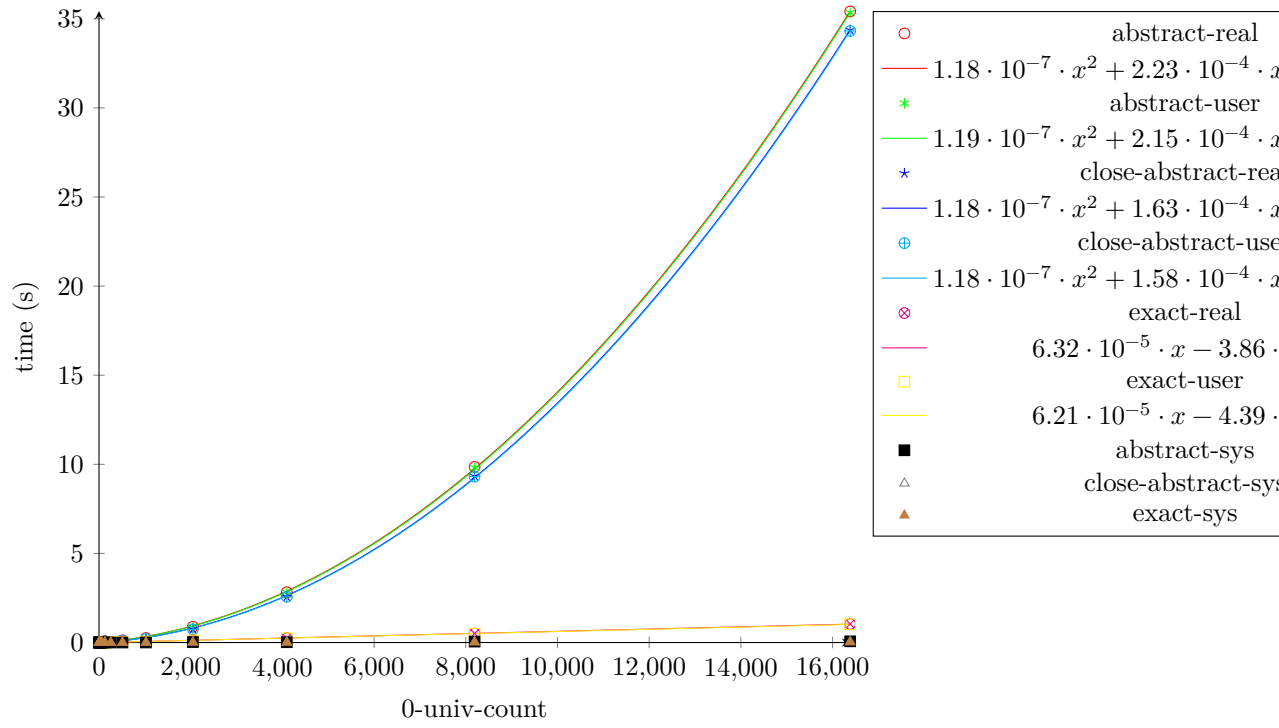Figure 1: timing-pattern

1

Figure 2: timing-n-polymorphic-universes param-1-n 0
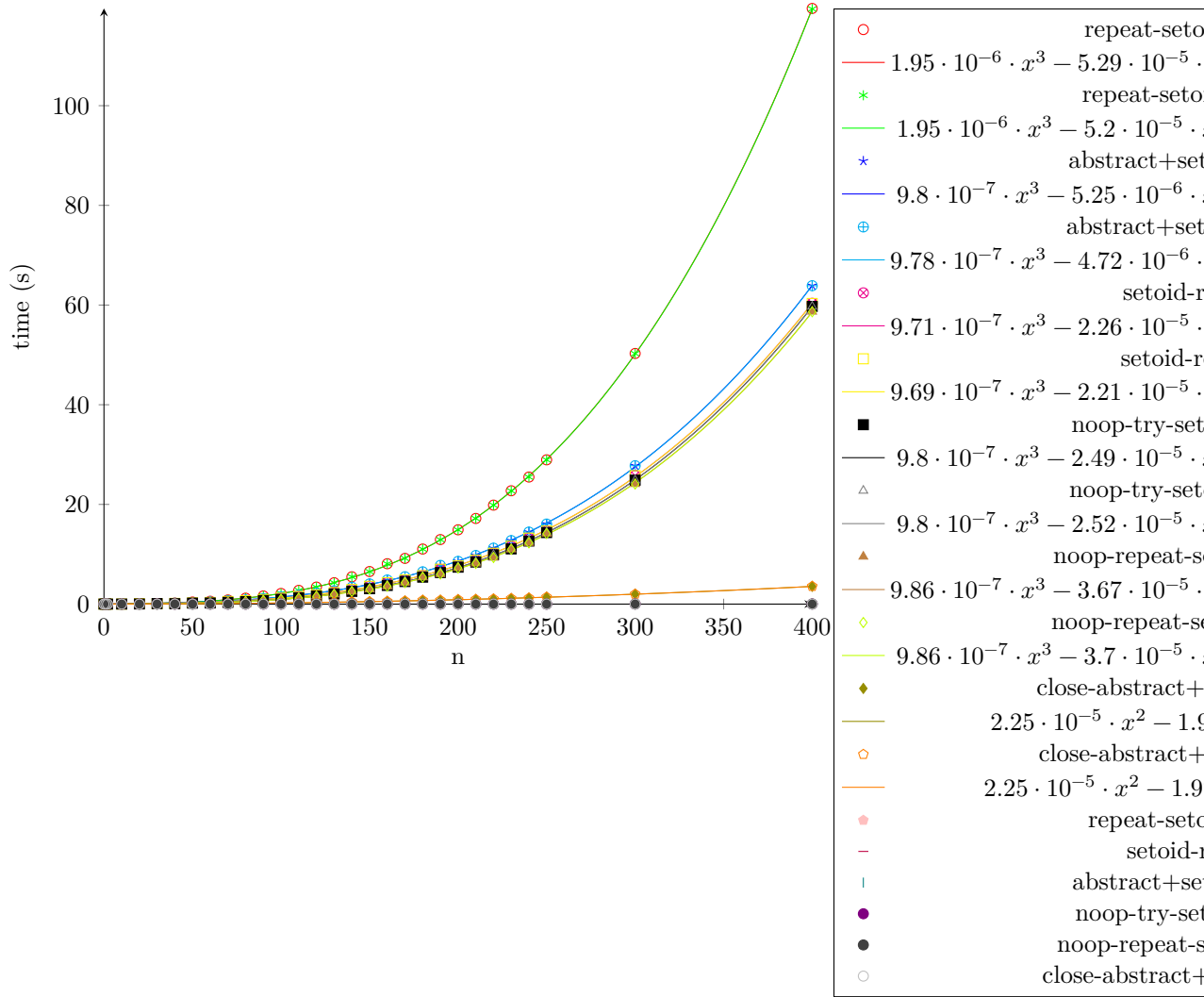
Figure 3: timing-repeat-setoid-rewrite-under-binders
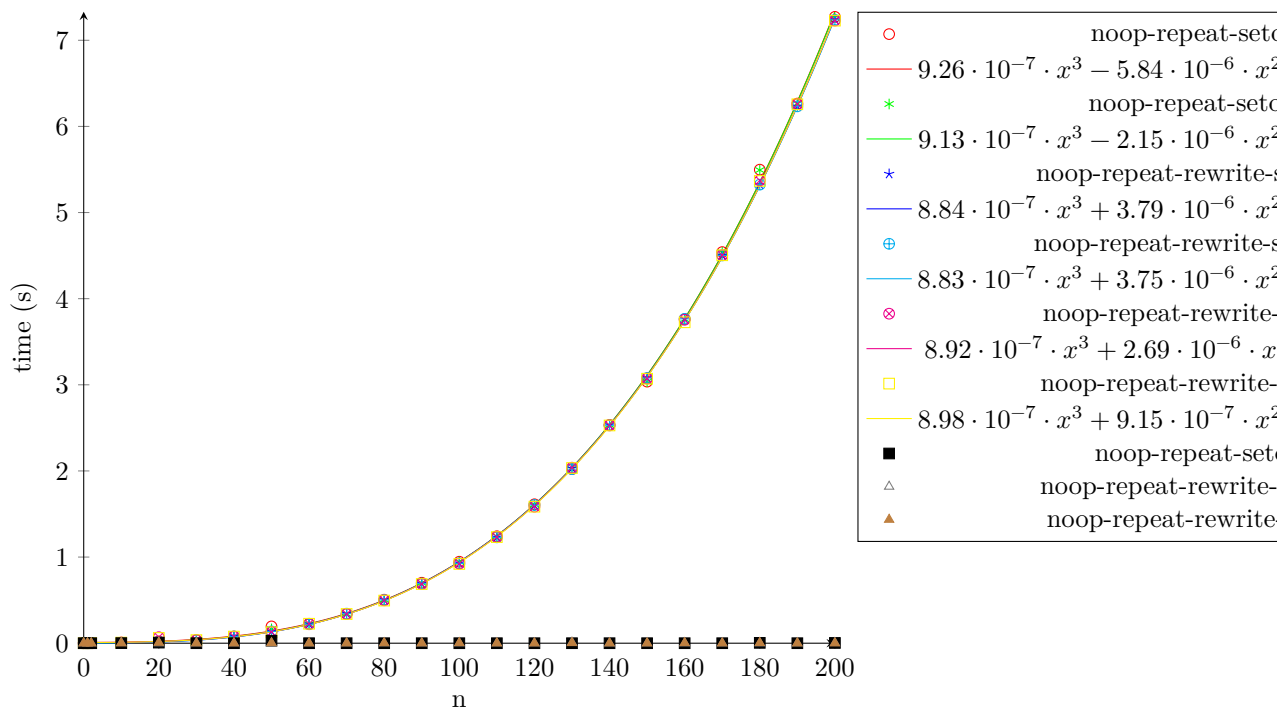
Figure 4: timing-repeat-setoid-rewrite-under-binders-noop

The legend entries and fit curves:

- ○ noop-repeat-seto...
- — $9.26 \cdot 10^{-7} \cdot x^3 - 5.84 \cdot 10^{-6} \cdot x^2$
- ∗ noop-repeat-seto...
- — $9.13 \cdot 10^{-7} \cdot x^3 - 2.15 \cdot 10^{-6} \cdot x^2$
- ∗ noop-repeat-rewrite-s...
- — $8.84 \cdot 10^{-7} \cdot x^3 + 3.79 \cdot 10^{-6} \cdot x^2$
- ⊕ noop-repeat-rewrite-s...
- — $8.83 \cdot 10^{-7} \cdot x^3 + 3.75 \cdot 10^{-6} \cdot x^2$
- ⊗ noop-repeat-rewrite-...
- — $8.92 \cdot 10^{-7} \cdot x^3 + 2.69 \cdot 10^{-6} \cdot x$
- □ noop-repeat-rewrite-...
- — $8.98 \cdot 10^{-7} \cdot x^3 + 9.15 \cdot 10^{-7} \cdot x^2$
- ■ noop-repeat-set...
- △ noop-repeat-rewrite-...
- ▲ noop-repeat-rewrite...

