Figure 1: timing-pattern

1

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

The figure contains the following legend entries:

- abstract-real
- $1.28 \cdot 10^{-9} \cdot x^2 + 1.76 \cdot 10^{-4} \cdot$
- abstract-user
- $1.13 \cdot 10^{-9} \cdot x^2 + 1.74 \cdot 10^{-4} \cdot$
- close-abstract-re
- $1.37 \cdot 10^{-9} \cdot x^2 + 1.22 \cdot 10^{-4} \cdot$
- close-abstract-us
- $1.37 \cdot 10^{-9} \cdot x^2 + 1.19 \cdot 10^{-4} \cdot$
- exact-real
- $5.27 \cdot 10^{-5} \cdot x - 2.72$
- exact-user
- $5.11 \cdot 10^{-5} \cdot x - 2.3 \cdot$
- abstract-sys
- close-abstract-sy
- exact-sys
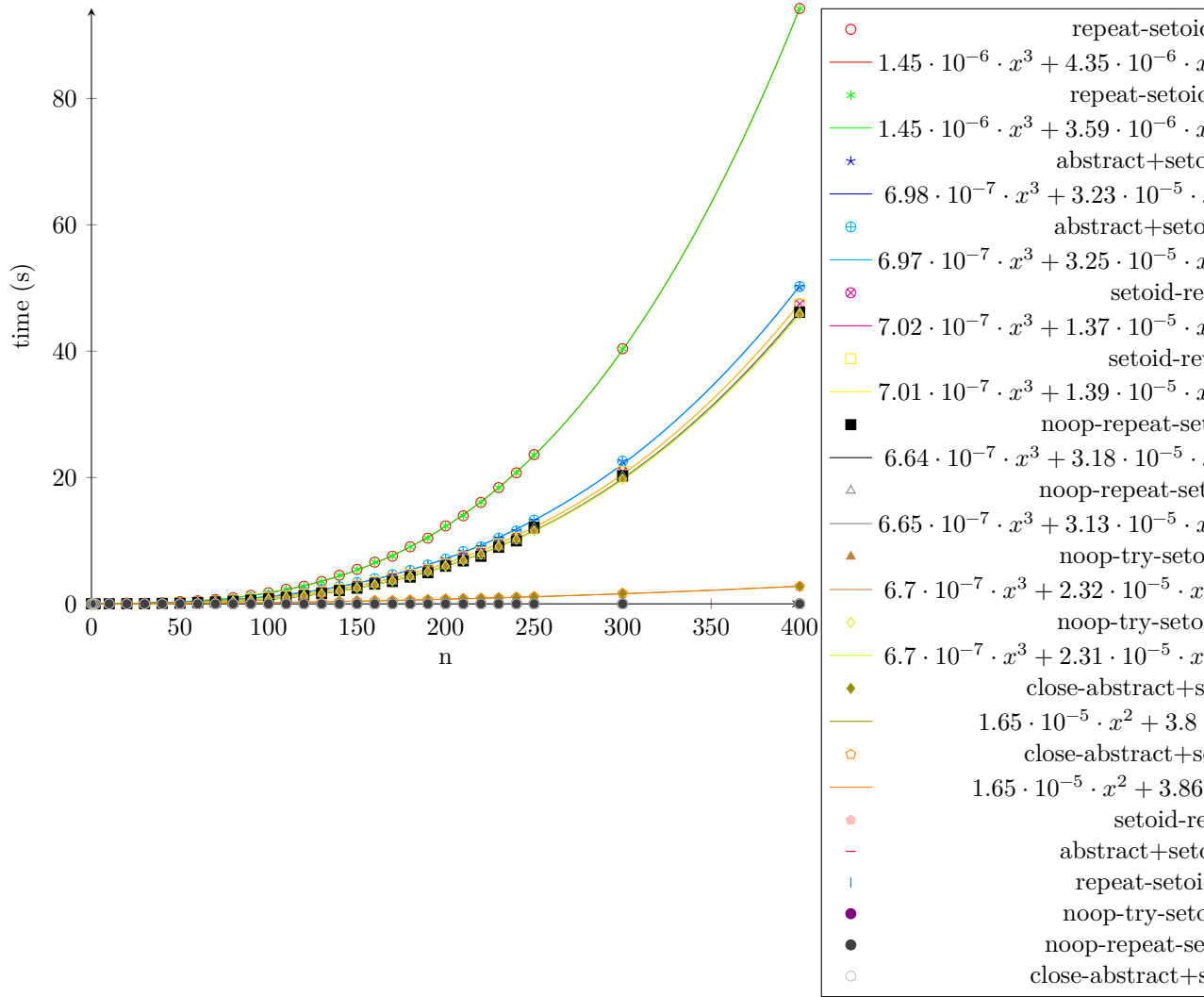
Axis labels: time (s), 0-univ-count

