$$\max_{-1/2 \le t \le 1/2} \int_{\mathbb{R}} f_{+}(t-x) f_{+}(x) \ dx \ge \mathbf{C} \left(\int_{-1/4}^{1/4} f_{+}(x) \ dx \right)^{2}$$

1.5098 → **1.5053**

$$||f * f||_2^2 \le C' ||f * f||_1 ||f * f||_{\infty}$$

0.8892 → **0.8962**

$$\max_{-1/2 \le t \le 1/2} \left| \int_{\mathbb{R}} f(t-x) f(x) \ dx \right| \ge C'' \left(\int_{-1/4}^{1/4} f(x) \ dx \right)^2$$

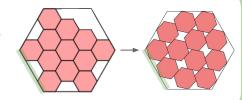
1.4581 → **1.4557**

$$A(f)A(\hat{f}) \ge C'''$$

0.3523 → **0.3521**

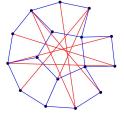
Analysis

Hexagon outer edge $4.000 \rightarrow 3.942$

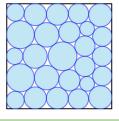


Max distance/min distance

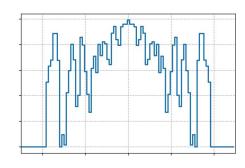
12.890 → **12.889**



Sum of radii 2.6340 → **2.6358**



Geometry



$$\sup_{x \in [-2,2]} \int_{-1}^{1} f(t)g(x+t) \ dt \ge C$$

 $0.380926 \rightarrow 0.380924$

$$|A+B| \ll |A|$$

$$|A-B|\gg |A|^{\mathbb{C}}$$

1.1446 → **1.1584**

Combinatorics