Figure 1: timing-pattern

1

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

The figure shows a plot with the following legend entries:

- abstract-real
- $1.32 \cdot 10^{-9} \cdot x^2 + 2.04 \cdot 10^{-4} \cdot$
- close-abstract-re...
- $1.32 \cdot 10^{-9} \cdot x^2 + 1.42 \cdot 10^{-4} \cdot$
- exact-real
- $6.14 \cdot 10^{-5} \cdot x - 2.06$

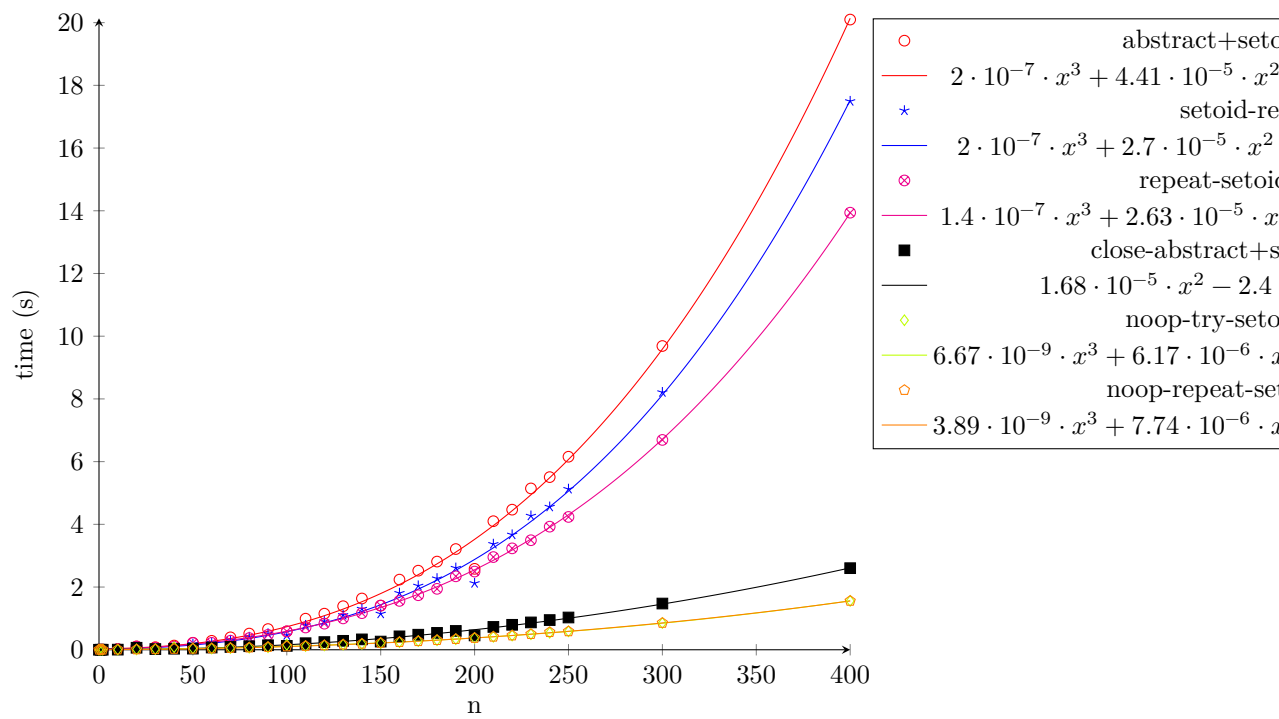The x-axis is labeled "0-univ-count" and the y-axis is labeled "time (s)".
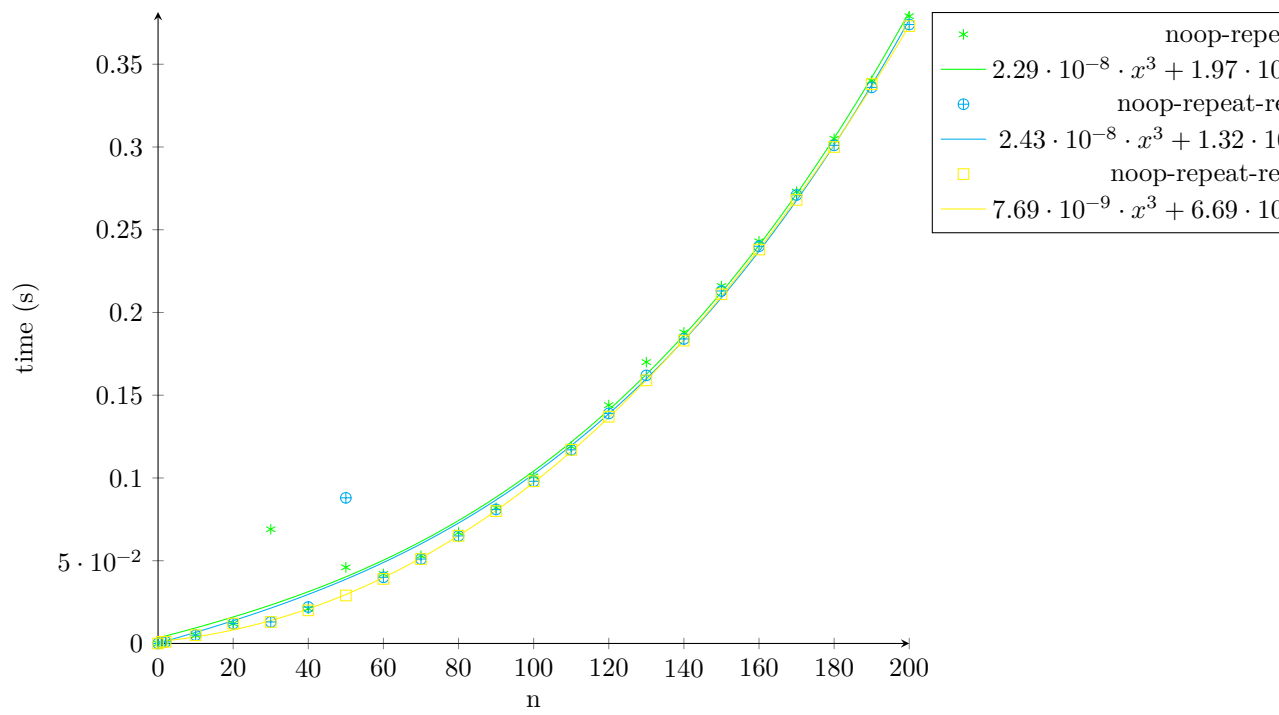
Figure 3: timing-repeat-setoid-rewrite-under-binders