Figure 3: timing-repeat-setoid-rewrite-under-binders
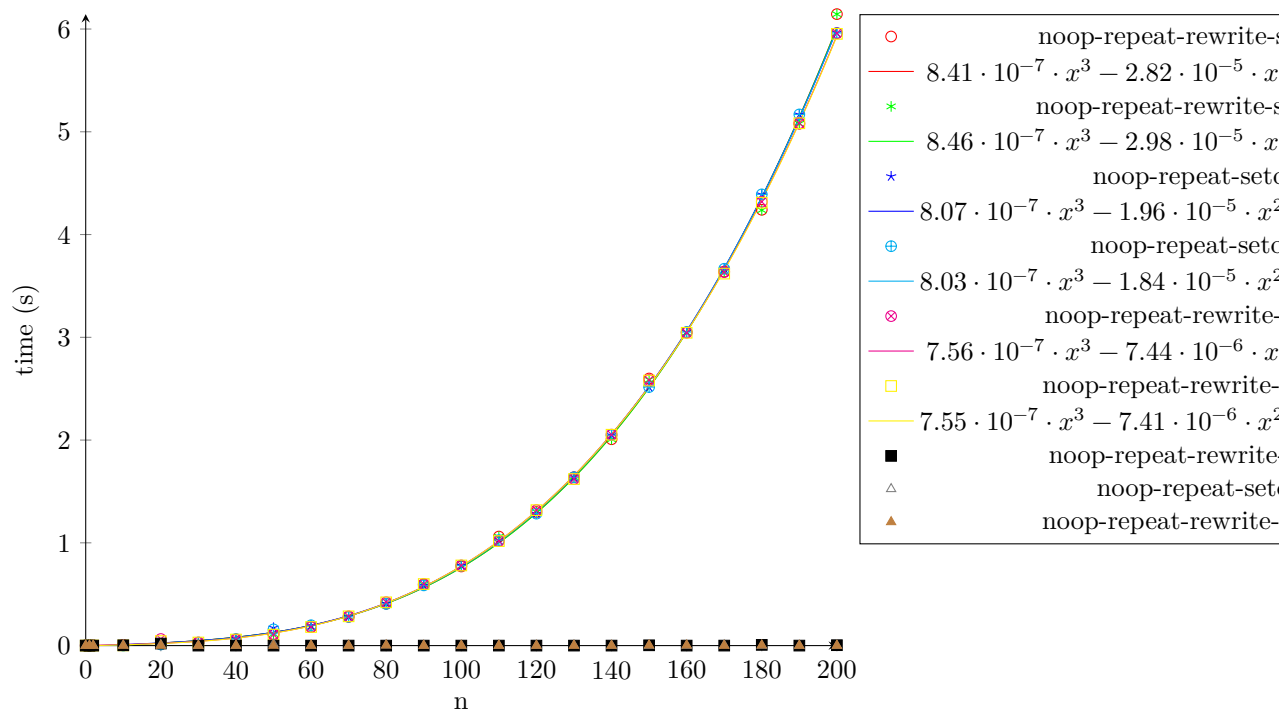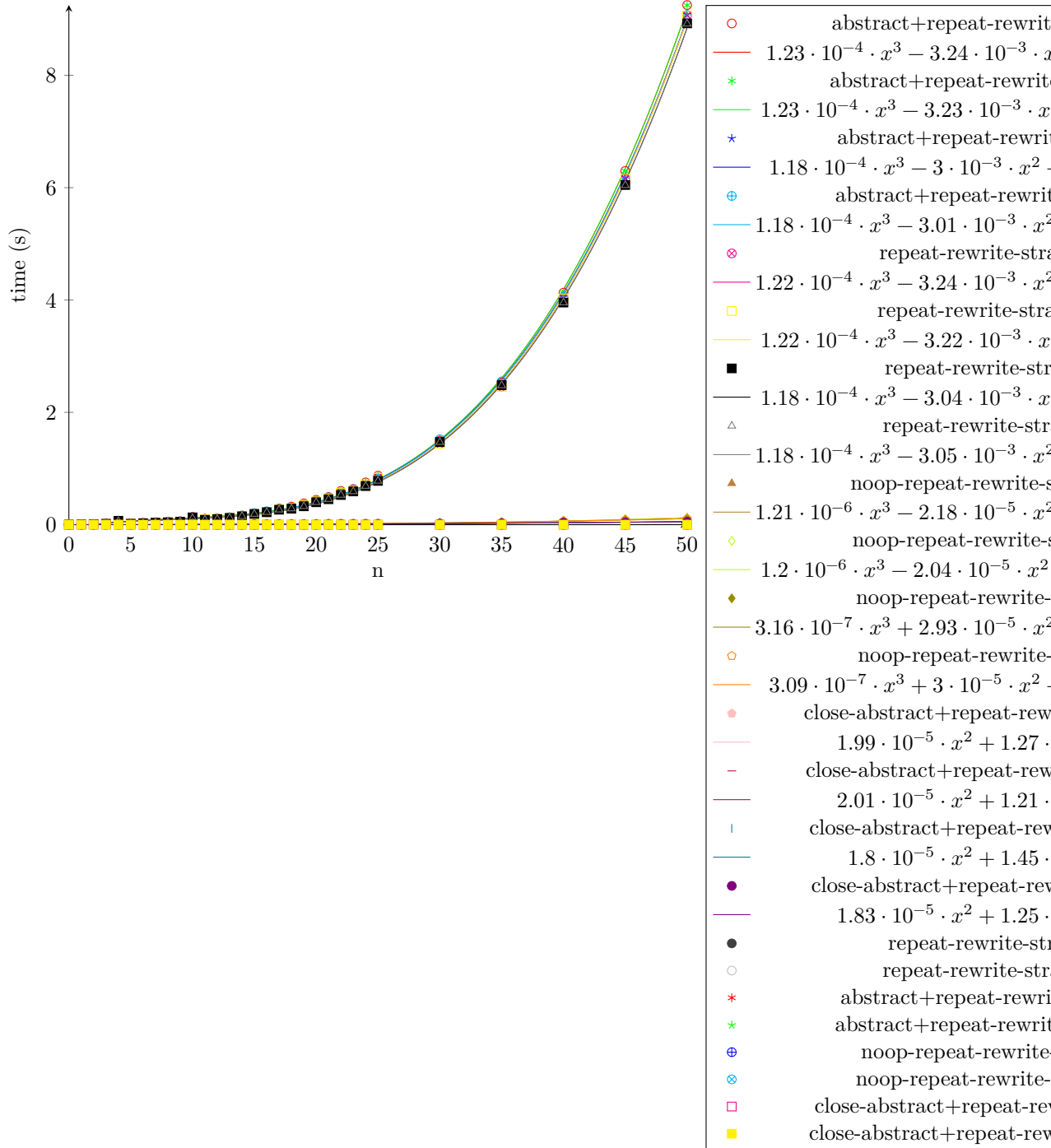
Figure 4: timing-repeat-setoid-rewrite-under-binders-noop

