Figure 1: timing-pattern

Legend:
- ○ pattern-user
- — $3.19 \cdot 10^{-5} \cdot x - 4.16 \cdot 10^{-3}$
- $*$ pattern-real
- — $3.2 \cdot 10^{-5} \cdot x - 4.08 \cdot 10^{-3}$
- $*$ pattern-sys

Axis labels: time (s) vs n

The legend contains:

- abstract-real
- $1.02 \cdot 10^{-7} \cdot x^2 + 3.36 \cdot 10^{-4} \cdot x$
- abstract-user
- $1.01 \cdot 10^{-7} \cdot x^2 + 3.32 \cdot 10^{-4} \cdot x$
- close-abstract-real
- $1.02 \cdot 10^{-7} \cdot x^2 + 2.62 \cdot 10^{-4} \cdot x$
- close-abstract-user
- $1.02 \cdot 10^{-7} \cdot x^2 + 2.59 \cdot 10^{-4} \cdot x$
- exact-real
- $7.39 \cdot 10^{-5} \cdot x - 3.35 \cdot$
- exact-user
- $7.17 \cdot 10^{-5} \cdot x - 2.64 \cdot$
- abstract-sys
- close-abstract-sys
- exact-sys

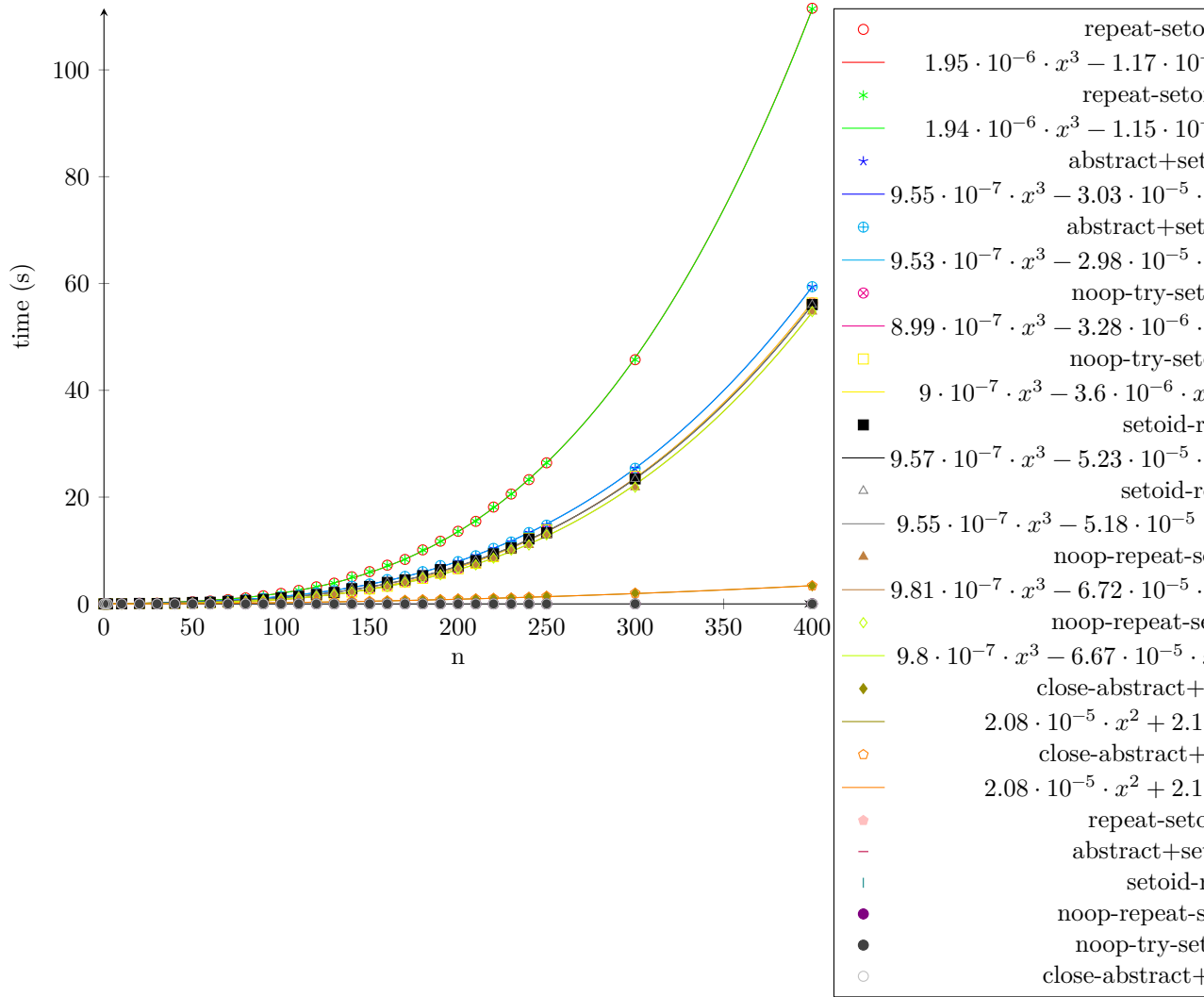Axis labels: time (s); 0-univ-count

Figure 2: timing-n-polymorphic-universes param-1-n 0
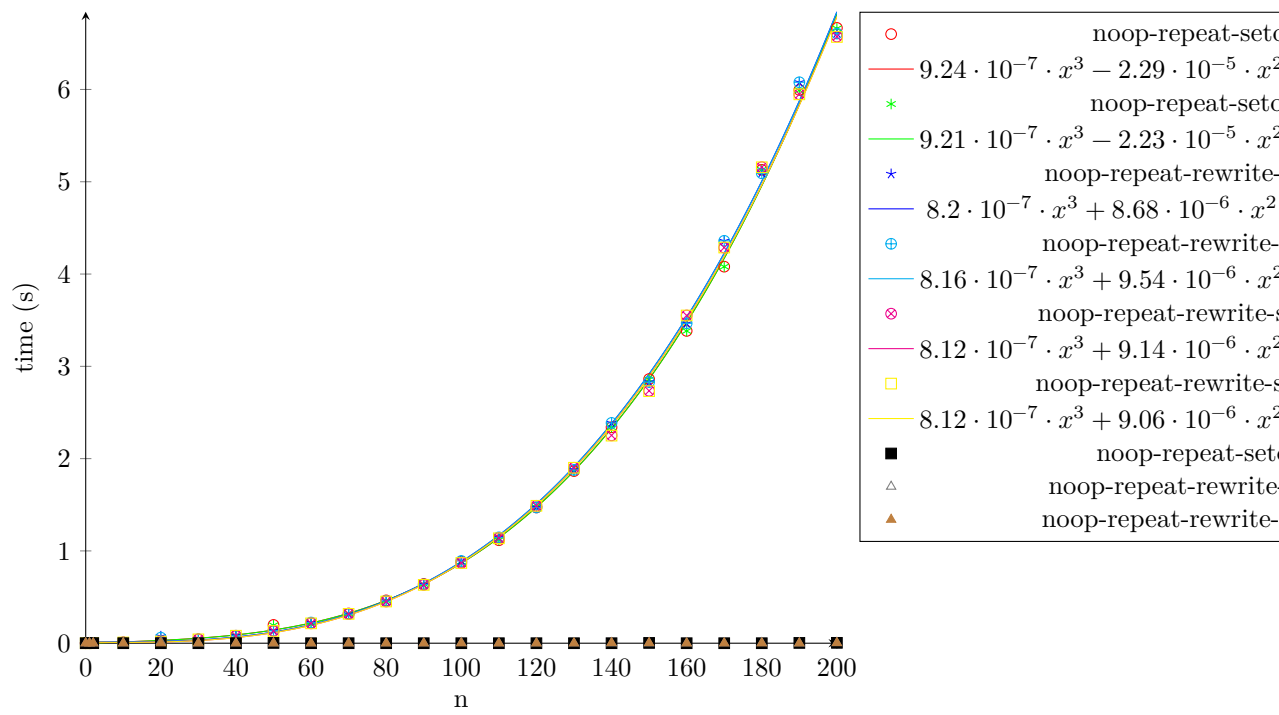
2

Figure 3: timing-repeat-setoid-rewrite-under-binders

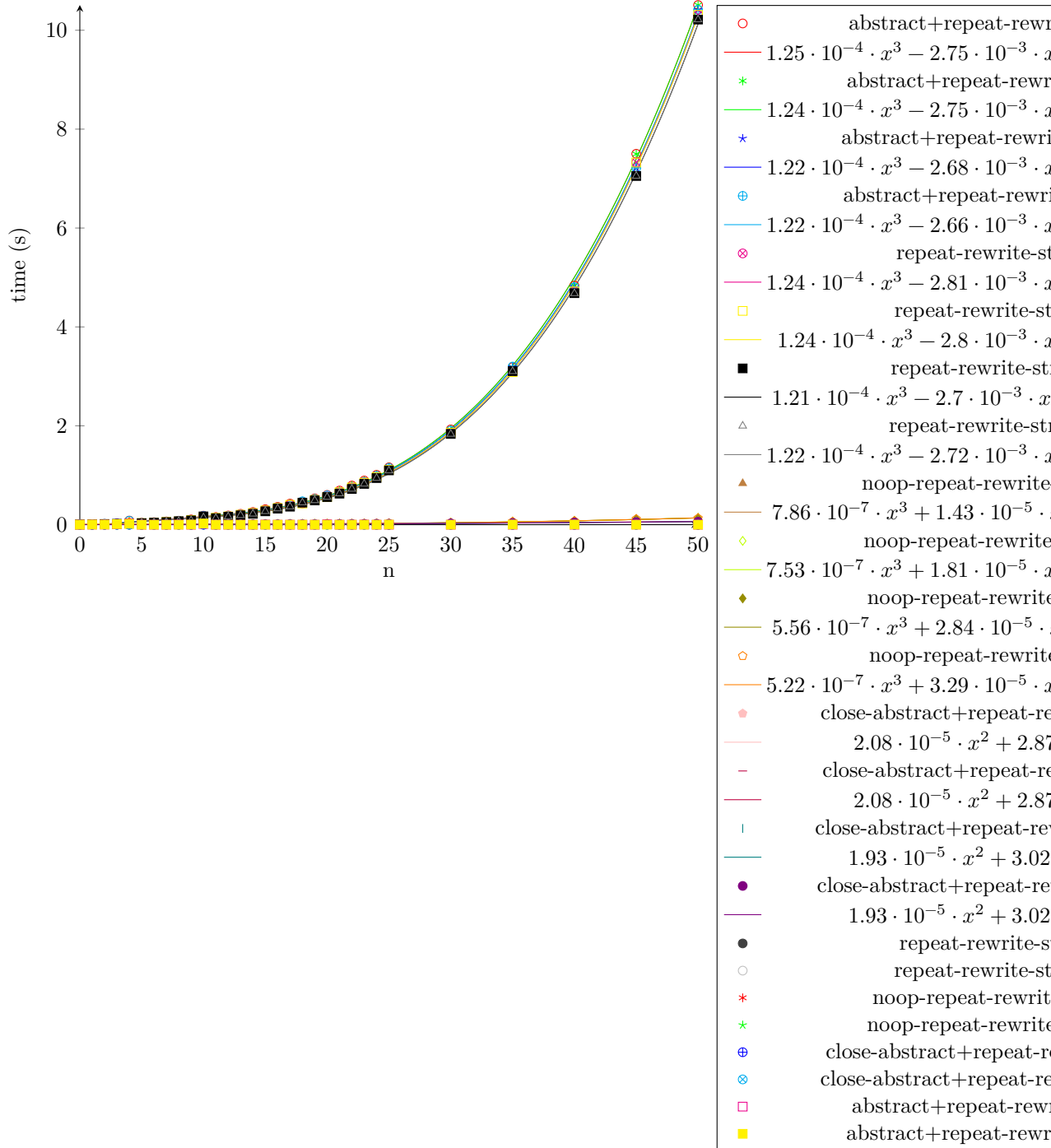Figure 4: timing-repeat-setoid-rewrite-under-binders-noop