4

The chart shows time (s) on the y-axis versus n on the x-axis, with a legend listing:

- abstract+repeat-rewr...
  $1.46 \cdot 10^{-4} \cdot x^3 - 3.94 \cdot 10^{-3} \cdot x$...
- abstract+repeat-rewr...
  $1.46 \cdot 10^{-4} \cdot x^3 - 3.92 \cdot 10^{-3} \cdot x$...
- abstract+repeat-rewri...
  $1.41 \cdot 10^{-4} \cdot x^3 - 3.62 \cdot 10^{-3} \cdot x$...
- abstract+repeat-rewri...
  $1.4 \cdot 10^{-4} \cdot x^3 - 3.57 \cdot 10^{-3} \cdot x$...
- repeat-rewrite-st...
  $1.46 \cdot 10^{-4} \cdot x^3 - 4.01 \cdot 10^{-3} \cdot x$...
- repeat-rewrite-st...
  $1.46 \cdot 10^{-4} \cdot x^3 - 3.98 \cdot 10^{-3} \cdot x$...
- repeat-rewrite-str...
  $1.41 \cdot 10^{-4} \cdot x^3 - 3.67 \cdot 10^{-3} \cdot x$...
- repeat-rewrite-str...
  $1.4 \cdot 10^{-4} \cdot x^3 - 3.61 \cdot 10^{-3} \cdot x$...
- noop-repeat-rewrite...
  $7.94 \cdot 10^{-7} \cdot x^3 + 1.61 \cdot 10^{-5} \cdot x$...
- noop-repeat-rewrite...
  $7.5 \cdot 10^{-7} \cdot x^3 + 2.05 \cdot 10^{-5} \cdot x$...
- noop-repeat-rewrite...
  $7.28 \cdot 10^{-7} \cdot x^3 + 1.91 \cdot 10^{-5} \cdot x$...
- noop-repeat-rewrite...
  $7.45 \cdot 10^{-7} \cdot x^3 + 1.92 \cdot 10^{-5} \cdot x$...
- close-abstract+repeat-re...
  $2.15 \cdot 10^{-5} \cdot x^2 + 2.77$...
- close-abstract+repeat-re...
  $2.15 \cdot 10^{-5} \cdot x^2 + 2.74$...
- close-abstract+repeat-rev...
  $2.08 \cdot 10^{-5} \cdot x^2 + 2.19$...
- close-abstract+repeat-re...
  $2.08 \cdot 10^{-5} \cdot x^2 + 2.19$...
- repeat-rewrite-st...
- abstract+repeat-rewr...
- repeat-rewrite-s...
- abstract+repeat-rewr...
- noop-repeat-rewrit...
- noop-repeat-rewrite...
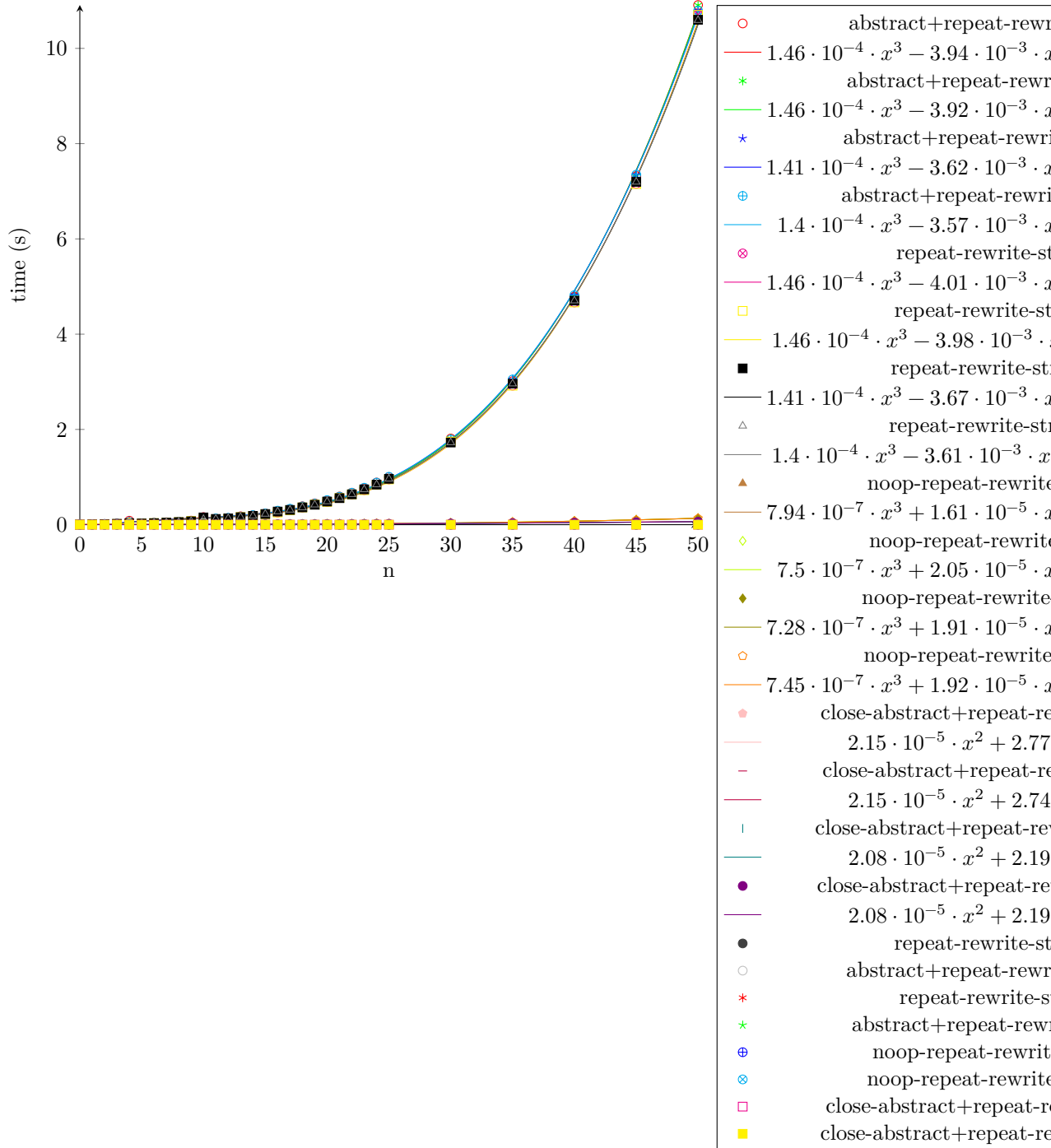- close-abstract+repeat-re...
- close-abstract+repeat-re...