3

Figure 4: timing-repeat-setoid-rewrite-under-binders-noop
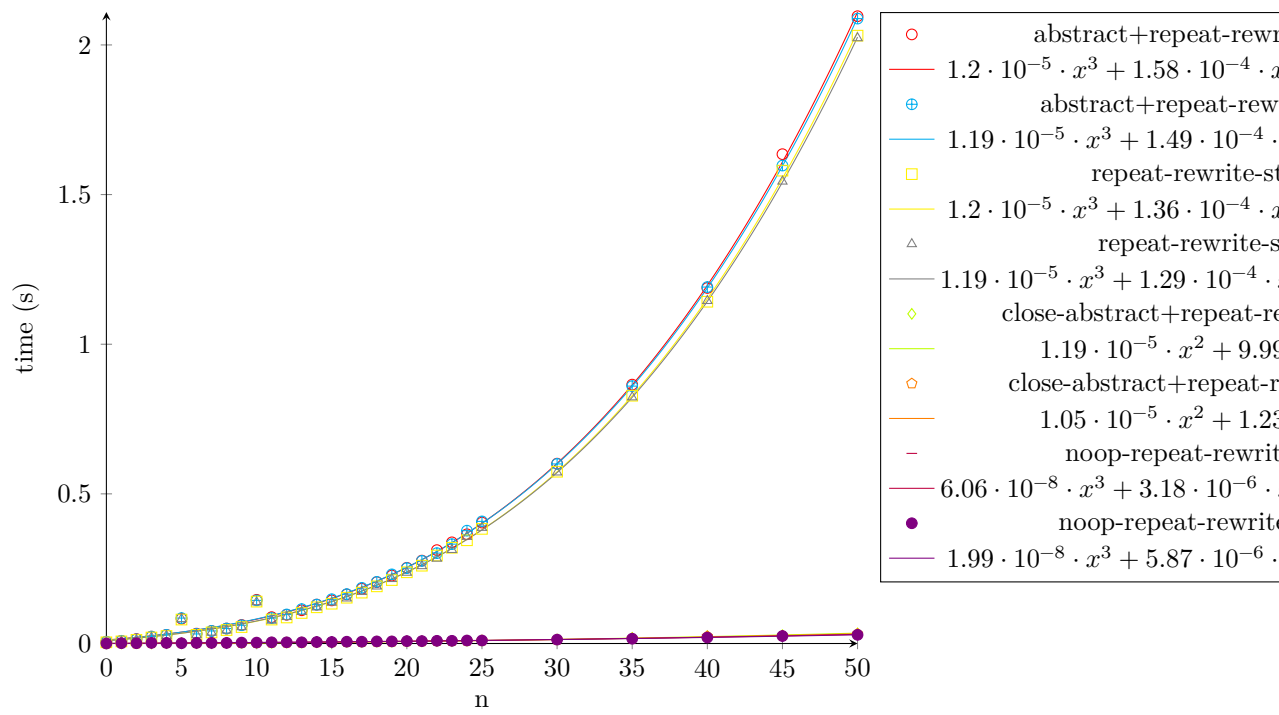
Figure 5: timing-rewrite-strat-under-binders
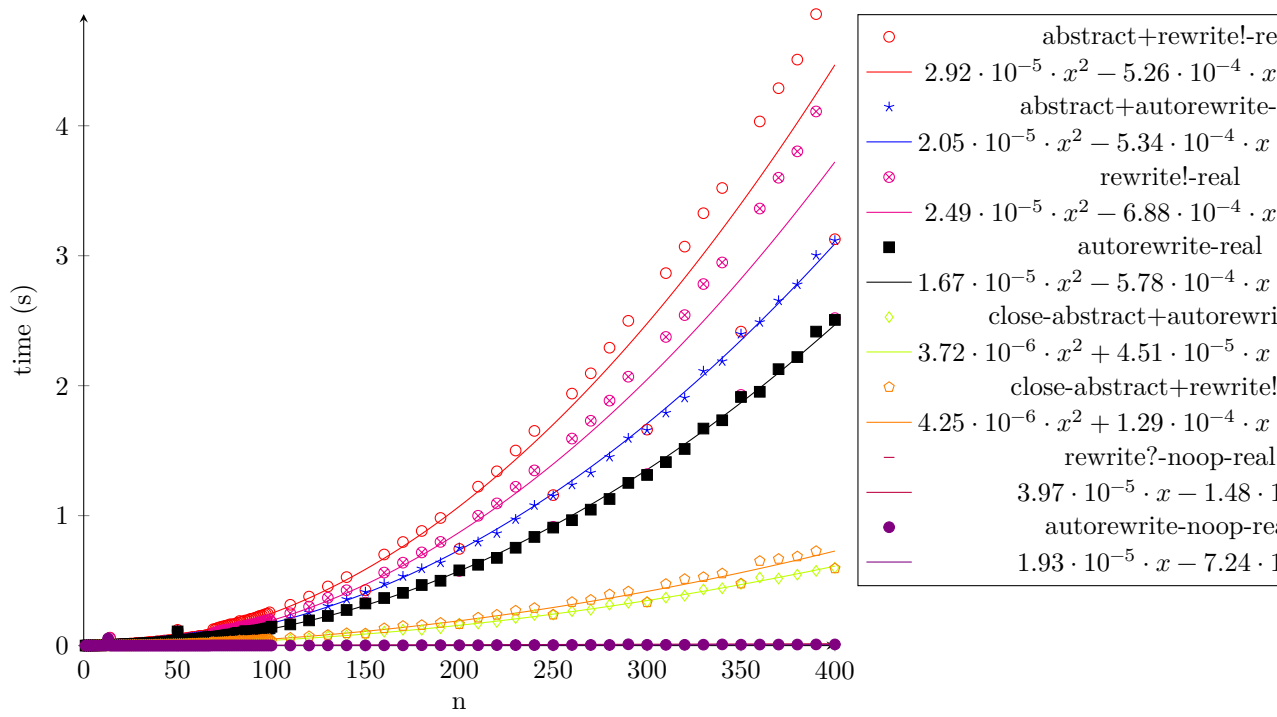
time (s)

n

abstract+repeat-rewr...
$1.2 \cdot 10^{-5} \cdot x^3 + 1.58 \cdot 10^{-4} \cdot x$
abstract+repeat-rew...
$1.19 \cdot 10^{-5} \cdot x^3 + 1.49 \cdot 10^{-4} \cdot$
repeat-rewrite-st...
$1.2 \cdot 10^{-5} \cdot x^3 + 1.36 \cdot 10^{-4} \cdot x$
repeat-rewrite-s...
$1.19 \cdot 10^{-5} \cdot x^3 + 1.29 \cdot 10^{-4} \cdot$
close-abstract+repeat-r...
$1.19 \cdot 10^{-5} \cdot x^2 + 9.99$
close-abstract+repeat-r...
$1.05 \cdot 10^{-5} \cdot x^2 + 1.23$
noop-repeat-rewrit...
$6.06 \cdot 10^{-8} \cdot x^3 + 3.18 \cdot 10^{-6} \cdot$
noop-repeat-rewrite...
$1.99 \cdot 10^{-8} \cdot x^3 + 5.87 \cdot 10^{-6} \cdot$

5

time (s)

n

abstract+rewrite!-re

$2.92 \cdot 10^{-5} \cdot x^2 - 5.26 \cdot 10^{-4} \cdot x$

abstract+autorewrite-

$2.05 \cdot 10^{-5} \cdot x^2 - 5.34 \cdot 10^{-4} \cdot x$

rewrite!-real

$2.49 \cdot 10^{-5} \cdot x^2 - 6.88 \cdot 10^{-4} \cdot x$

autorewrite-real

$1.67 \cdot 10^{-5} \cdot x^2 - 5.78 \cdot 10^{-4} \cdot x$

close-abstract+autorewri

$3.72 \cdot 10^{-6} \cdot x^2 + 4.51 \cdot 10^{-5} \cdot x$

close-abstract+rewrite!