4

time (s)

n

abstract+repeat-rewr

$1.25 \cdot 10^{-4} \cdot x^3 - 2.75 \cdot 10^{-3} \cdot x$

abstract+repeat-rewr

$1.24 \cdot 10^{-4} \cdot x^3 - 2.75 \cdot 10^{-3} \cdot x$

abstract+repeat-rewri

$1.22 \cdot 10^{-4} \cdot x^3 - 2.68 \cdot 10^{-3} \cdot x$

abstract+repeat-rewri

$1.22 \cdot 10^{-4} \cdot x^3 - 2.66 \cdot 10^{-3} \cdot x$

repeat-rewrite-st

$1.24 \cdot 10^{-4} \cdot x^3 - 2.81 \cdot 10^{-3} \cdot x$

repeat-rewrite-st

$1.24 \cdot 10^{-4} \cdot x^3 - 2.8 \cdot 10^{-3} \cdot x$

repeat-rewrite-str

$1.21 \cdot 10^{-4} \cdot x^3 - 2.7 \cdot 10^{-3} \cdot x$

repeat-rewrite-str

$1.22 \cdot 10^{-4} \cdot x^3 - 2.72 \cdot 10^{-3} \cdot x$

noop-repeat-rewrite

$7.86 \cdot 10^{-7} \cdot x^3 + 1.43 \cdot 10^{-5} \cdot x$

noop-repeat-rewrite

$7.53 \cdot 10^{-7} \cdot x^3 + 1.81 \cdot 10^{-5} \cdot x$