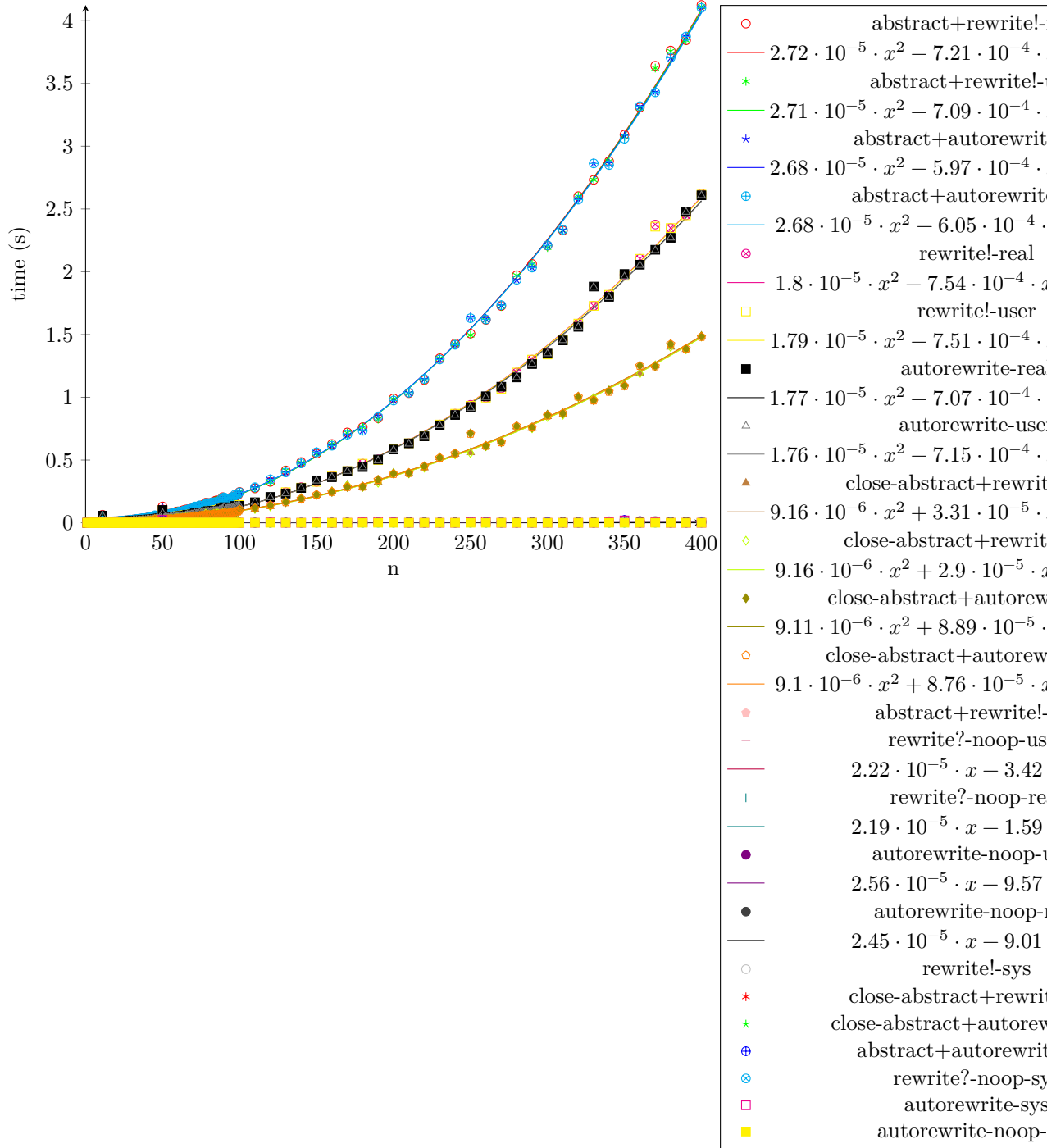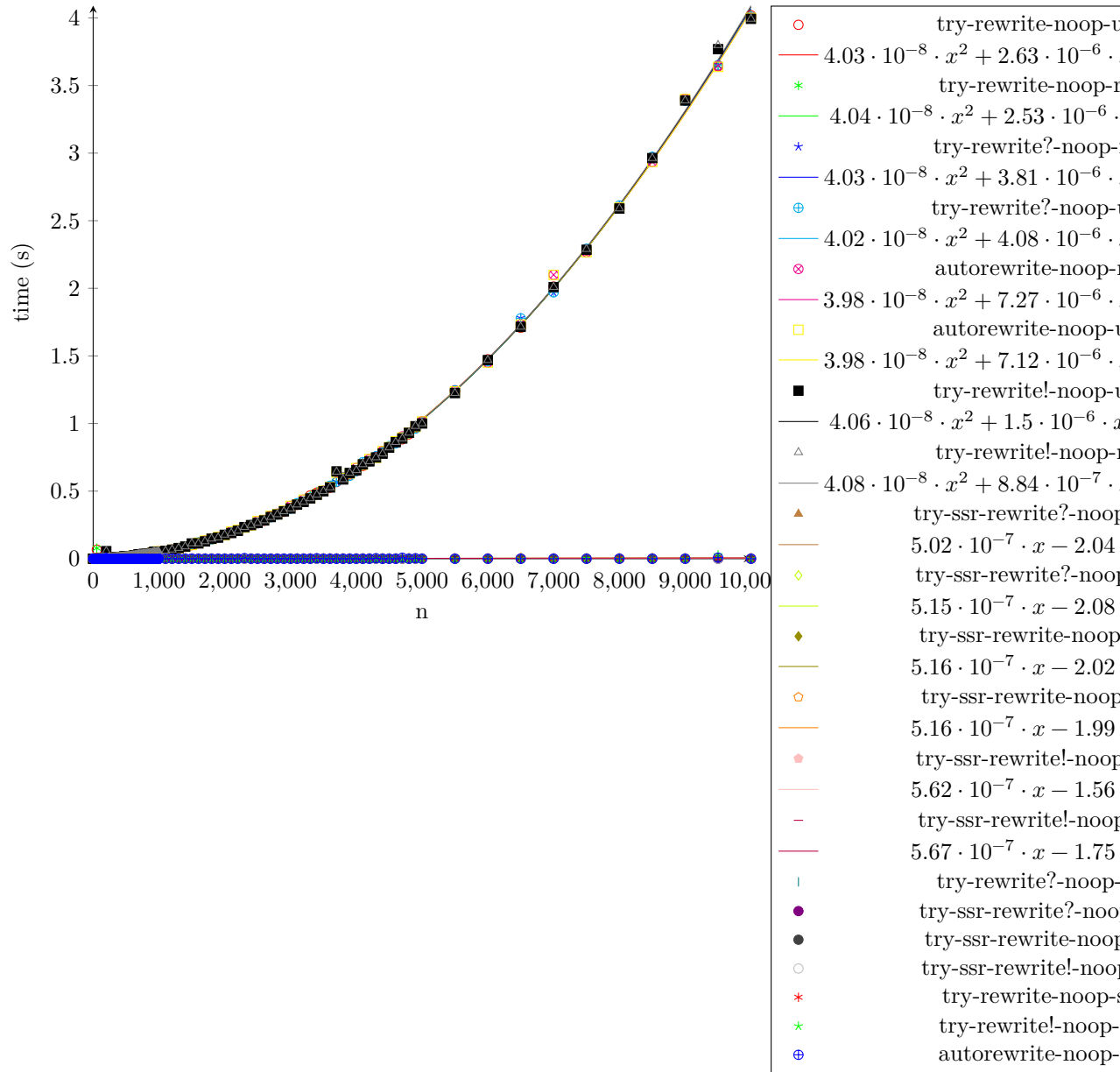Figure 5: timing-rewrite-strat-under-binders