4

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

5

time (s)

3.5

3

2.5

2

1.5

1

0.5

0

0   50   100   150   200   250   300   350   400

n

abstract+rewrite!-

$2.31 \cdot 10^{-5} \cdot x^2 - 5.36 \cdot 10^{-4} \cdot$

abstract+rewrite!-u

$2.31 \cdot 10^{-5} \cdot x^2 - 5.35 \cdot 10^{-4} \cdot$

abstract+autorewrit

$2.33 \cdot 10^{-5} \cdot x^2 - 6.54 \cdot 10^{-4} \cdot$

abstract+autorewrit

$2.33 \cdot 10^{-5} \cdot x^2 - 6.47 \cdot 10^{-4} \cdot$

rewrite!-real

$1.51 \cdot 10^{-5} \cdot x^2 - 5.32 \cdot 10^{-4} \cdot$

rewrite!-user

$1.51 \cdot 10^{-5} \cdot x^2 - 5.39 \cdot 10^{-4} \cdot$

autorewrite-rea

$1.53 \cdot 10^{-5} \cdot x^2 - 6.57 \cdot 10^{-4} \cdot$

autorewrite-use

$1.52 \cdot 10^{-5} \cdot x^2 - 6.49 \cdot 10^{-4} \cdot$

close-abstract+autorew