noop-repeat-rewrite

$5.56 \cdot 10^{-7} \cdot x^3 + 2.84 \cdot 10^{-5} \cdot x$

noop-repeat-rewrite

$5.22 \cdot 10^{-7} \cdot x^3 + 3.29 \cdot 10^{-5} \cdot x$

close-abstract+repeat-re

$2.08 \cdot 10^{-5} \cdot x^2 + 2.87$

close-abstract+repeat-re

$2.08 \cdot 10^{-5} \cdot x^2 + 2.87$

close-abstract+repeat-rev

$1.93 \cdot 10^{-5} \cdot x^2 + 3.02$

close-abstract+repeat-re

$1.93 \cdot 10^{-5} \cdot x^2 + 3.02$

repeat-rewrite-s

repeat-rewrite-st

noop-repeat-rewrit

noop-repeat-rewrite

close-abstract+repeat-re

close-abstract+repeat-re

abstract+repeat-rewr

abstract+repeat-rewr

Figure 5: timing-rewrite-strat-under-binders

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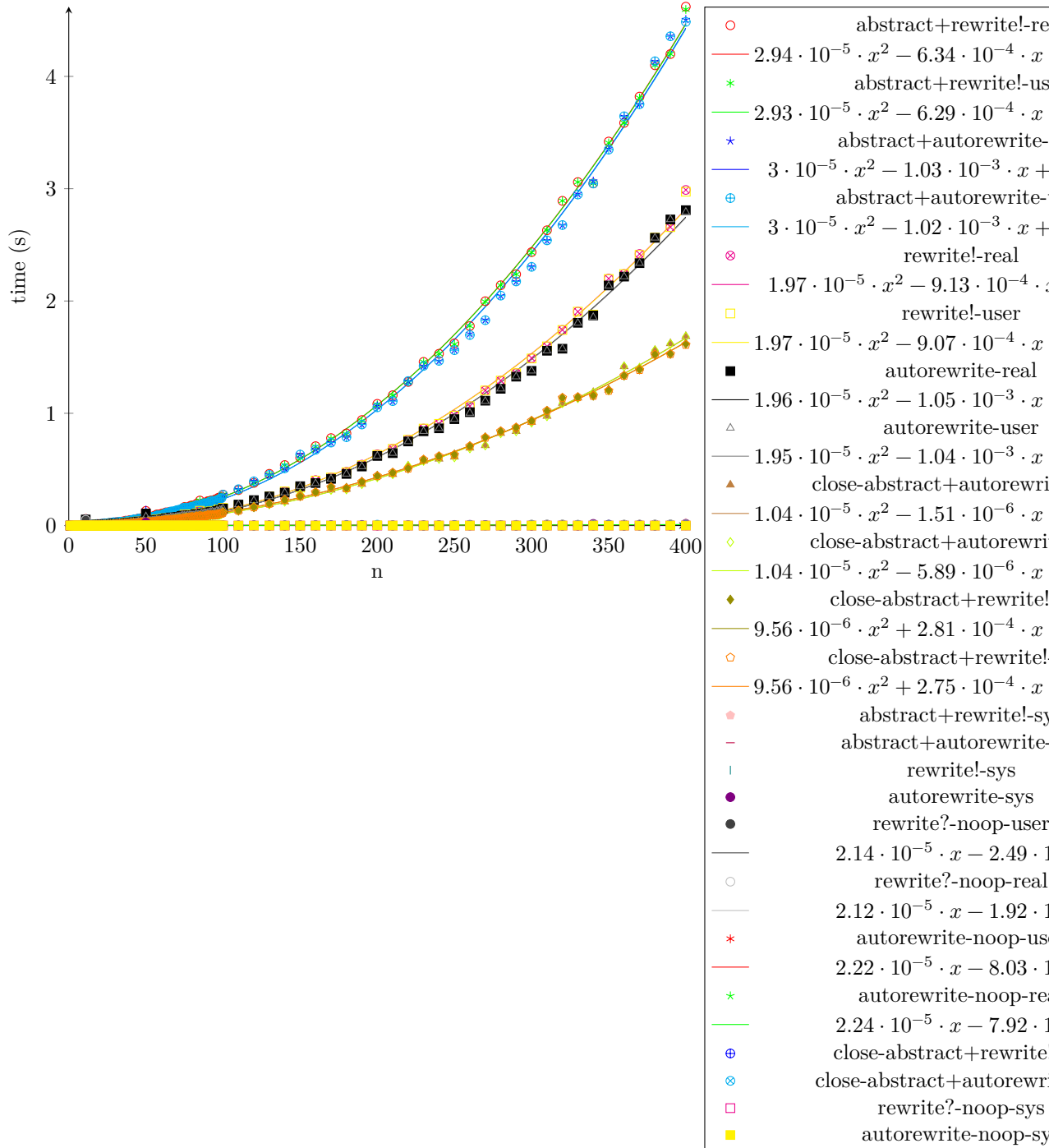
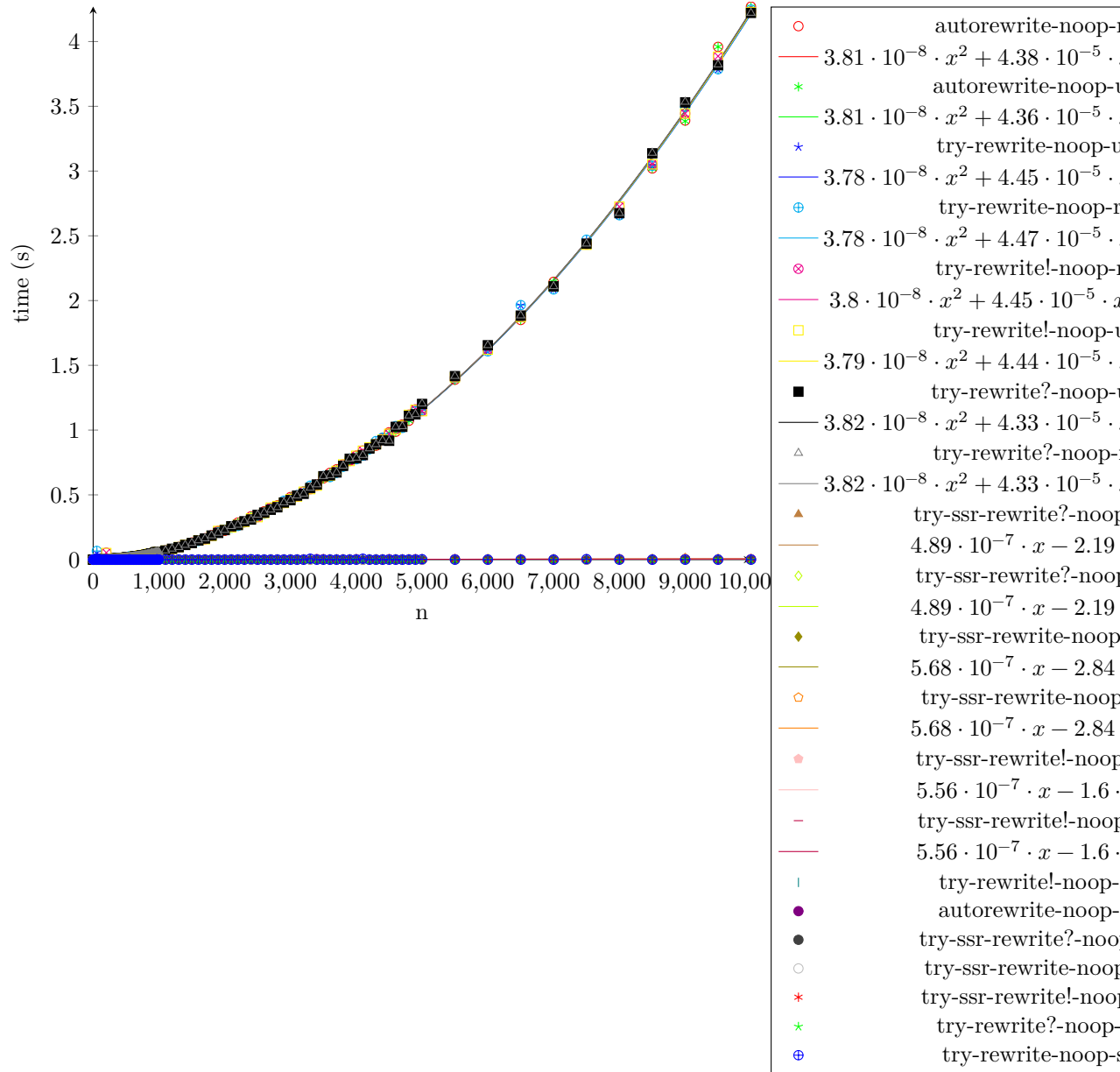Figure 6: timing-rewrite-repeated-app-autorewrite