$4.25 \cdot 10^{-6} \cdot x^2 + 1.29 \cdot 10^{-4} \cdot x$

rewrite?-noop-real

$3.97 \cdot 10^{-5} \cdot x - 1.48 \cdot 1$

autorewrite-noop-rea

$1.93 \cdot 10^{-5} \cdot x - 7.24 \cdot 1$

Figure 6: timing-rewrite-repeated-app-autorewrite
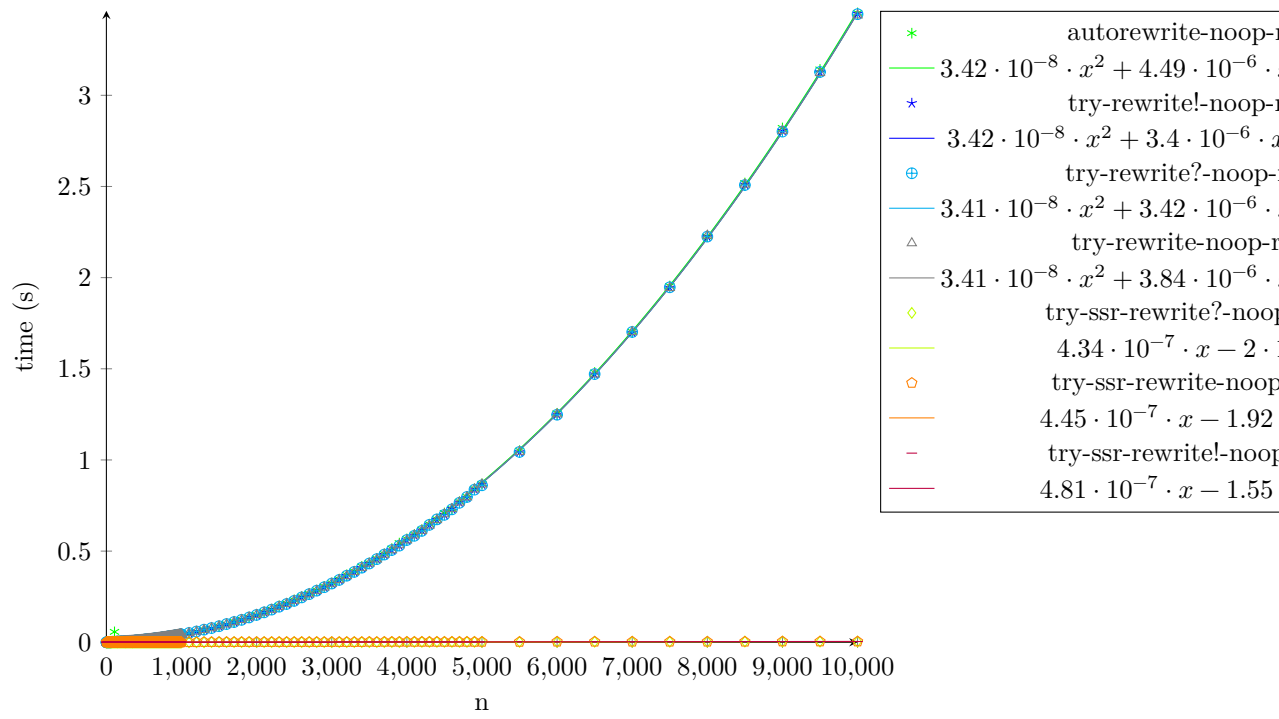
Figure 7: timing-rewrite-repeated-app-autorewrite-noop
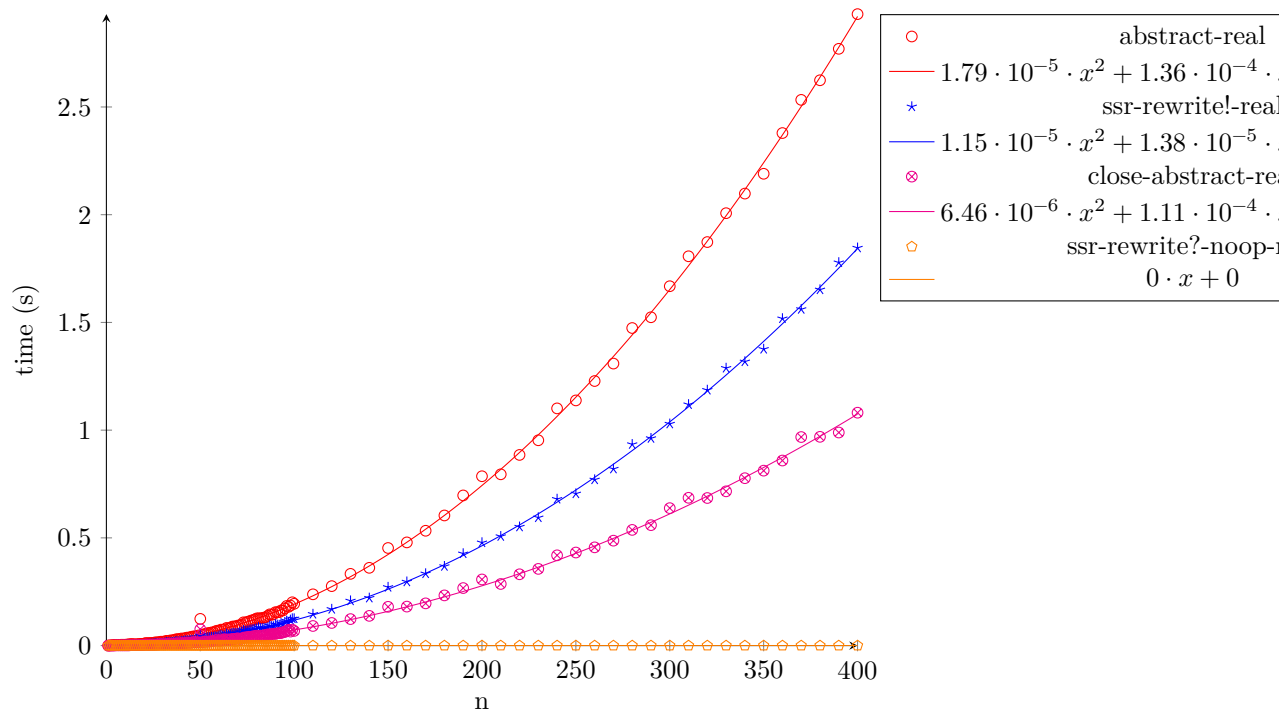