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

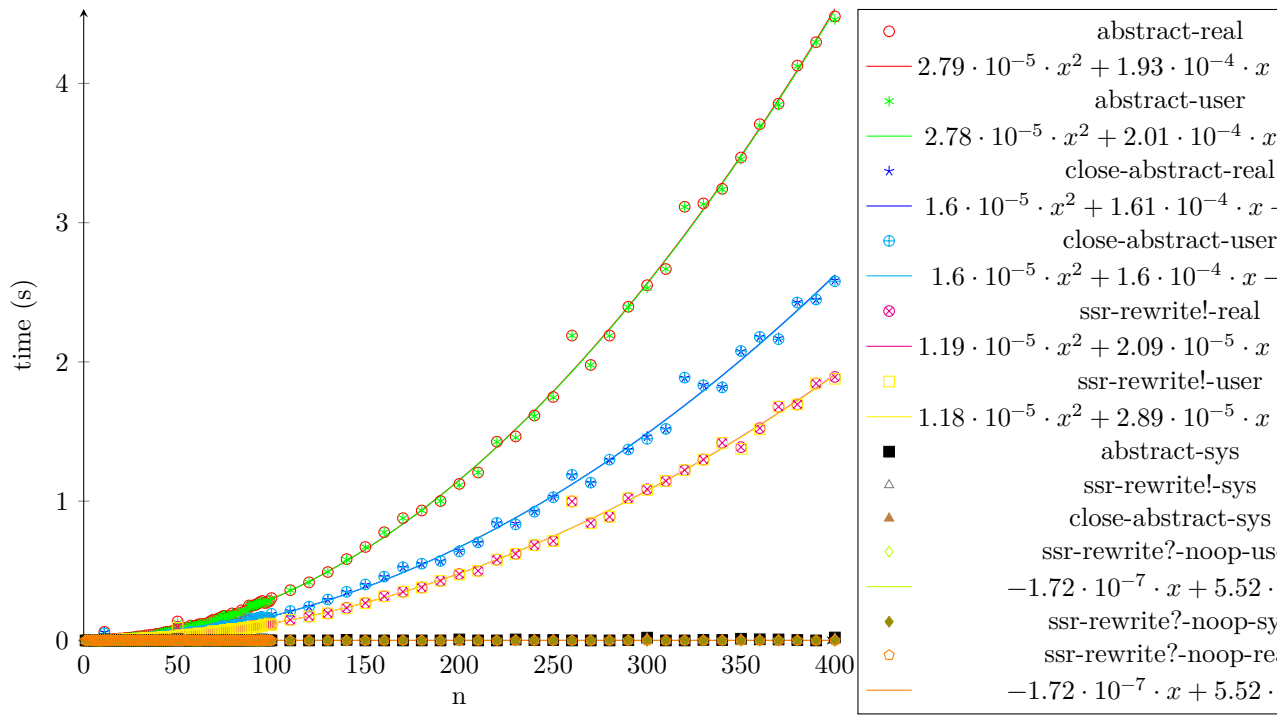6

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