6

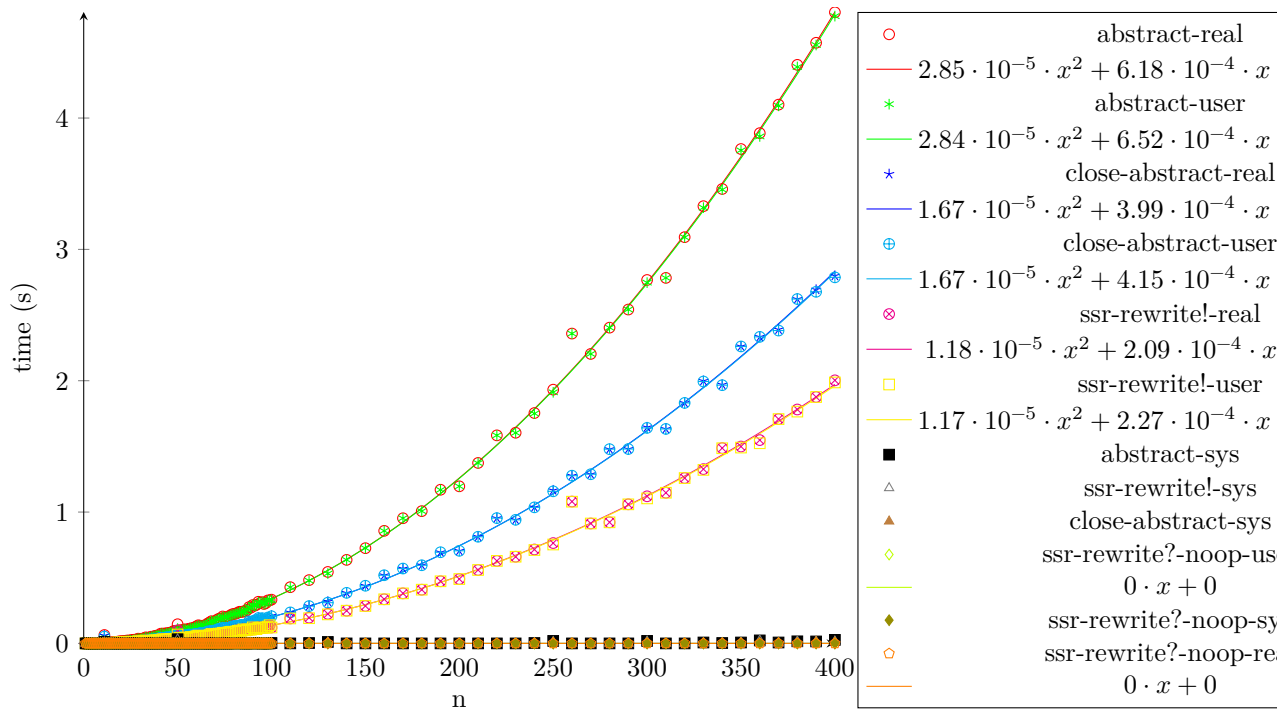Figure 7: timing-rewrite-repeated-app-autorewrite-noop

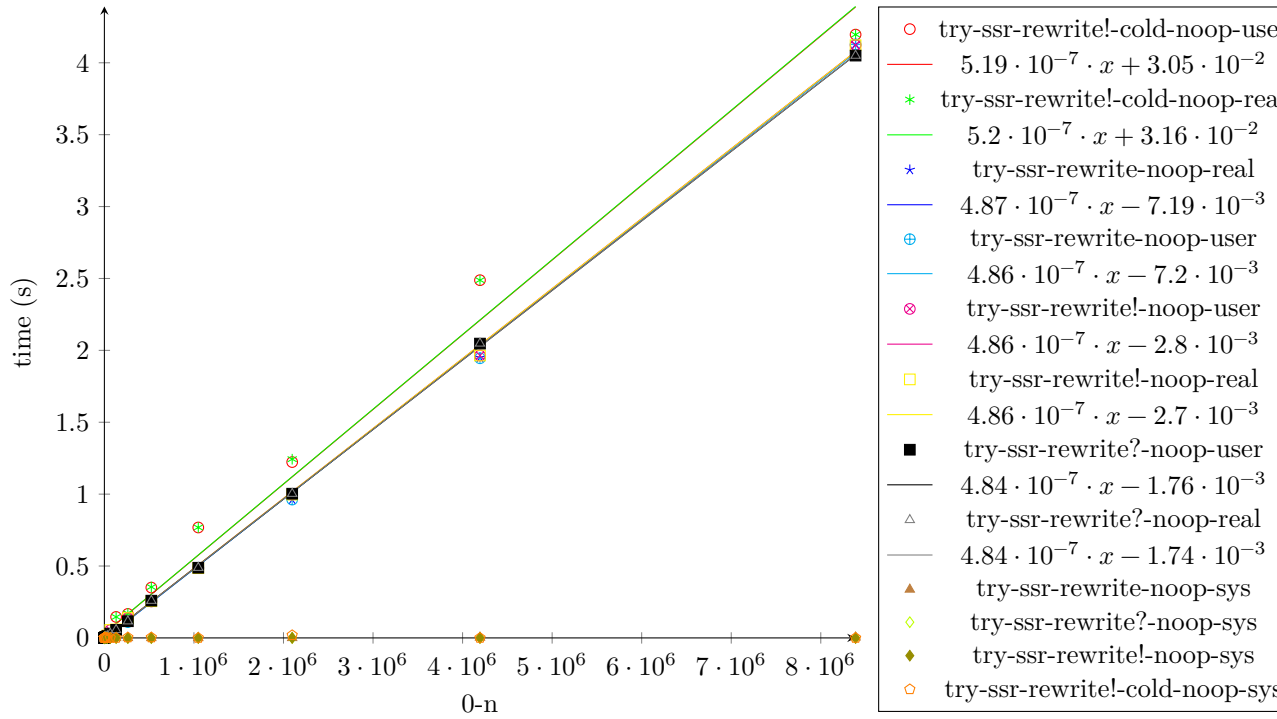Figure 8: timing-rewrite-repeated-app-ssrrewrite

