_g) \leq Y_g = \sum_{i=1}^n m_i F(x_i)$$

$$F(x) = x \log x$$

$$F\left(\sum_{i=1}^n m_i x_i\right) \leq \sum_{i=1}^n m_i F(x_i)$$

$$x_i = p_i/q_i$$

$$m_i = q_i$$

$$F(x) = x \log x$$

$$F\left(\sum_{i=1}^n m_i x_i\right) \leq \sum_{i=1}^n m_i F(x_i)$$

$$x_i = p_i / q_i$$

$$m_i = q_i$$

$$\sum_{i=1}^n m_i x_i = \sum_{i=1}^n q_i p_i / q_i = \sum_{i=1}^n p_i$$

$$F(x) = x \log x$$

$$F\left(\sum_{i=1}^n m_i x_i\right) \leq \sum_{i=1}^n m_i F(x_i)$$

$$x_i = p_i / q_i$$

$$m_i = q_i$$

$$\sum_{i=1}^n m_i x_i = \sum_{i=1}^n q_i p_i / q_i = \sum_{i=1}^n p_i = 1$$

$$F(x) = x \log x$$

$$F\left(\sum_{i=1}^n m_i x_i\right) \leq \sum_{i=1}^n m_i F(x_i)$$

$$x_i = p_i / q_i$$

$$m_i = q_i$$

$$F(1) = 1 \log 1 = 0$$

$$F(x) = x \log x$$

$$F\left(\sum_{i=1}^n m_i x_i\right) \leq \sum_{i=1}^n m_i F(x_i)$$

$$x_i = p_i / q_i$$

$$m_i = q_i$$

$$F(1) = 1 \log 1 = 0$$

$$0 \leq \sum_{i=1}^n m_i F(x_i) = \sum_{i=1}^n q_i F(p_i / q_i)$$

$$F(x) = x \log x$$

$$F\left(\sum_{i=1}^n m_i x_i\right) \leq \sum_{i=1}^n m_i F(x_i)$$

$$x_i = p_i/q_i$$

$$m_i = q_i$$

$$F(1) = 1 \log 1 = 0$$

$$0 \leq \sum_{i=1}^n m_i F(x_i) = \sum_{i=1}^n q_i p_i/q_i \log(p_i/q_i)$$

$$F(x) = x \log x$$

$$F\left(\sum_{i=1}^n m_i x_i\right) \leq \sum_{i=1}^n m_i F(x_i)$$

$$x_i = p_i/q_i$$

$$m_i = q_i$$

$$F(1) = 1 \log 1 = 0$$

$$0 \leq \sum_{i=1}^n m_i F(x_i) = \sum_{i=1}^n p_i \log(p_i/q_i)$$

$$F(x) = x \log x$$

$$F\left(\sum_{i=1}^n m_i x_i\right) \leq \sum_{i=1}^n m_i F(x_i)$$

$$x_i = p_i / q_i$$

$$m_i = q_i$$

$$F(1) = 1 \log 1 = 0$$

$$0 \leq \sum_{i=1}^n m_i F(x_i) = \sum_{i=1}^n p_i (\log p_i - \log q_i)$$

$$F(x) = x \log x$$

$$F\left(\sum_{i=1}^n m_i x_i\right) \leq \sum_{i=1}^n m_i F(x_i)$$

$$x_i = p_i / q_i$$

$$m_i = q_i$$

$$F(1) = 1 \log 1 = 0$$

$$0 \leq \sum_{i=1}^n p_i \log p_i - \sum_{i=1}^n p_i \log q_i$$

$$F(x) = x \log x$$

$$F\left(\sum_{i=1}^n m_i x_i\right) \leq \sum_{i=1}^n m_i F(x_i)$$

$$\sum_{i=1}^n p_i \log q_i \leq \sum_{i=1}^n p_i \log p_i$$