$8.04 \cdot 10^{-6} \cdot x^2 - 1.46 \cdot 10^{-5} \cdot$

close-abstract+autorew

$8.05 \cdot 10^{-6} \cdot x^2 - 1.63 \cdot 10^{-5} \cdot$

close-abstract+rewrit

$8.01 \cdot 10^{-6} \cdot x^2 - 1.83 \cdot 10^{-5} \cdot$

close-abstract+rewrit

$8.04 \cdot 10^{-6} \cdot x^2 - 2.72 \cdot 10^{-5} \cdot$

rewrite?-noop-us

$1.98 \cdot 10^{-5} \cdot x - 7.3 \cdot$

rewrite?-noop-re

$1.98 \cdot 10^{-5} \cdot x - 7.16$

autorewrite-noop-u

$2 \cdot 10^{-5} \cdot x - 7.51 \cdot$

autorewrite-noop-

$2.01 \cdot 10^{-5} \cdot x - 7.47$

abstract+autorewrit

autorewrite-sys

rewrite!-sys

abstract+rewrite!-

rewrite?-noop-sy

close-abstract+rewrit

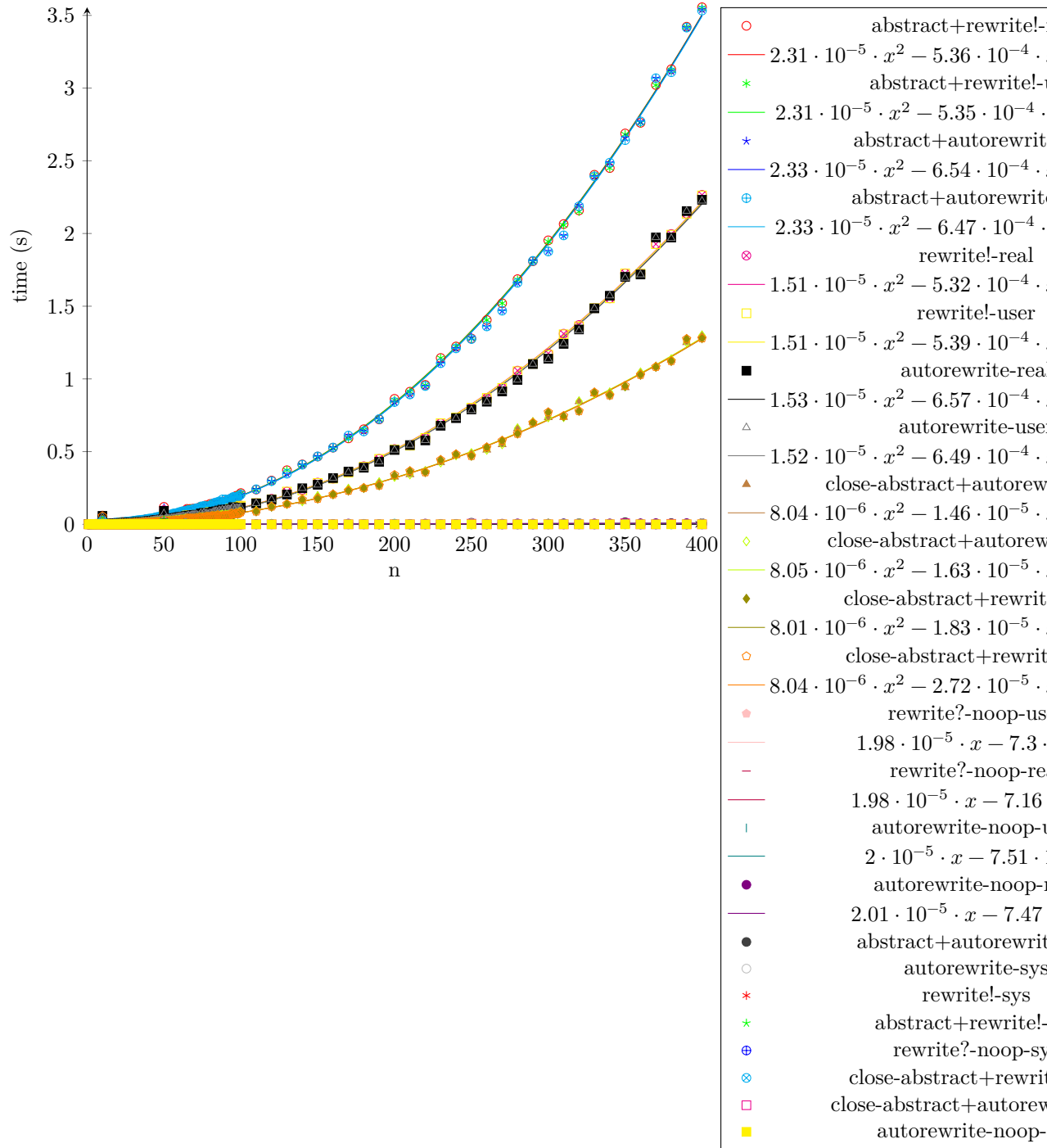close-abstract+autorew

autorewrite-noop-

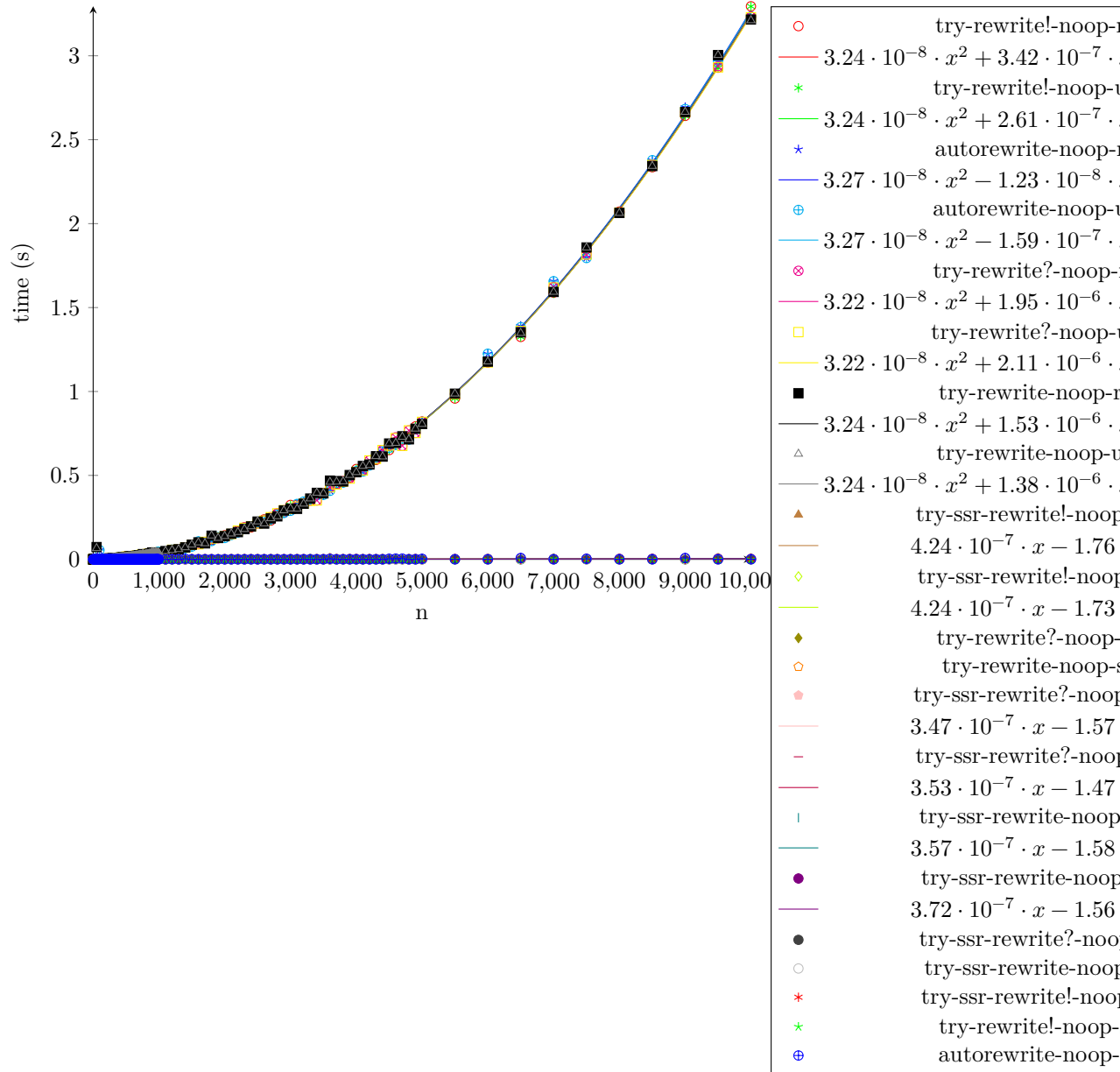Figure 6: timing-rewrite-repeated-app-autorewrite