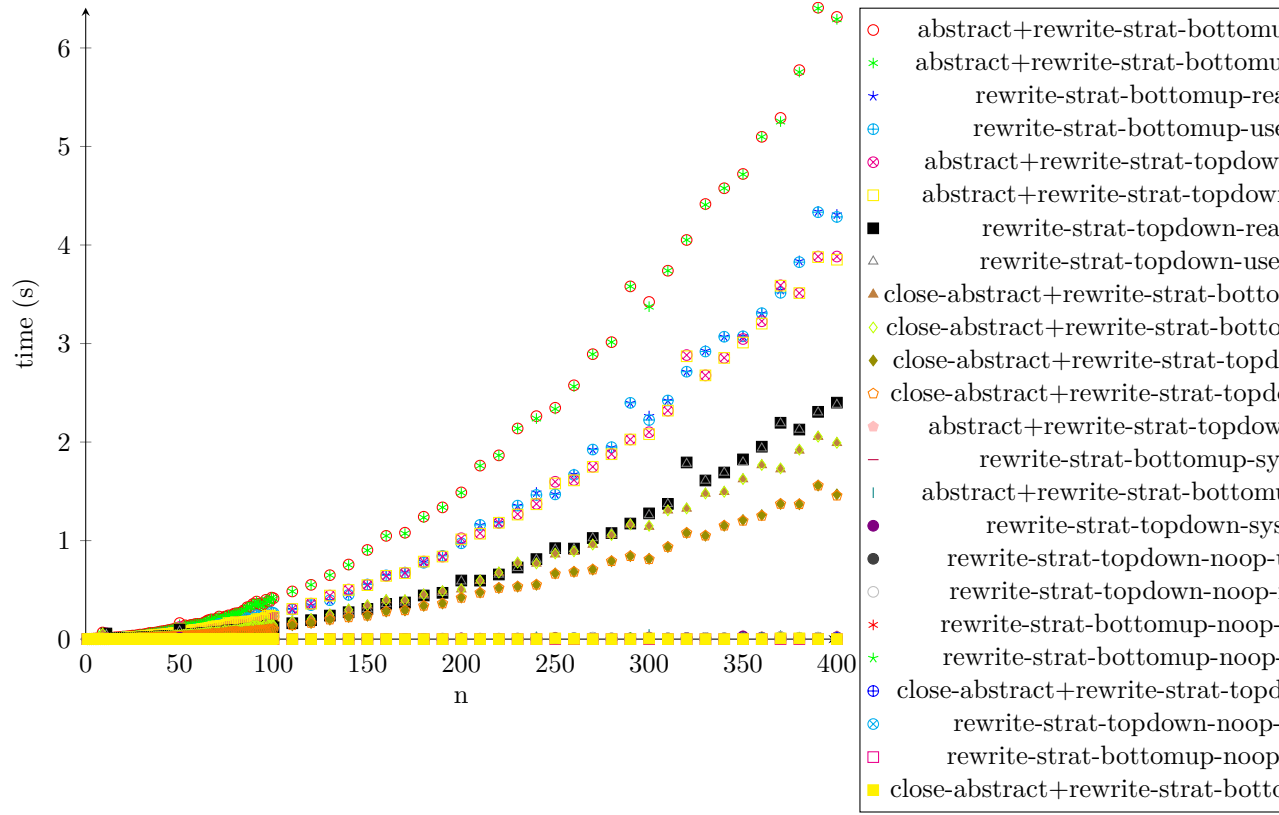Figure 9: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn 1

