

Extending to general functions f

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- Superadditivity: $f(x) + f(y) \leq f(x + y)$

- A multiplicative approximation for $f(x)$ can be used to obtain a multiplicative approximation for f

- The procedure extends and gives a protocol with $\mathcal{O}(c_f[s] \cdot \text{polylog}(n)/\varepsilon^2)$ communication

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Results

$$f(y_1 + \cdots + y_s) \leq \frac{c_f[s]}{s} \left(\sqrt{f(y_1)} + \cdots + \sqrt{f(y_s)} \right)^2$$