Figure 8: timing-rewrite-repeated-app-ssrrewrite
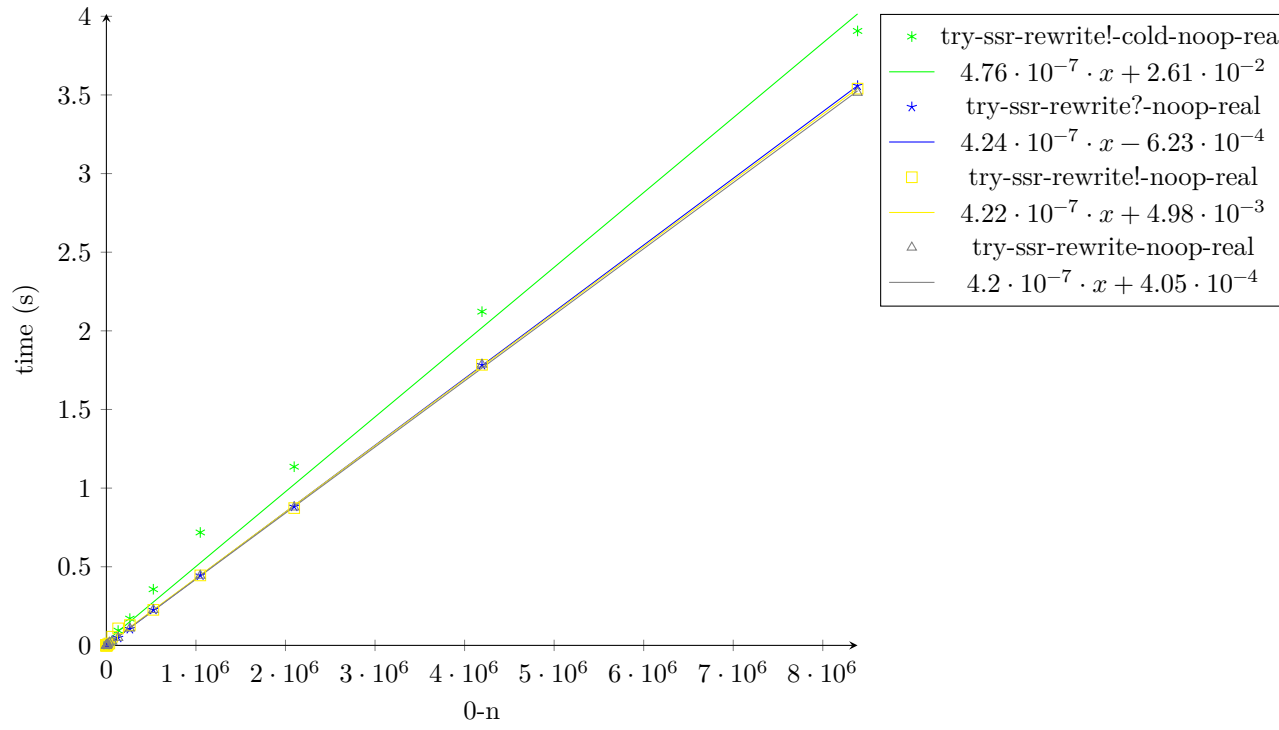
Figure 9: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn   1
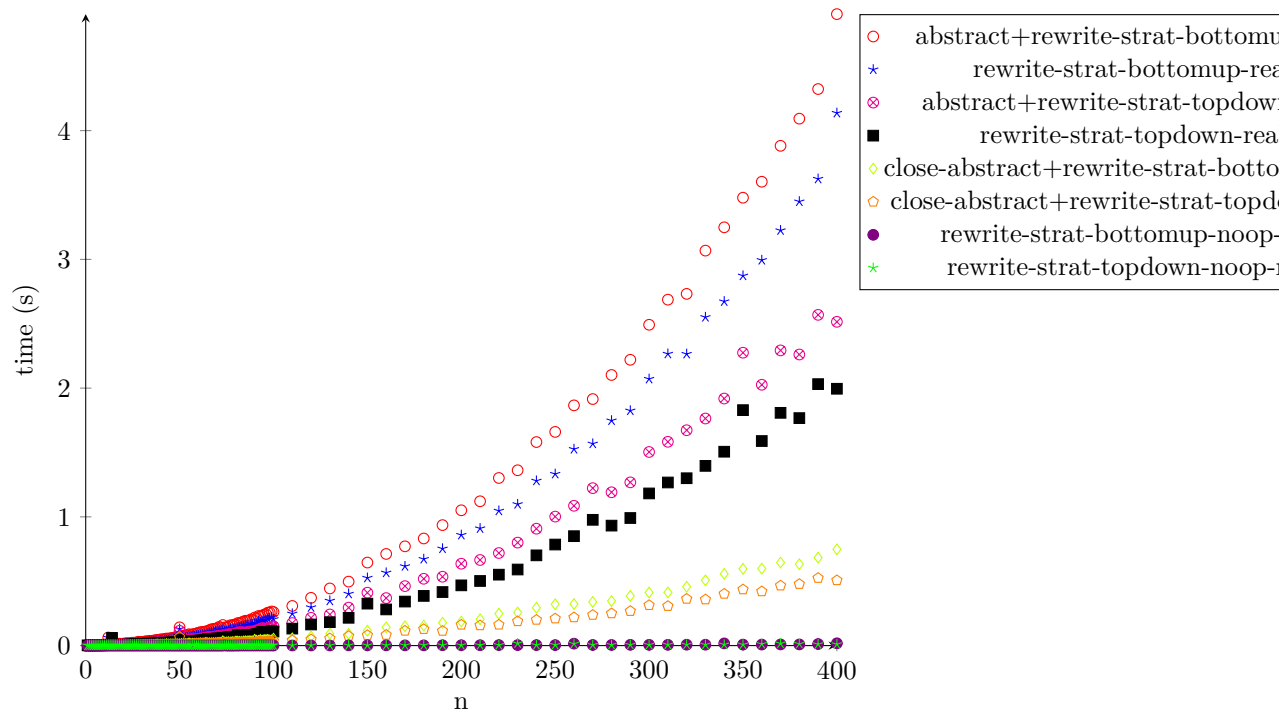
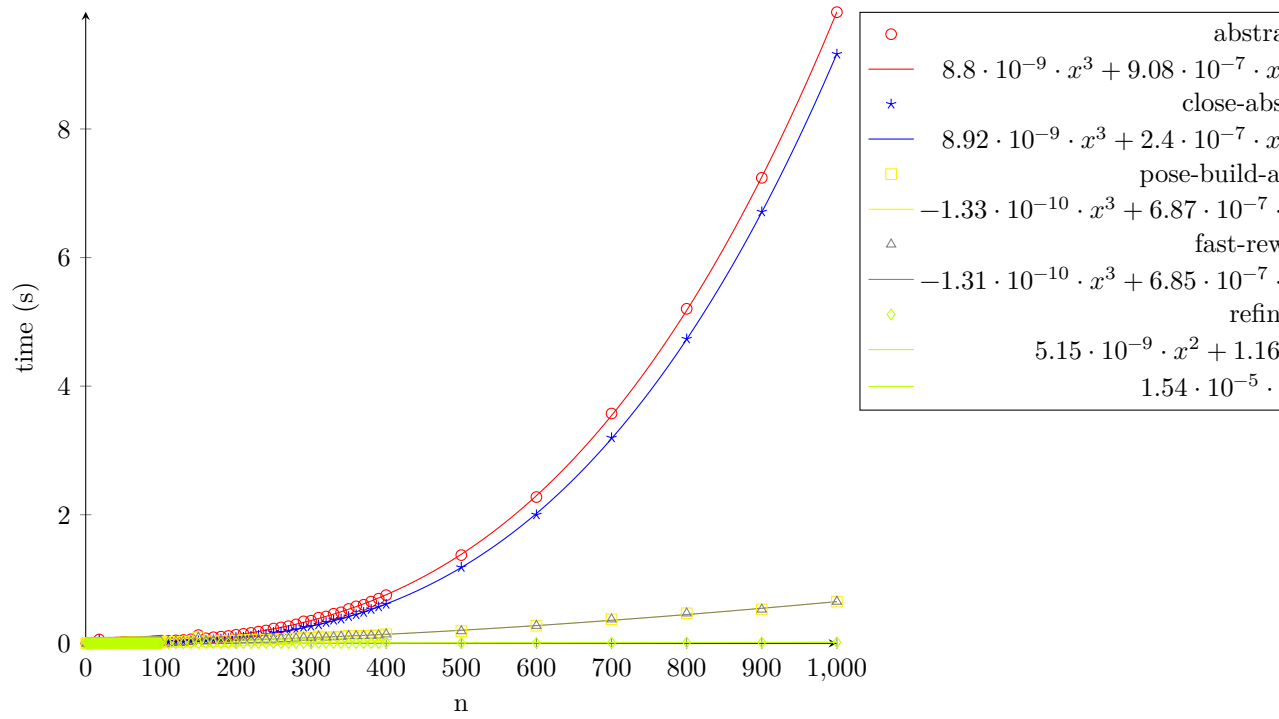Figure 10: timing-rewrite-repeated-app-rewrite-strat
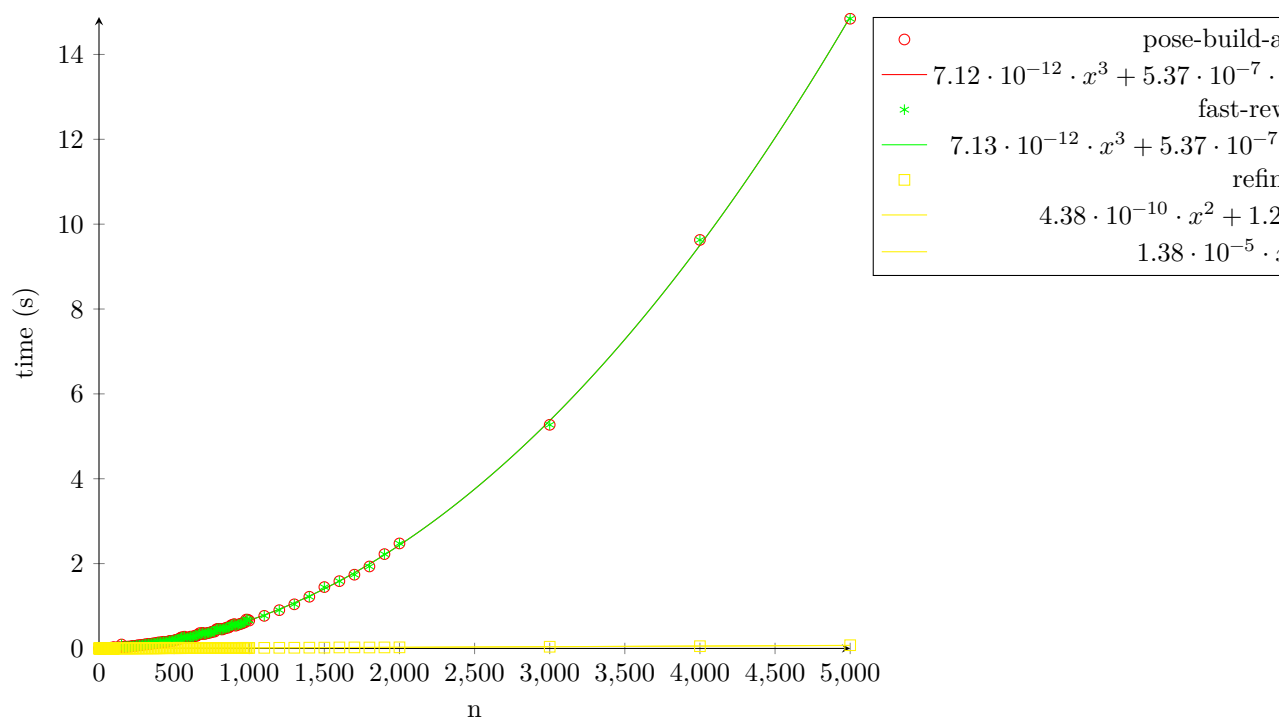
Figure 11: timing-rewrite-repeated-app-fast-rewrite

