

- Algorithm1

N	1000	5000	10000	20000
first	$3.27 \cdot 10^{-6}$	$2.73 \cdot 10^{-5}$	$3.06 \cdot 10^{-5}$	$6.36 \cdot 10^{-5}$
second	$3.40 \cdot 10^{-6}$	$1.77 \cdot 10^{-5}$	$3.26 \cdot 10^{-5}$	$7.39 \cdot 10^{-5}$
third	$3.29 \cdot 10^{-6}$	$1.65 \cdot 10^{-5}$	$3.34 \cdot 10^{-5}$	$6.34 \cdot 10^{-5}$
fourth	$3.35 \cdot 10^{-6}$	$1.69 \cdot 10^{-5}$	$3.27 \cdot 10^{-5}$	$6.42 \cdot 10^{-5}$
fifth	$3.34 \cdot 10^{-6}$	$1.64 \cdot 10^{-5}$	$3.54 \cdot 10^{-5}$	$7.99 \cdot 10^{-5}$
sixth	$3.40 \cdot 10^{-6}$	$2.08 \cdot 10^{-5}$	$3.30 \cdot 10^{-5}$	$6.26 \cdot 10^{-5}$
average	$3.34 \cdot 10^{-6}$	$1.69 \cdot 10^{-5}$	$3.30 \cdot 10^{-5}$	$6.56 \cdot 10^{-5}$

N	40000	60000	80000	100000
first	$1.37 \cdot 10^{-4}$	$1.89 \cdot 10^{-4}$	$2.58 \cdot 10^{-4}$	$4.44 \cdot 10^{-4}$
second	$1.32 \cdot 10^{-4}$	$2.38 \cdot 10^{-4}$	$2.67 \cdot 10^{-4}$	$3.62 \cdot 10^{-4}$
third	$1.42 \cdot 10^{-4}$	$2.07 \cdot 10^{-4}$	$2.57 \cdot 10^{-4}$	$3.19 \cdot 10^{-4}$
fourth	$1.24 \cdot 10^{-4}$	$1.95 \cdot 10^{-4}$	$2.49 \cdot 10^{-4}$	$3.15 \cdot 10^{-4}$
fifth	$1.31 \cdot 10^{-4}$	$1.85 \cdot 10^{-4}$	$2.69 \cdot 10^{-4}$	$3.23 \cdot 10^{-4}$
sixth	$1.40 \cdot 10^{-4}$	$2.04 \cdot 10^{-4}$	$2.55 \cdot 10^{-4}$	$3.39 \cdot 10^{-4}$
average	$1.34 \cdot 10^{-4}$	$2.03 \cdot 10^{-4}$	$2.59 \cdot 10^{-4}$	$3.32 \cdot 10^{-4}$

- Algorithm2

N	1000	5000	10000	20000
first	$5.12 \cdot 10^{-8}$	$6.09 \cdot 10^{-8}$	$6.72 \cdot 10^{-8}$	$7.22 \cdot 10^{-8}$
second	$4.61 \cdot 10^{-8}$	$6.34 \cdot 10^{-8}$	$6.52 \cdot 10^{-8}$	$7.39 \cdot 10^{-8}$
third	$5.04 \cdot 10^{-8}$	$6.23 \cdot 10^{-8}$	$6.63 \cdot 10^{-8}$	$7.16 \cdot 10^{-8}$
fourth	$4.85 \cdot 10^{-8}$	$6.31 \cdot 10^{-8}$	$6.58 \cdot 10^{-8}$	$7.22 \cdot 10^{-8}$
fifth	$4.61 \cdot 10^{-8}$	$6.52 \cdot 10^{-8}$	$6.86 \cdot 10^{-8}$	$7.05 \cdot 10^{-8}$
sixth	$4.91 \cdot 10^{-8}$	$6.02 \cdot 10^{-8}$	$6.99 \cdot 10^{-8}$	$7.03 \cdot 10^{-8}$
average	$4.86 \cdot 10^{-8}$	$6.25 \cdot 10^{-8}$	$6.73 \cdot 10^{-8}$	$7.18 \cdot 10^{-8}$