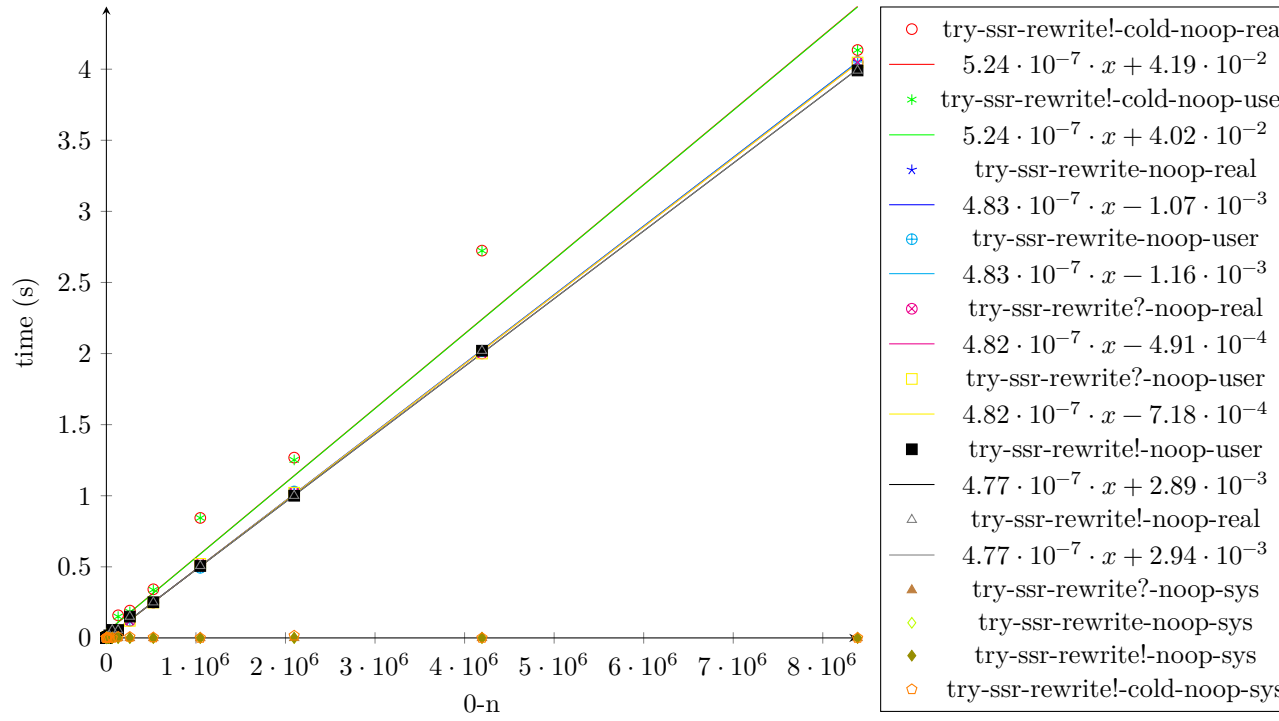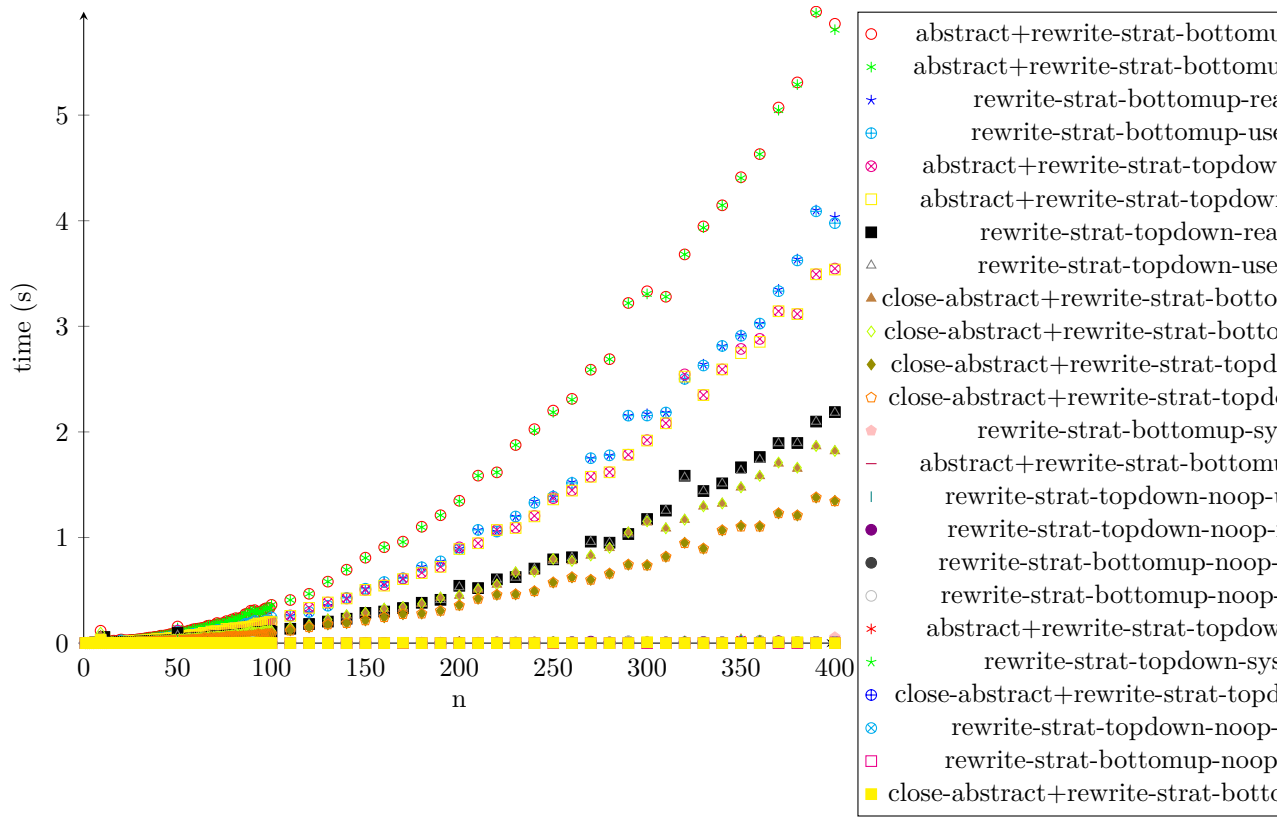
Figure 8: timing-rewrite-repeated-app-ssrrewrite