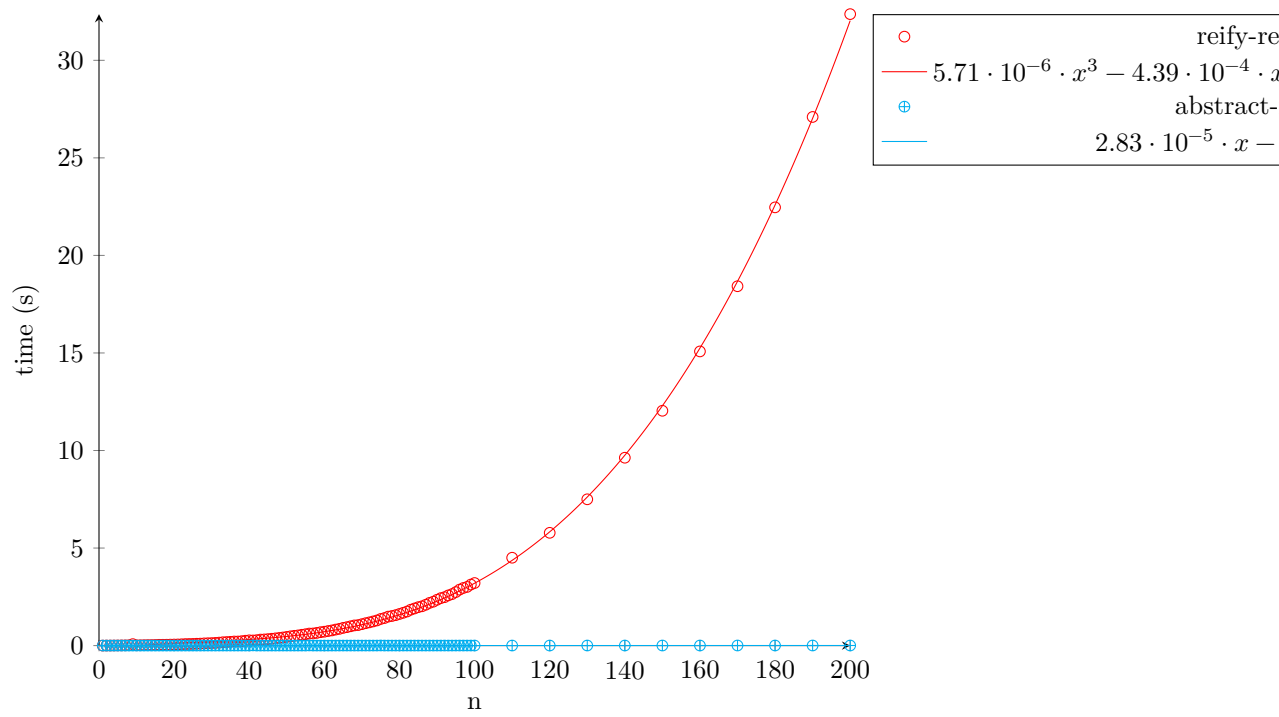Figure 12: timing-rewrite-repeated-app-fast-rewrite-no-abstract