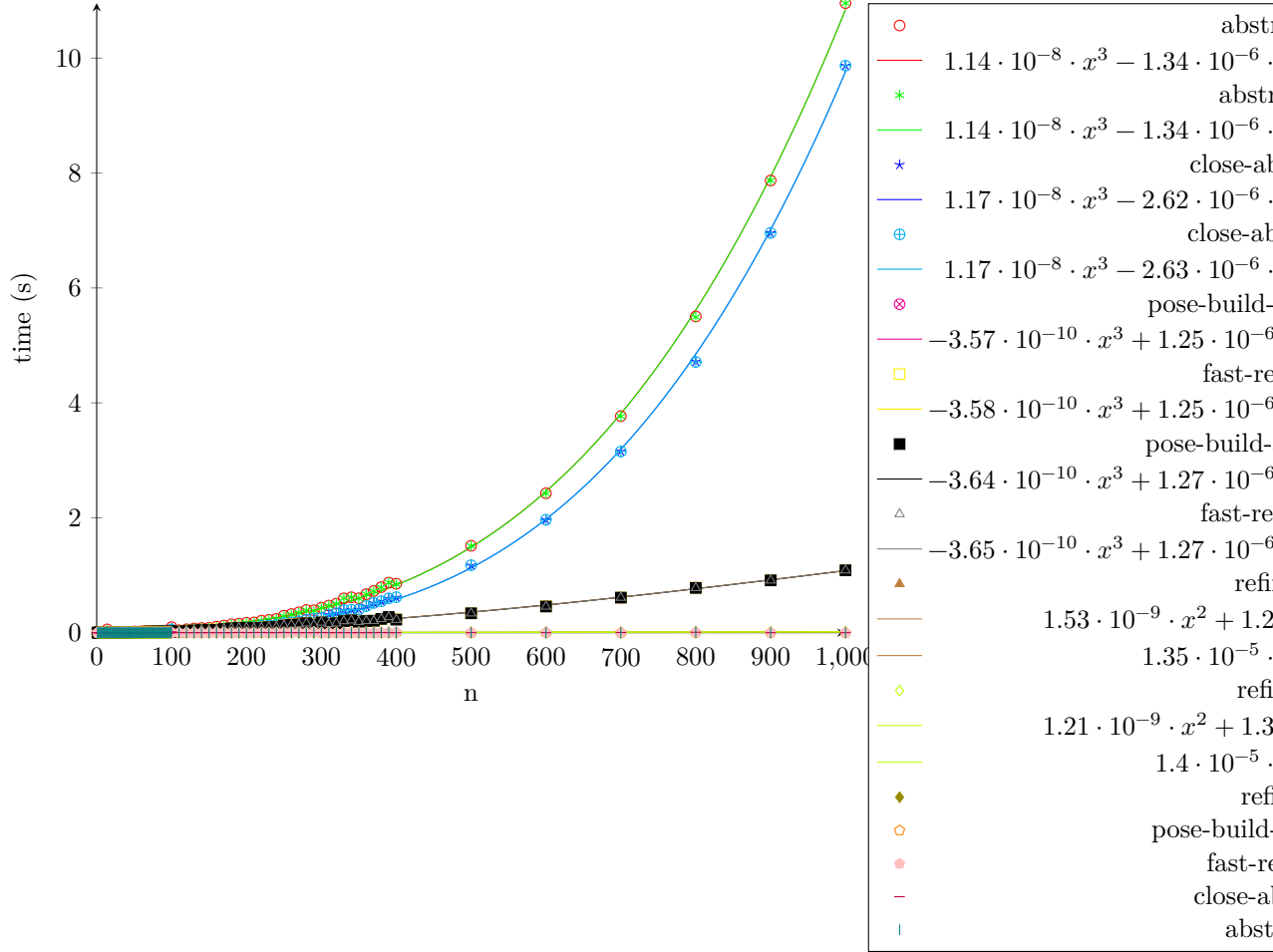9

Figure 10: timing-rewrite-repeated-app-rewrite-strat
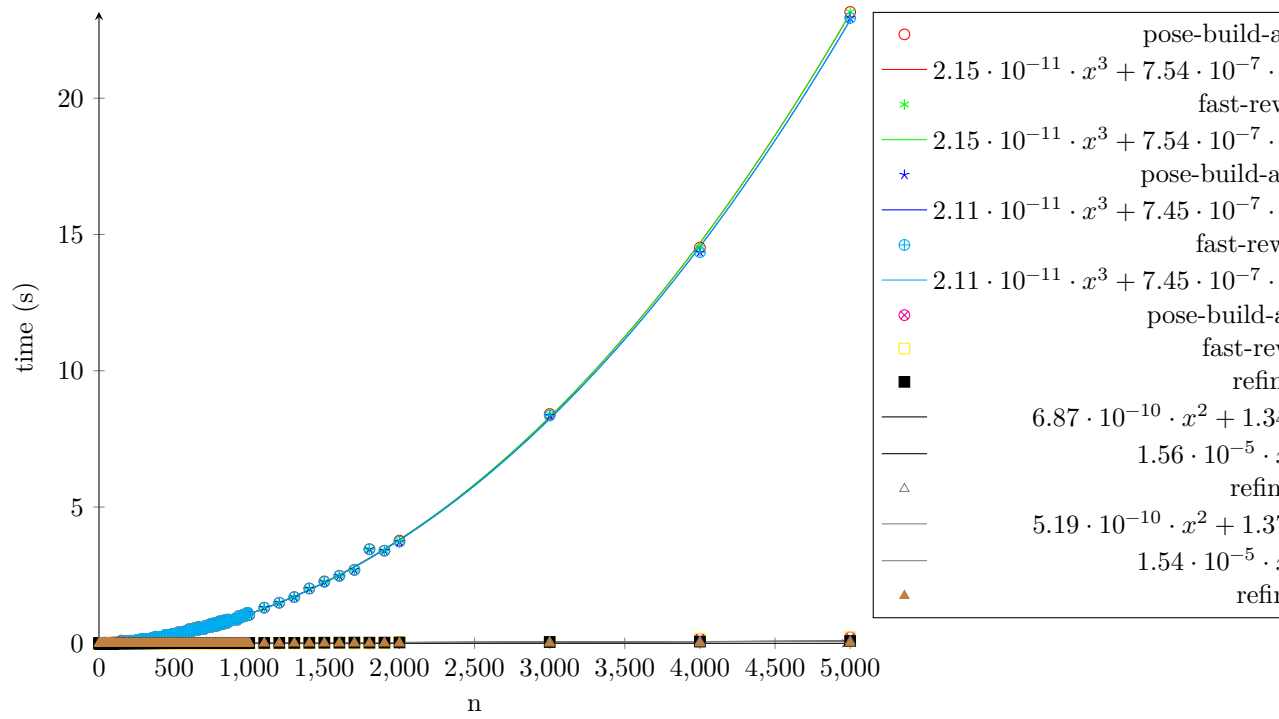
Figure 11: timing-rewrite-repeated-app-fast-rewrite