6

Figure 7: timing-rewrite-repeated-app-autorewrite-noop
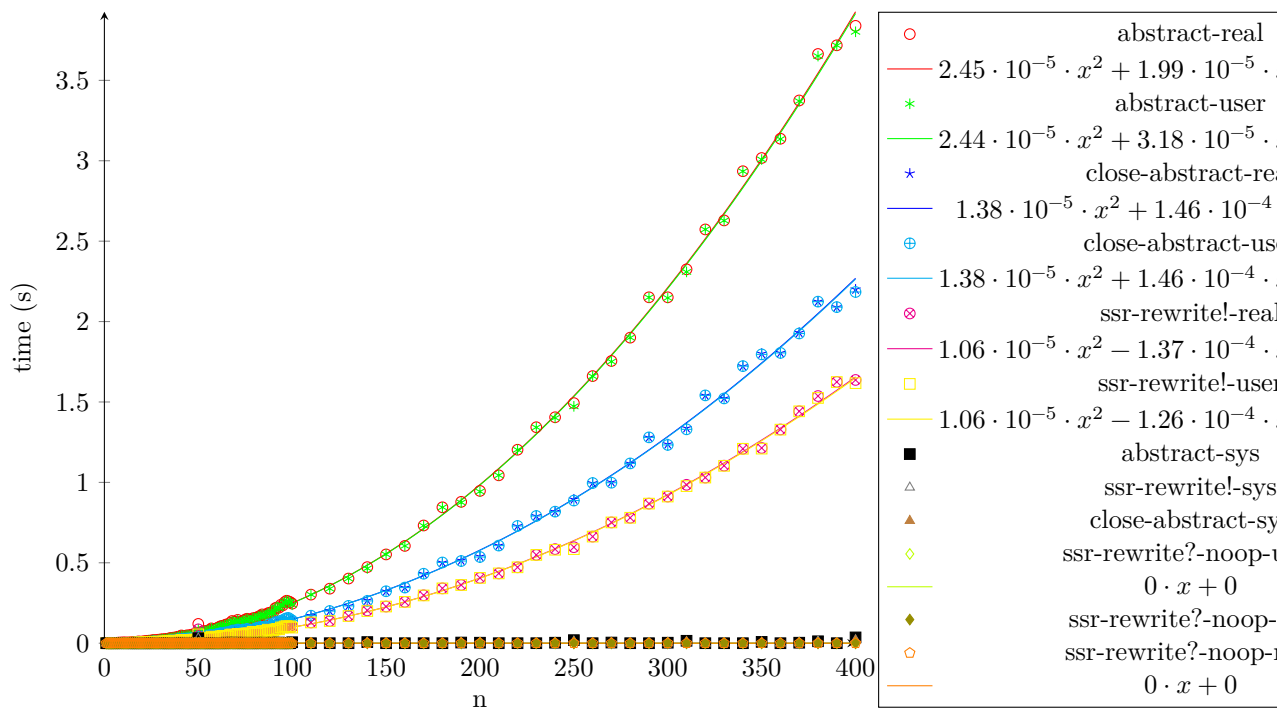
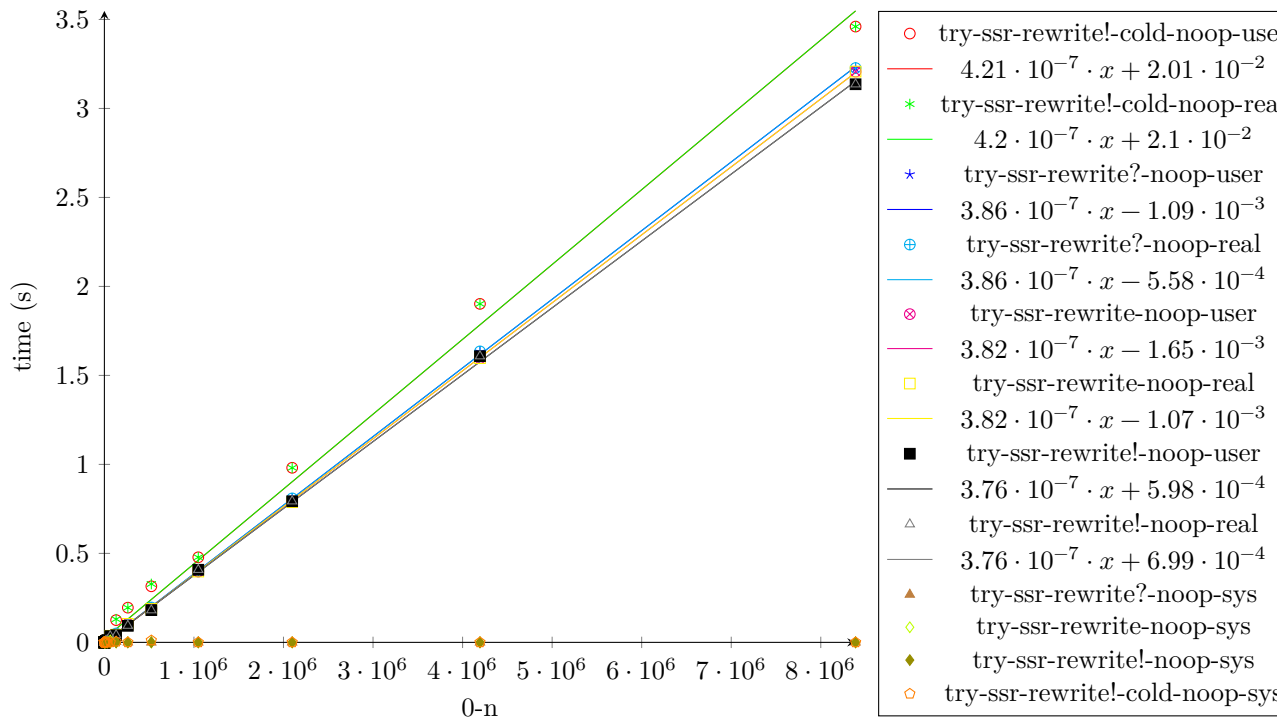Figure 8: timing-rewrite-repeated-app-ssrrewrite