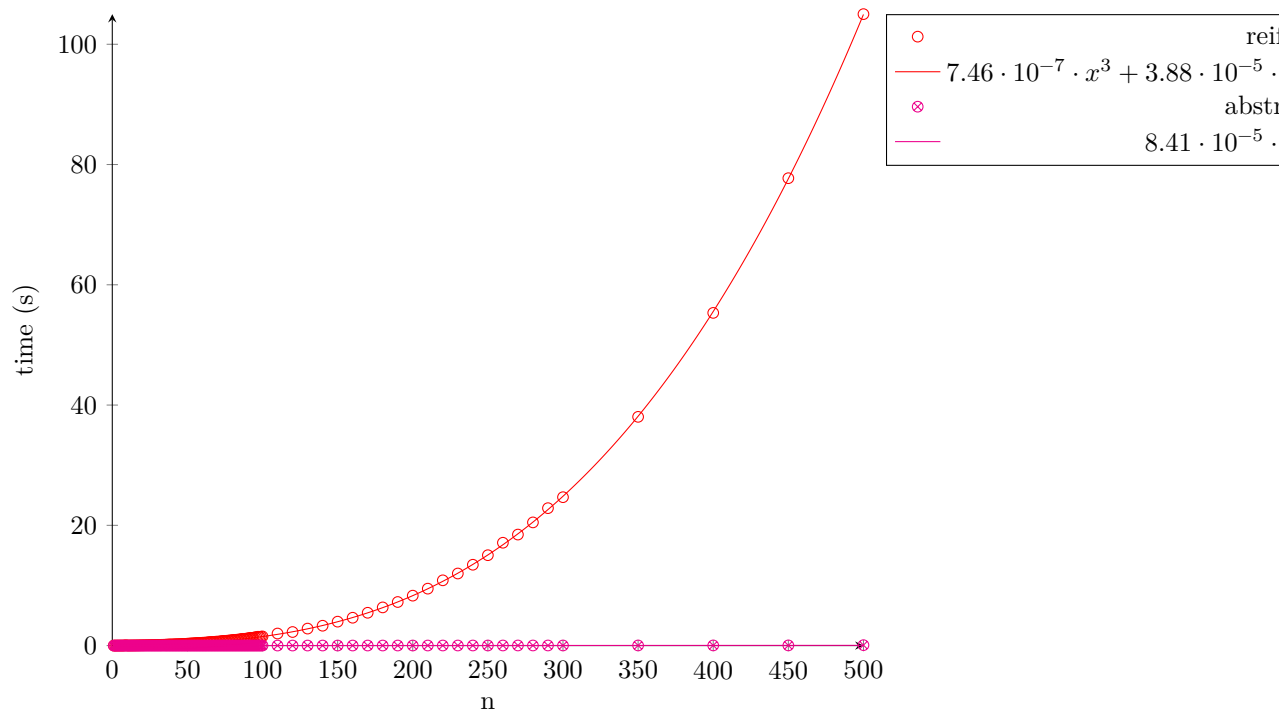Figure 13: timing-typeclass-reification-let-in-HOAS

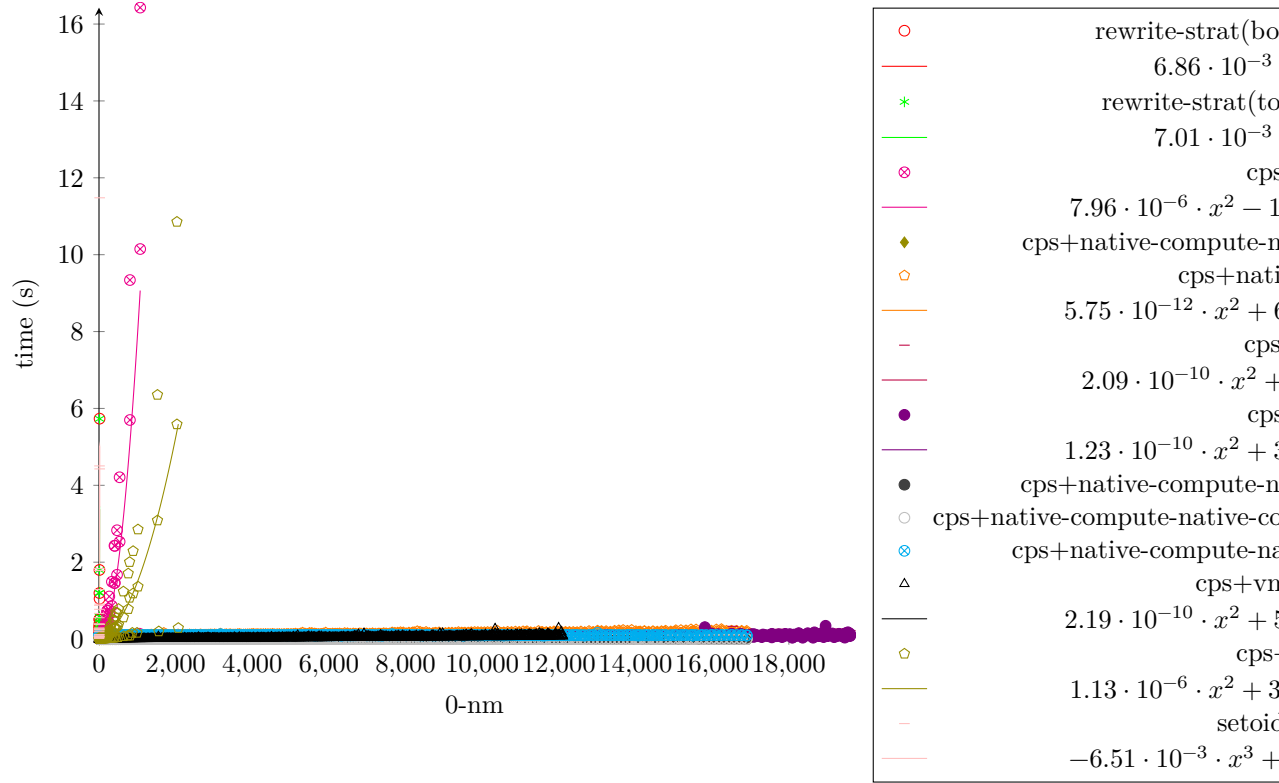Figure 14: timing-typeclass-reification-let-in-PHOAS