N	40000	60000	80000	100000
first	$7.55 \cdot 10^{-8}$	$7.79 \cdot 10^{-8}$	$8.29 \cdot 10^{-8}$	$8.56 \cdot 10^{-8}$
second	$7.72 \cdot 10^{-8}$	$7.94 \cdot 10^{-8}$	$8.14 \cdot 10^{-8}$	$8.30 \cdot 10^{-8}$
third	$7.65 \cdot 10^{-8}$	$7.72 \cdot 10^{-8}$	$8.11 \cdot 10^{-8}$	$8.32 \cdot 10^{-8}$
fourth	$7.61 \cdot 10^{-8}$	$7.91 \cdot 10^{-8}$	$8.27 \cdot 10^{-8}$	$8.46 \cdot 10^{-8}$
fifth	$7.42 \cdot 10^{-8}$	$8.12 \cdot 10^{-8}$	$8.21 \cdot 10^{-8}$	$8.48 \cdot 10^{-8}$
sixth	$7.78 \cdot 10^{-8}$	$7.76 \cdot 10^{-8}$	$8.10 \cdot 10^{-8}$	$8.17 \cdot 10^{-8}$
average	$7.62 \cdot 10^{-8}$	$7.87 \cdot 10^{-8}$	$8.19 \cdot 10^{-8}$	$8.38 \cdot 10^{-8}$

- Algorithm3

N	1000	5000	10000	20000
first	$1.99 \cdot 10^{-7}$	$2.54 \cdot 10^{-7}$	$2.67 \cdot 10^{-7}$	$3.02 \cdot 10^{-7}$
second	$2.07 \cdot 10^{-7}$	$2.72 \cdot 10^{-7}$	$2.69 \cdot 10^{-7}$	$2.93 \cdot 10^{-7}$
third	$2.18 \cdot 10^{-7}$	$2.63 \cdot 10^{-7}$	$2.75 \cdot 10^{-7}$	$2.91 \cdot 10^{-7}$
fourth	$1.99 \cdot 10^{-7}$	$2.55 \cdot 10^{-7}$	$2.65 \cdot 10^{-7}$	$2.98 \cdot 10^{-7}$
fifth	$2.00 \cdot 10^{-7}$	$2.51 \cdot 10^{-7}$	$2.78 \cdot 10^{-7}$	$2.94 \cdot 10^{-7}$
sixth	$2.03 \cdot 10^{-7}$	$2.78 \cdot 10^{-7}$	$2.73 \cdot 10^{-7}$	$2.99 \cdot 10^{-7}$
average	$2.07 \cdot 10^{-7}$	$2.62 \cdot 10^{-7}$	$2.71 \cdot 10^{-7}$	$2.96 \cdot 10^{-7}$

N	40000	60000	80000	100000
first	$3.10 \cdot 10^{-7}$	$3.17 \cdot 10^{-7}$	$3.30 \cdot 10^{-7}$	$3.43 \cdot 10^{-7}$
second	$3.14 \cdot 10^{-7}$	$3.20 \cdot 10^{-7}$	$3.35 \cdot 10^{-7}$	$3.38 \cdot 10^{-7}$
third	$3.16 \cdot 10^{-7}$	$3.11 \cdot 10^{-7}$	$3.34 \cdot 10^{-7}$	$3.48 \cdot 10^{-7}$
fourth	$3.17 \cdot 10^{-7}$	$3.19 \cdot 10^{-7}$	$3.35 \cdot 10^{-7}$	$3.41 \cdot 10^{-7}$
fifth	$3.12 \cdot 10^{-7}$	$3.18 \cdot 10^{-7}$	$3.35 \cdot 10^{-7}$	$3.48 \cdot 10^{-7}$
sixth	$3.04 \cdot 10^{-7}$	$3.11 \cdot 10^{-7}$	$3.44 \cdot 10^{-7}$	$3.38 \cdot 10^{-7}$
average	$3.12 \cdot 10^{-7}$	$3.18 \cdot 10^{-7}$	$3.36 \cdot 10^{-7}$	$3.43 \cdot 10^{-7}$