8

Figure 9: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn 1
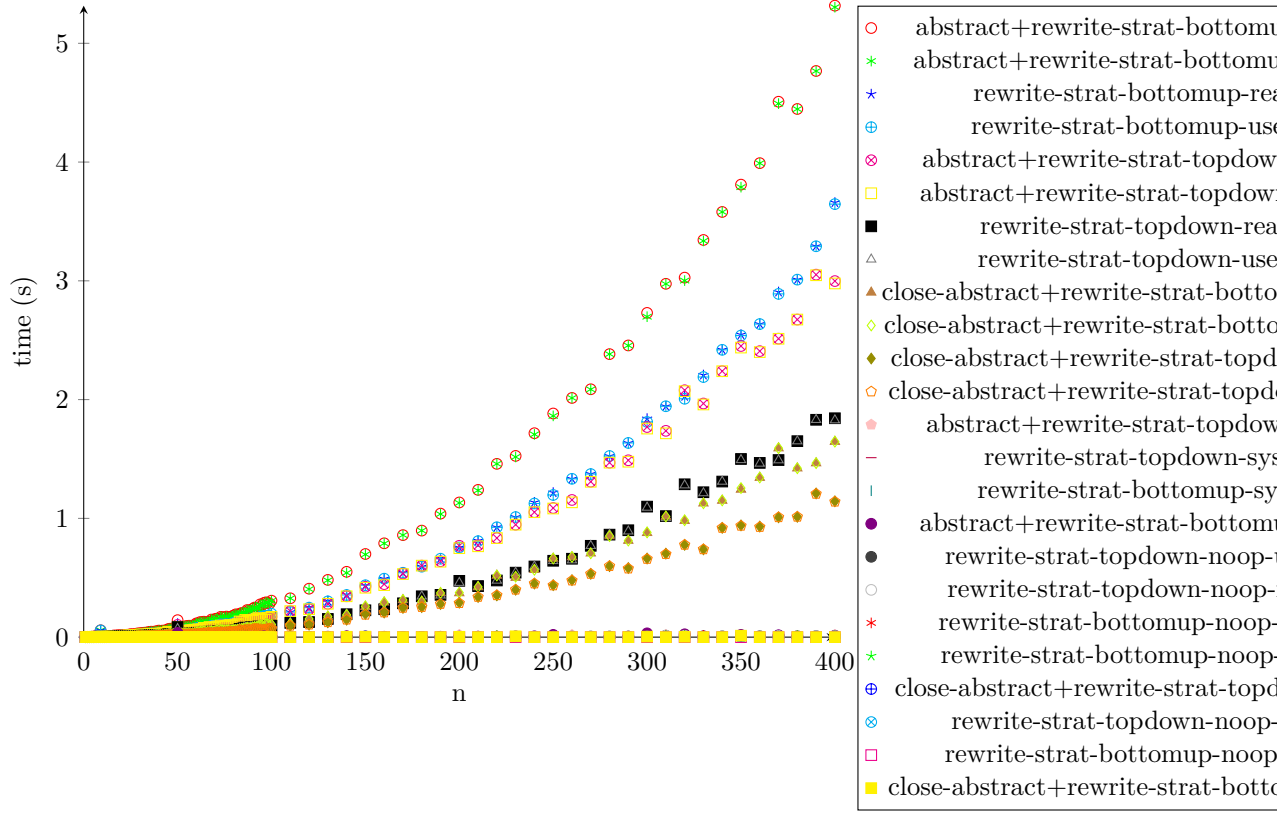
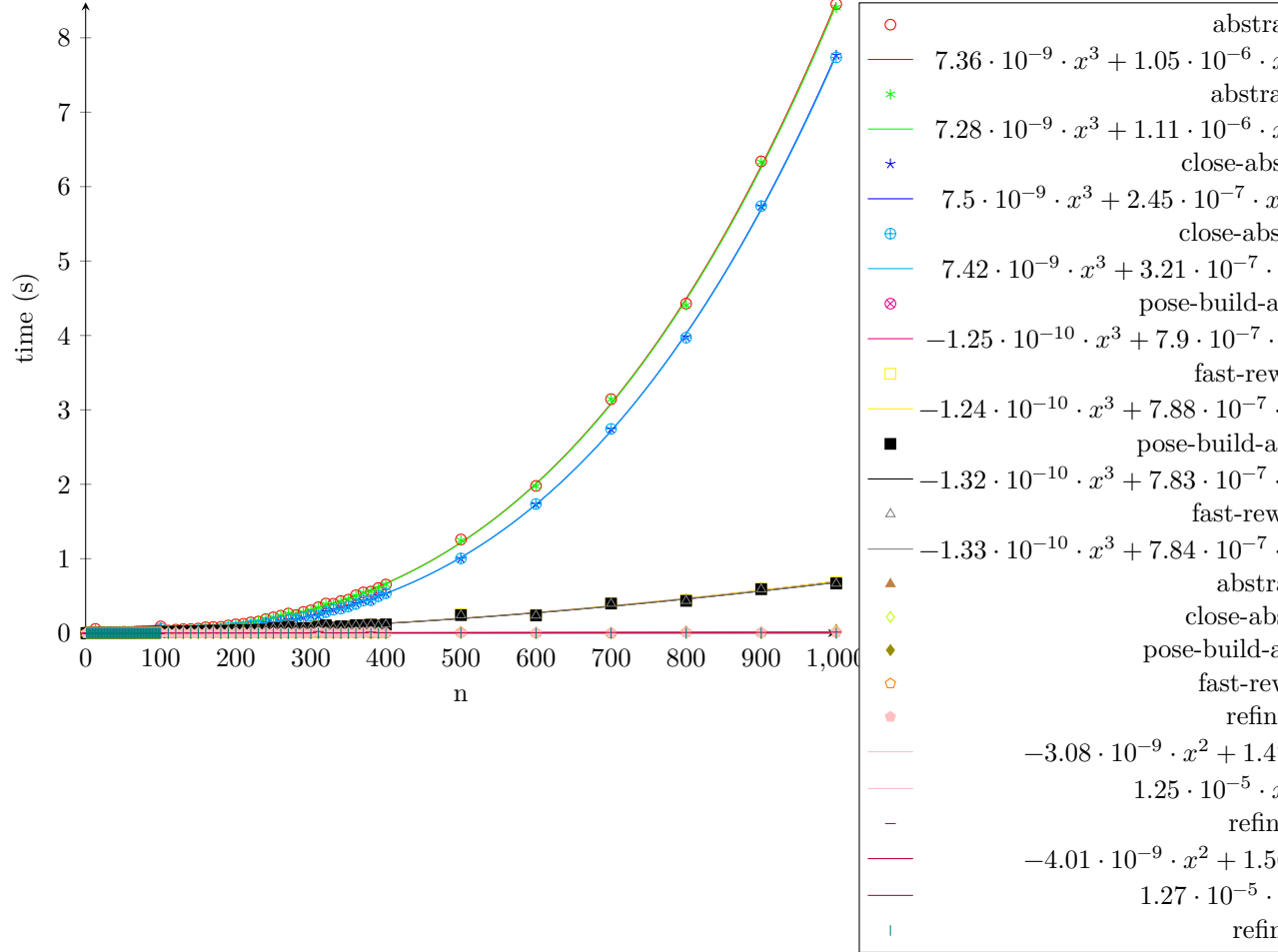Figure 10: timing-rewrite-repeated-app-rewrite-strat