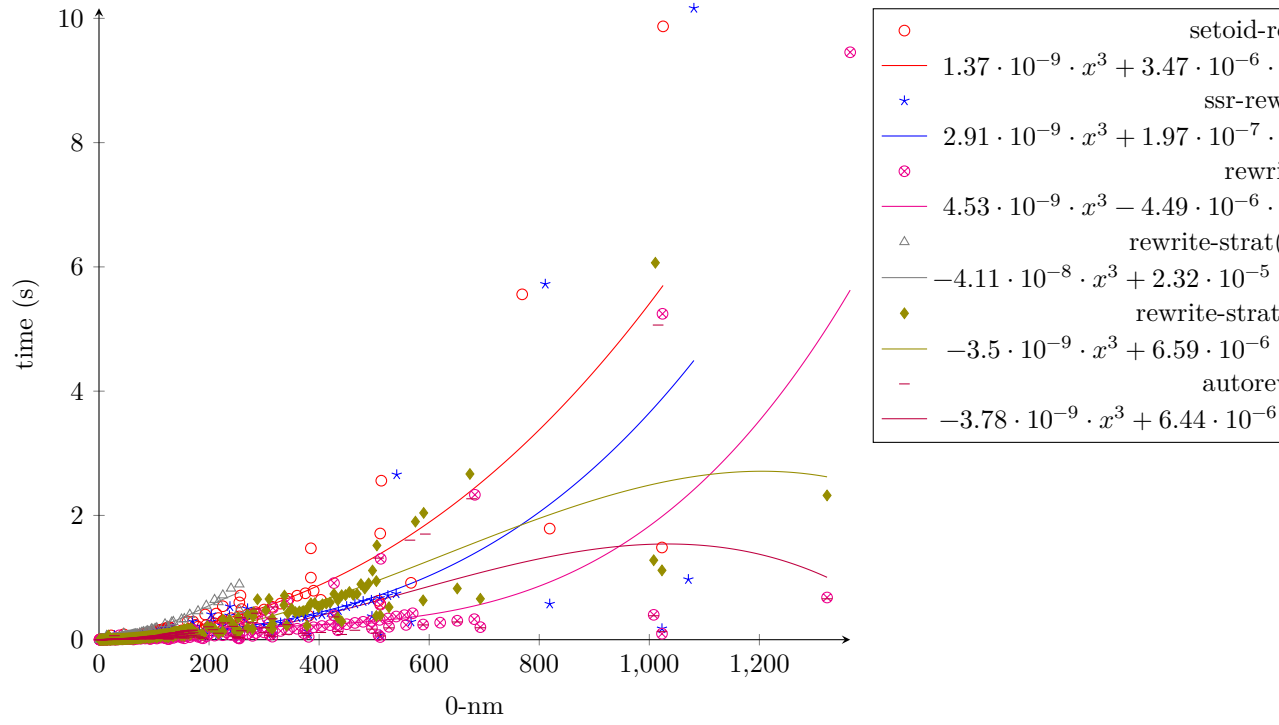Figure 15: timing-rewrite-lift-lets-map param-1-n 1, param-2-m 1

Figure 16: timing-rewrite-plus-0-tree param-1-n 0, param-2-m 1, param-3-input-size 5, param-4-output-size 3, param-5-num-rewrites 1
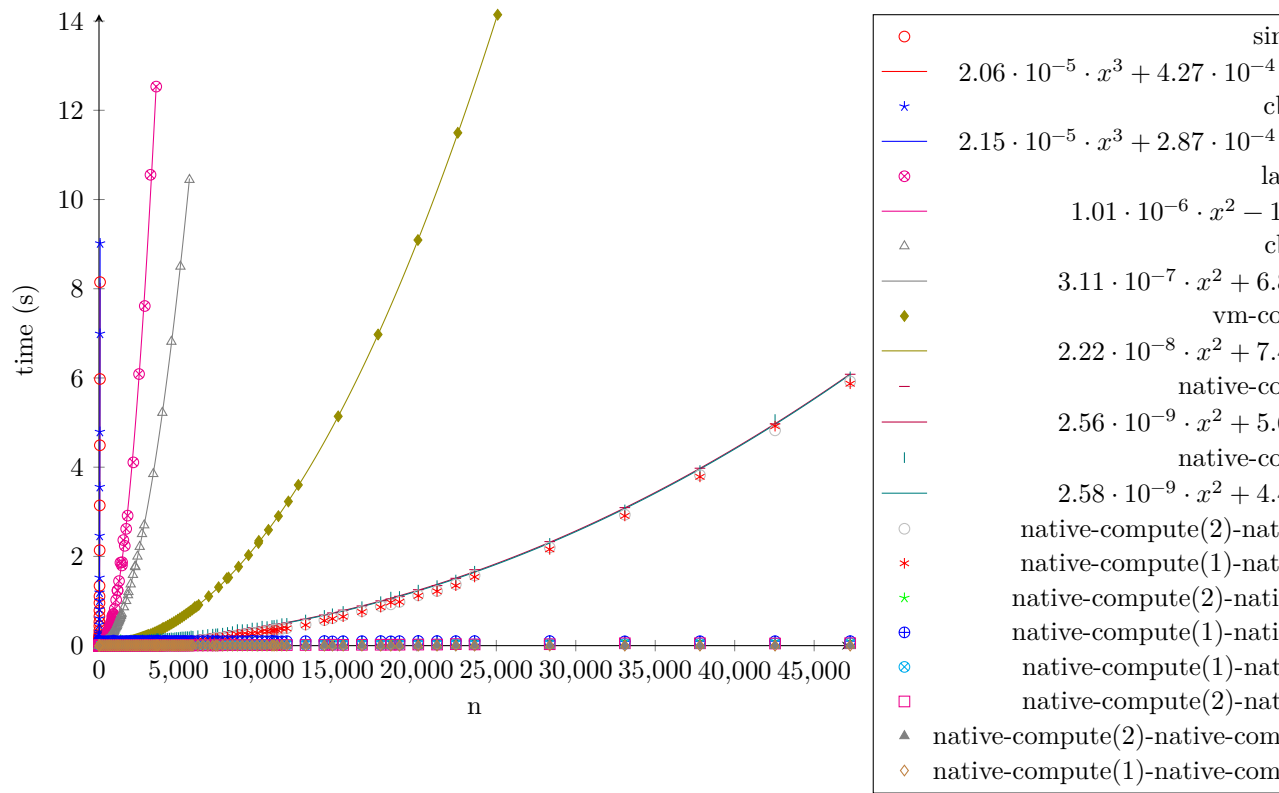
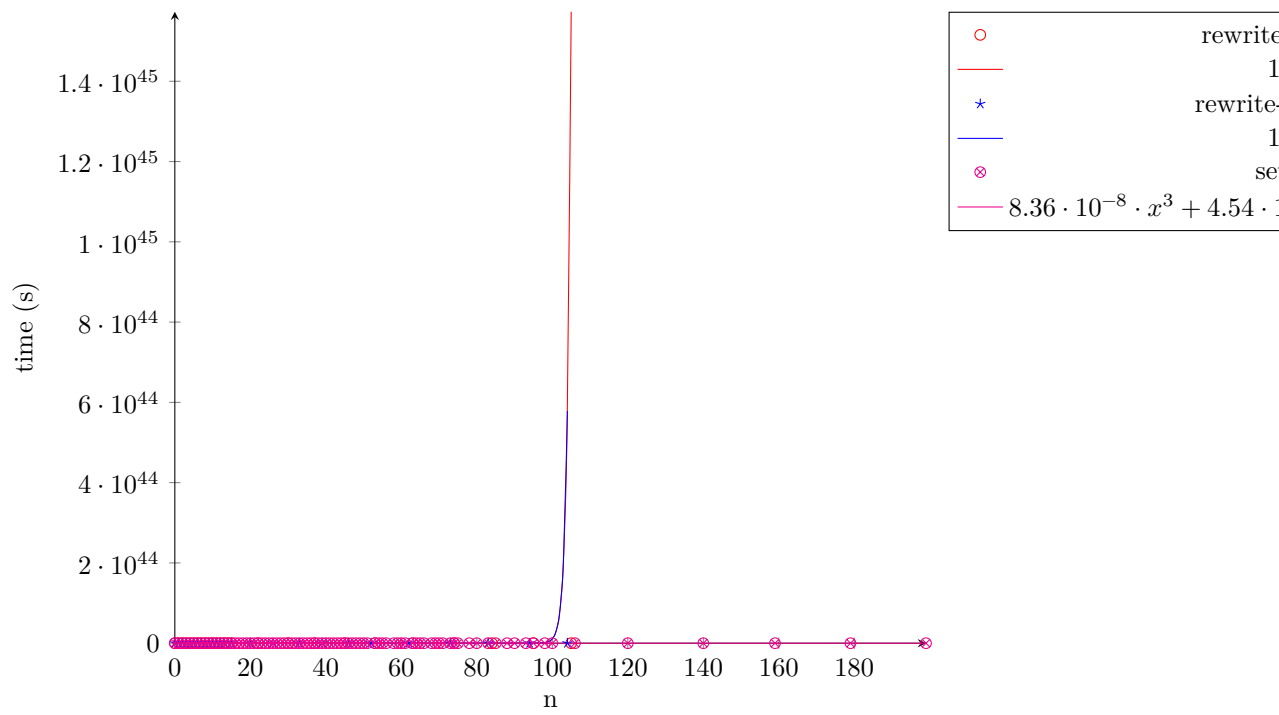16