Legend:

abstract-real
$2.79 \cdot 10^{-5} \cdot x^2 + 1.93 \cdot 10^{-4} \cdot x$

abstract-user
$2.78 \cdot 10^{-5} \cdot x^2 + 2.01 \cdot 10^{-4} \cdot x$

close-abstract-real
$1.6 \cdot 10^{-5} \cdot x^2 + 1.61 \cdot 10^{-4} \cdot x -$

close-abstract-user
$1.6 \cdot 10^{-5} \cdot x^2 + 1.6 \cdot 10^{-4} \cdot x -$

ssr-rewrite!-real
$1.19 \cdot 10^{-5} \cdot x^2 + 2.09 \cdot 10^{-5} \cdot x$

ssr-rewrite!-user
$1.18 \cdot 10^{-5} \cdot x^2 + 2.89 \cdot 10^{-5} \cdot x$

abstract-sys

ssr-rewrite!-sys

close-abstract-sys

ssr-rewrite?-noop-us

$-1.72 \cdot 10^{-7} \cdot x + 5.52 \cdot$

ssr-rewrite?-noop-sy

ssr-rewrite?-noop-re

$-1.72 \cdot 10^{-7} \cdot x + 5.52 \cdot$

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

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

- abstract+rewrite-strat-bottomu...
- abstract+rewrite-strat-bottomu...
- rewrite-strat-bottomup-rea...