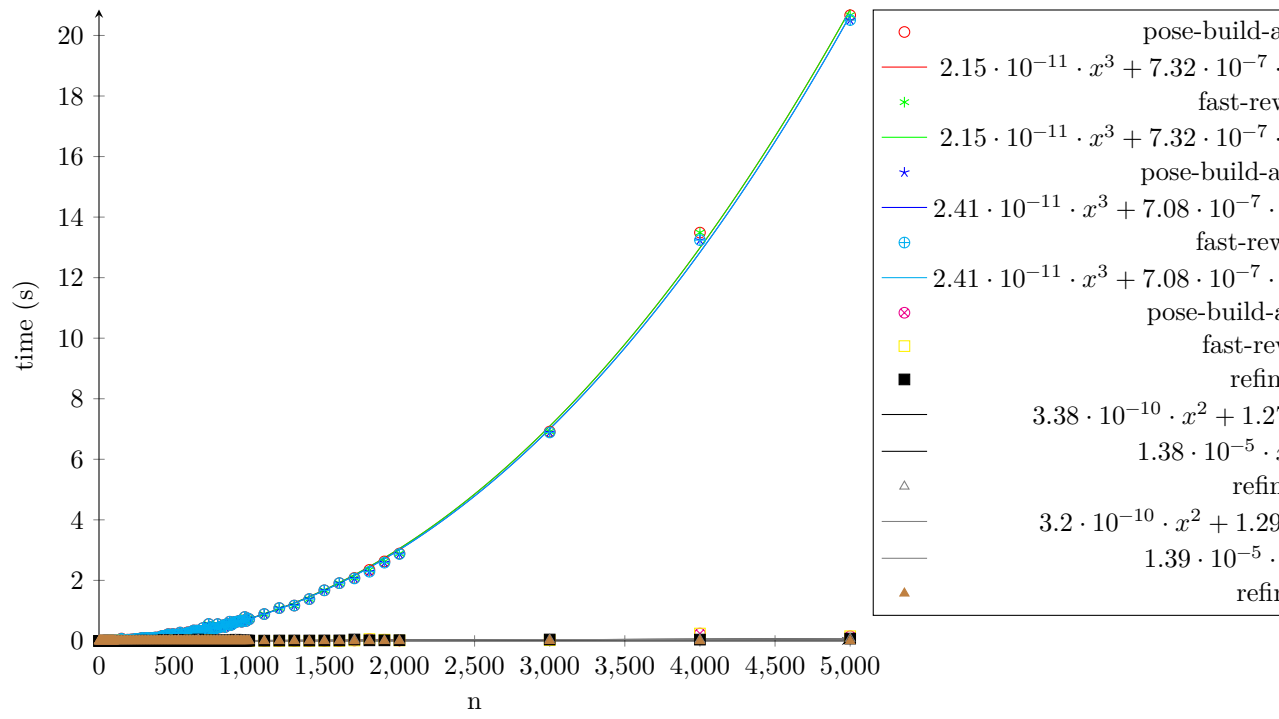Figure 11: timing-rewrite-repeated-app-fast-rewrite