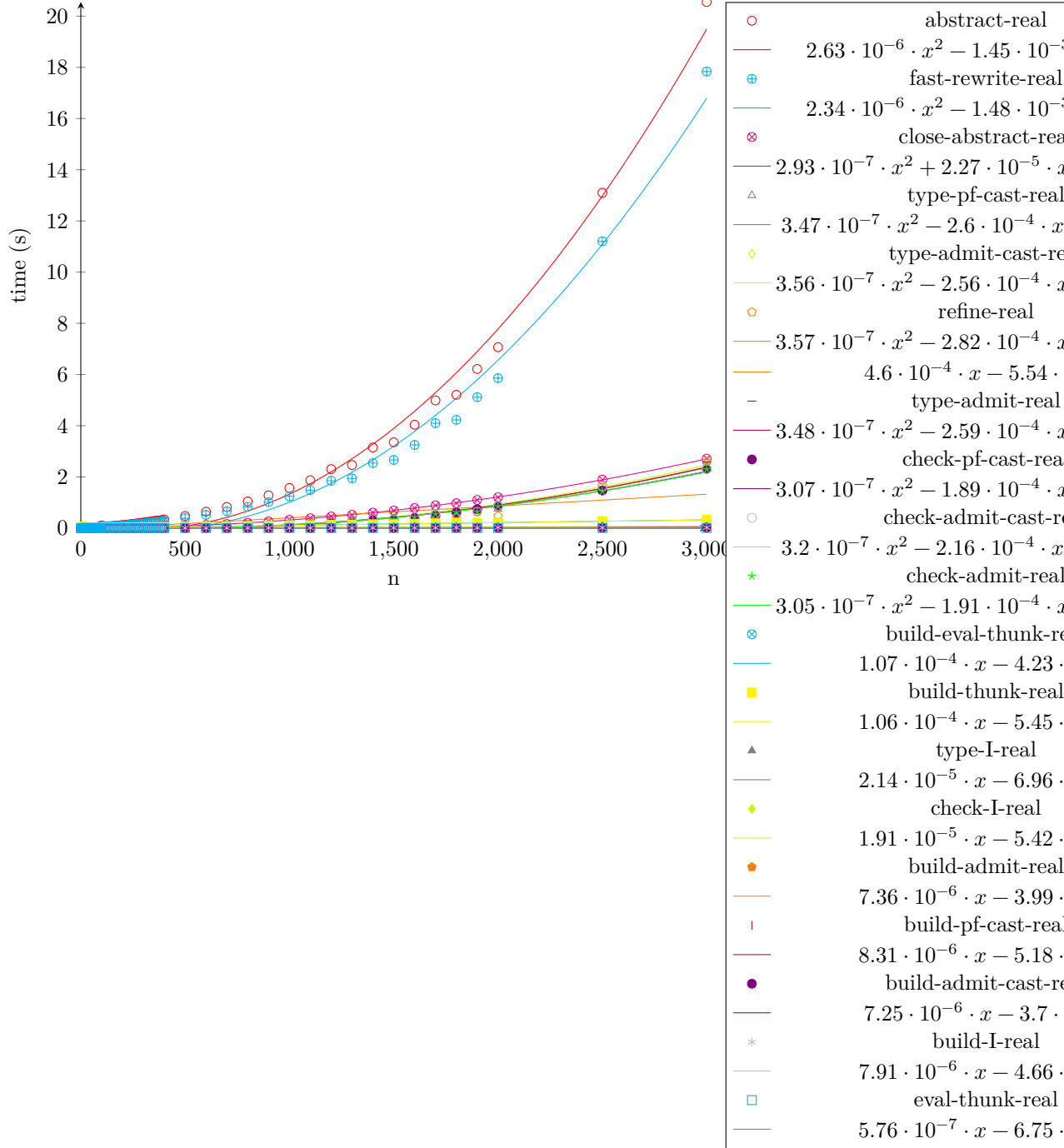Figure 17: timing-sieve-of-eratosthenes

Figure 18: timing-rewrite-under-lets-plus-0

Figure 19: timing-rewrite-repeated-app-fast-rewrite-ltac2