- rewrite-strat-bottomup-use...
- abstract+rewrite-strat-topdow...
- abstract+rewrite-strat-topdow...
- rewrite-strat-topdown-rea...
- rewrite-strat-topdown-use...
- close-abstract+rewrite-strat-botto...
- close-abstract+rewrite-strat-botto...
- close-abstract+rewrite-strat-topd...
- close-abstract+rewrite-strat-topdo...
- rewrite-strat-bottomup-sy...
- abstract+rewrite-strat-bottomu...
- rewrite-strat-topdown-noop-...
- rewrite-strat-topdown-noop-...
- rewrite-strat-bottomup-noop-...
- rewrite-strat-bottomup-noop-...
- abstract+rewrite-strat-topdow...
- rewrite-strat-topdown-sys...
- close-abstract+rewrite-strat-topd...
- rewrite-strat-topdown-noop-...
- rewrite-strat-bottomup-noop...
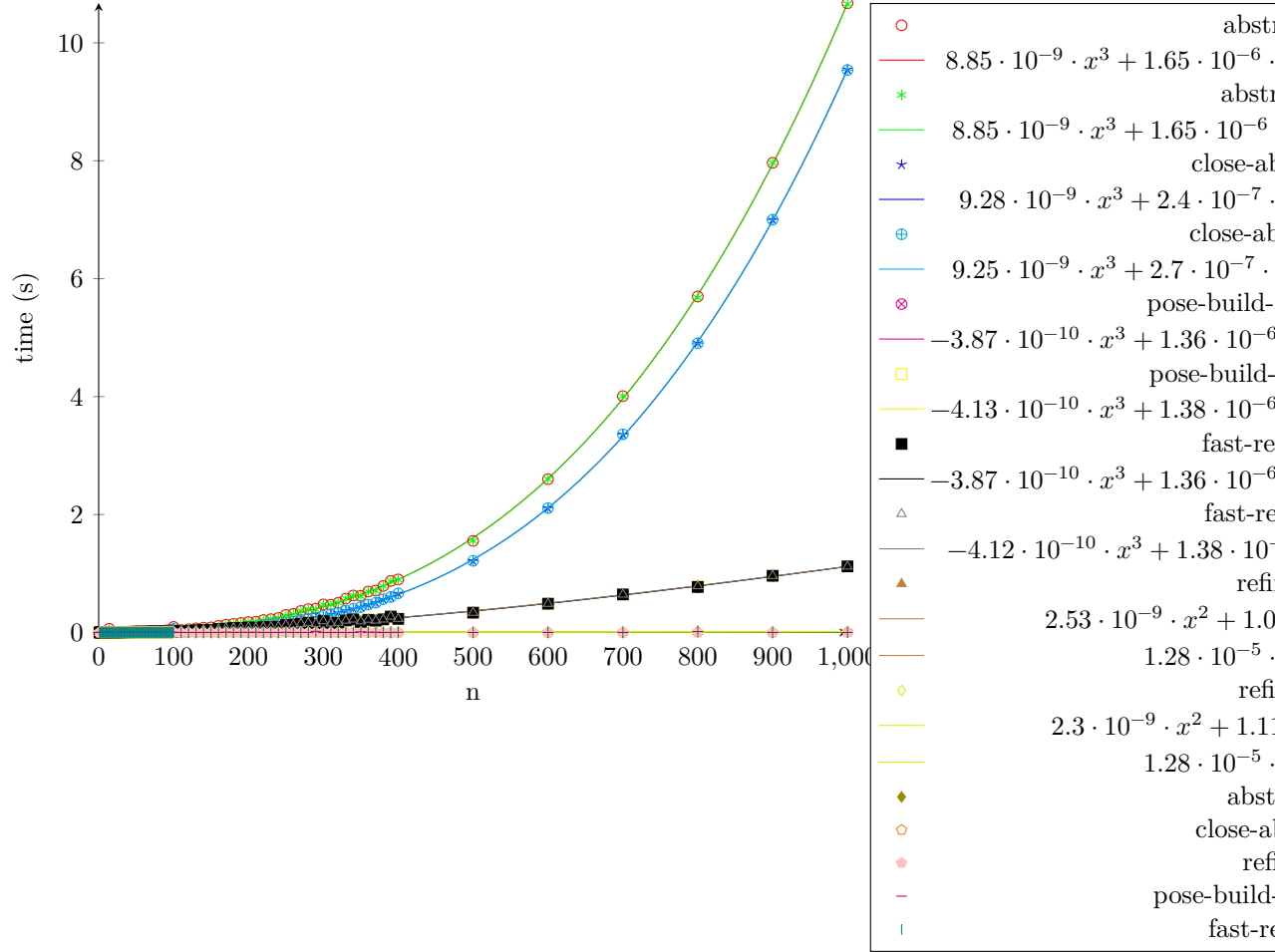- close-abstract+rewrite-strat-botto...

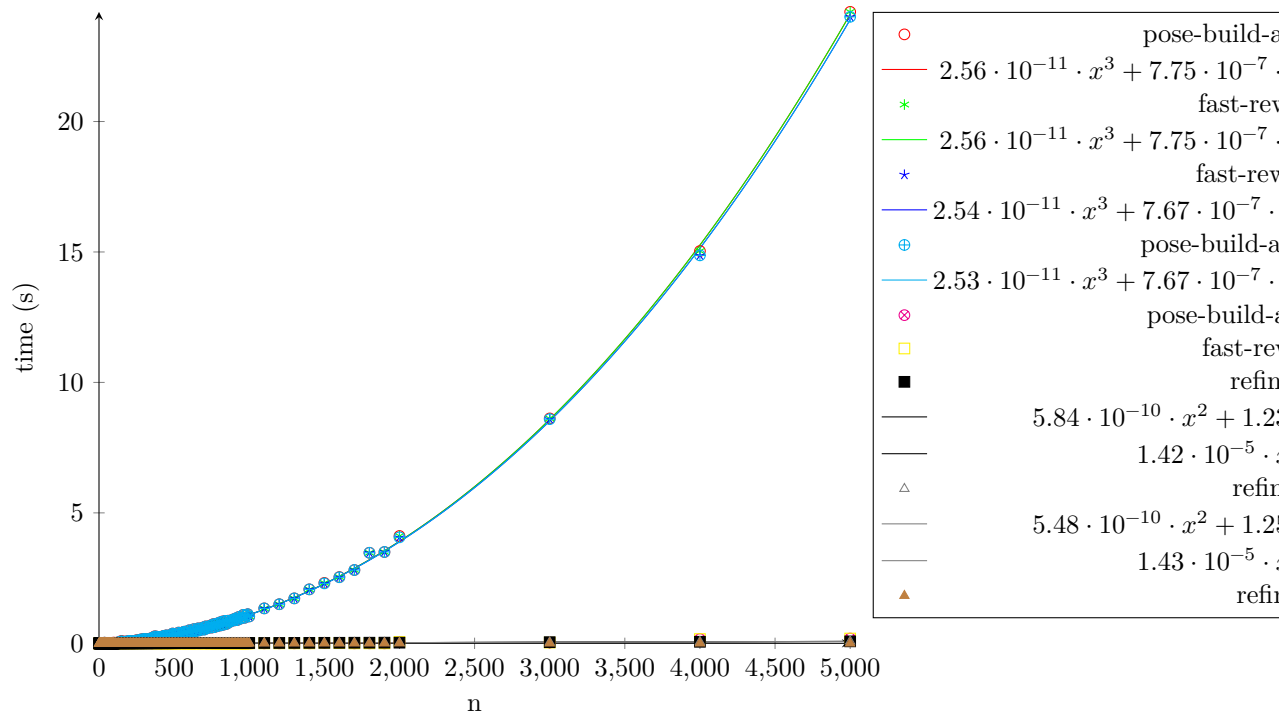10

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

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