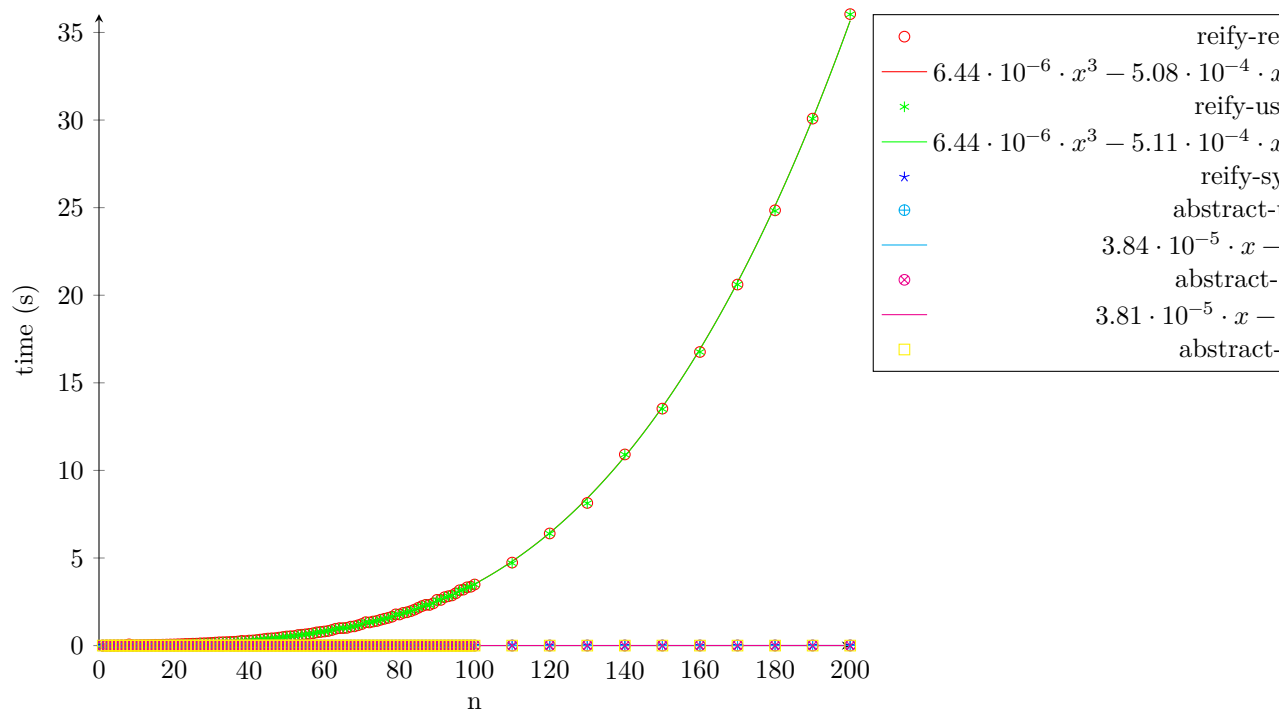Figure 12: timing-rewrite-repeated-app-fast-rewrite-no-abstract
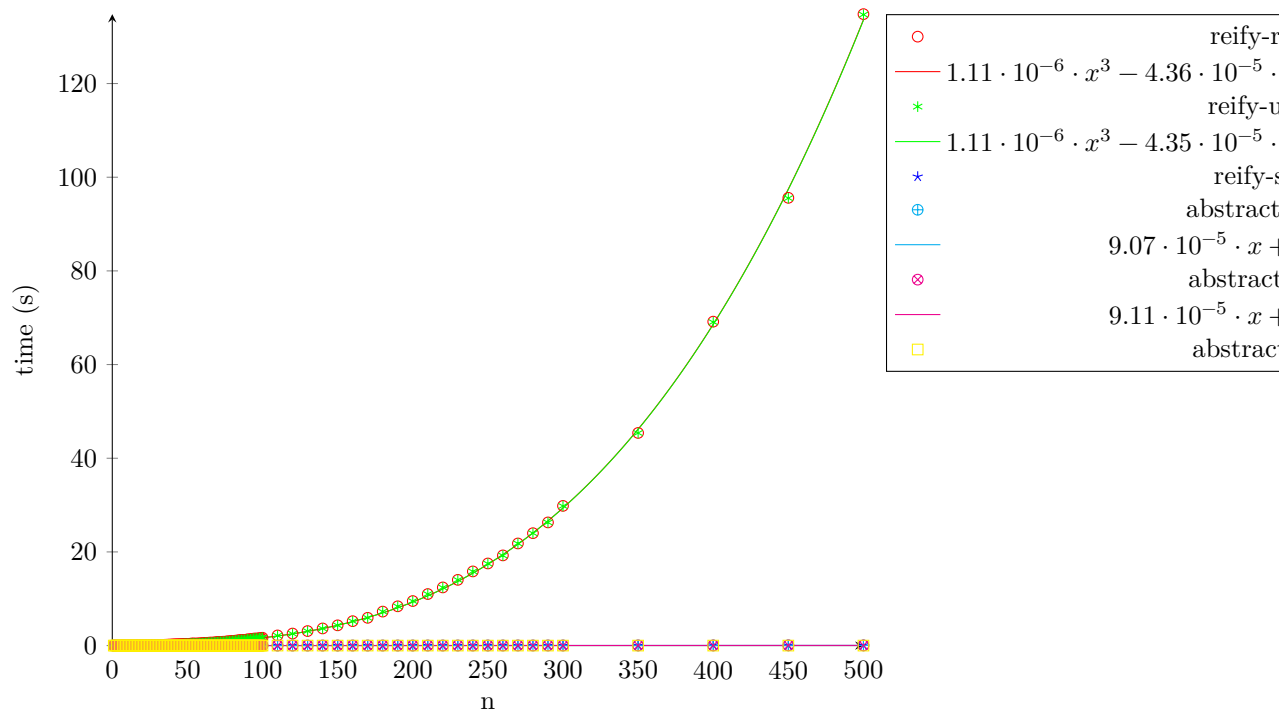
Figure 13: timing-typeclass-reification-let-in-HOAS

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Figure 14: timing-typeclass-reification-let-in-PHOAS