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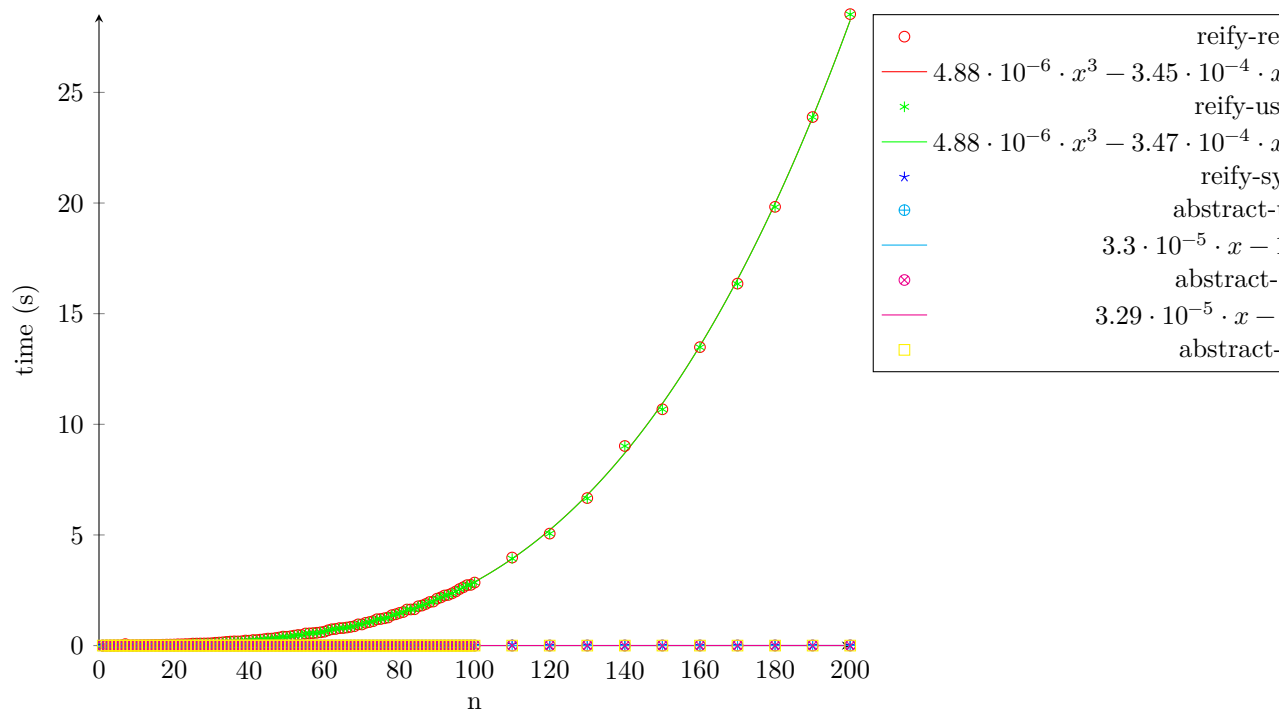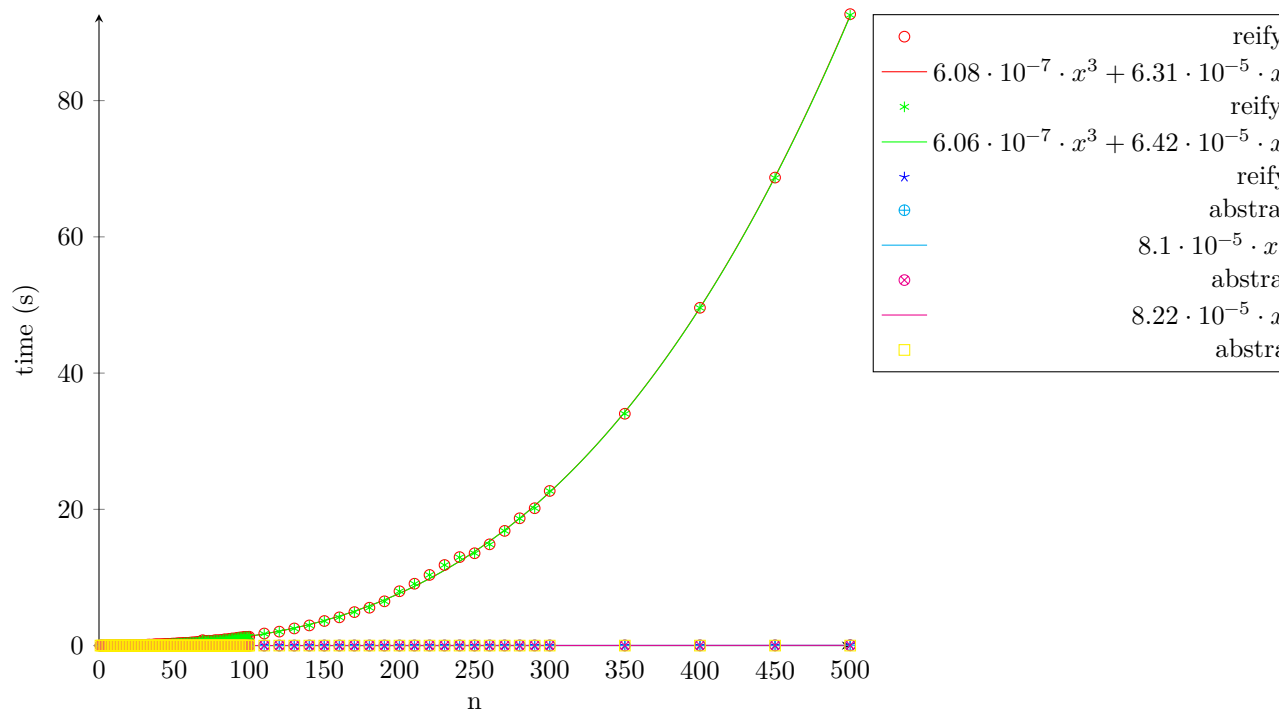
Figure 13: timing-typeclass-reification-let-in-HOAS

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