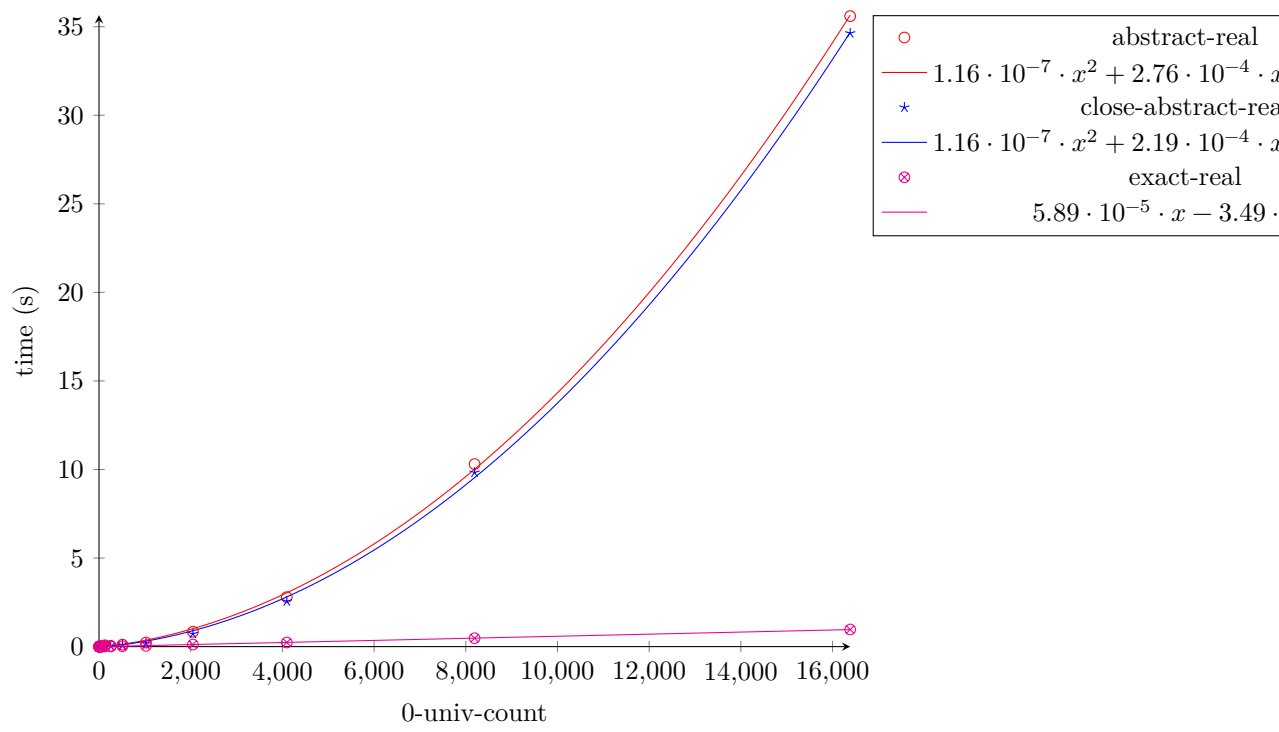Figure 1: timing-pattern

1

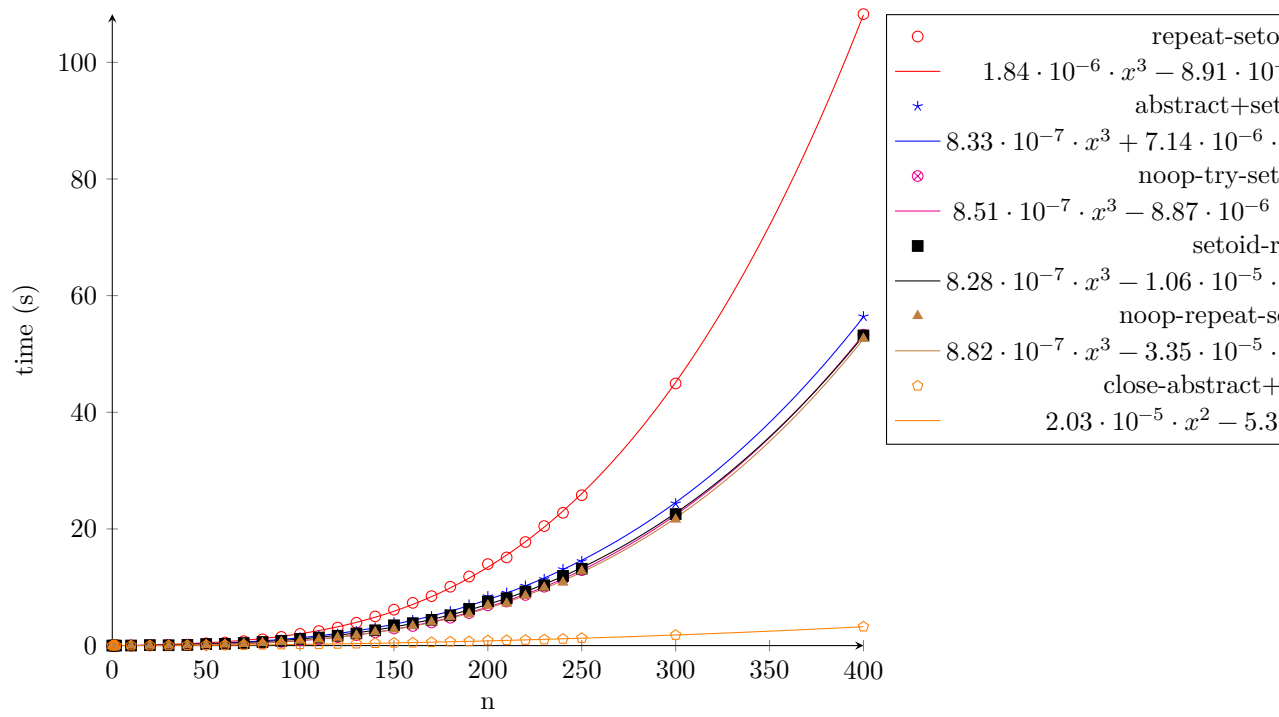Figure 2: timing-n-polymorphic-universes param-1-n 0

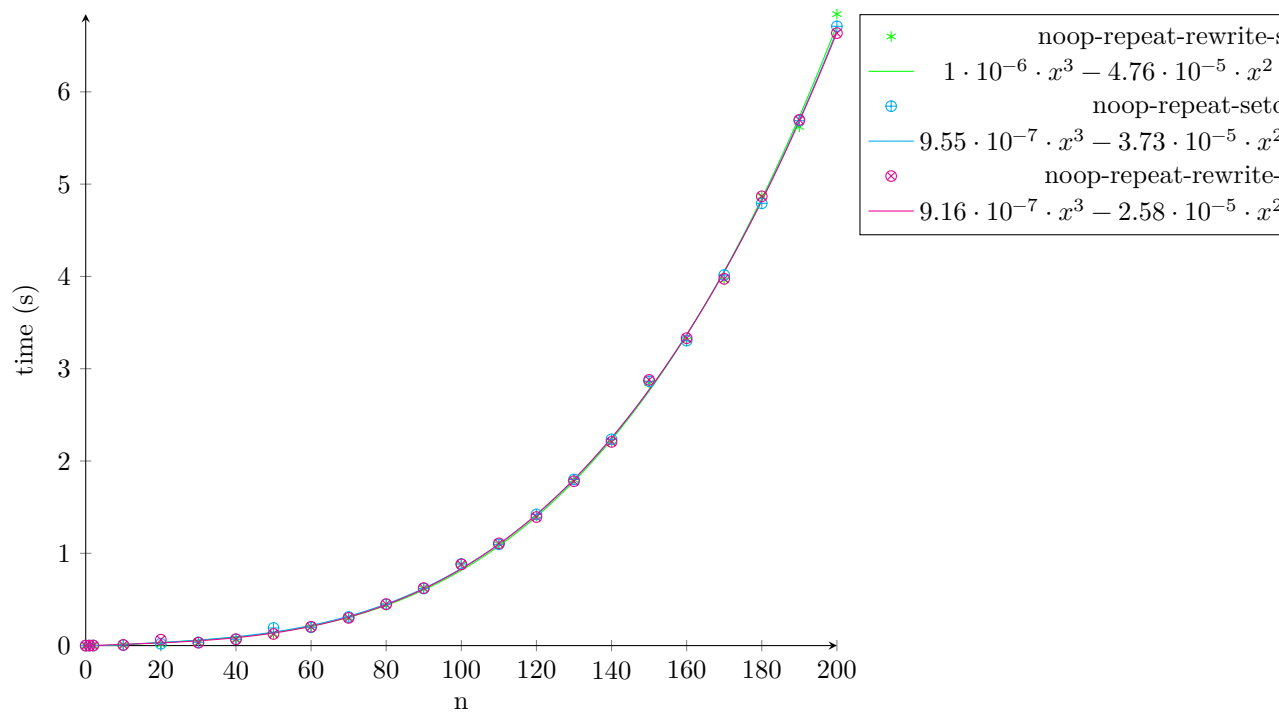Figure 3: timing-repeat-setoid-rewrite-under-binders

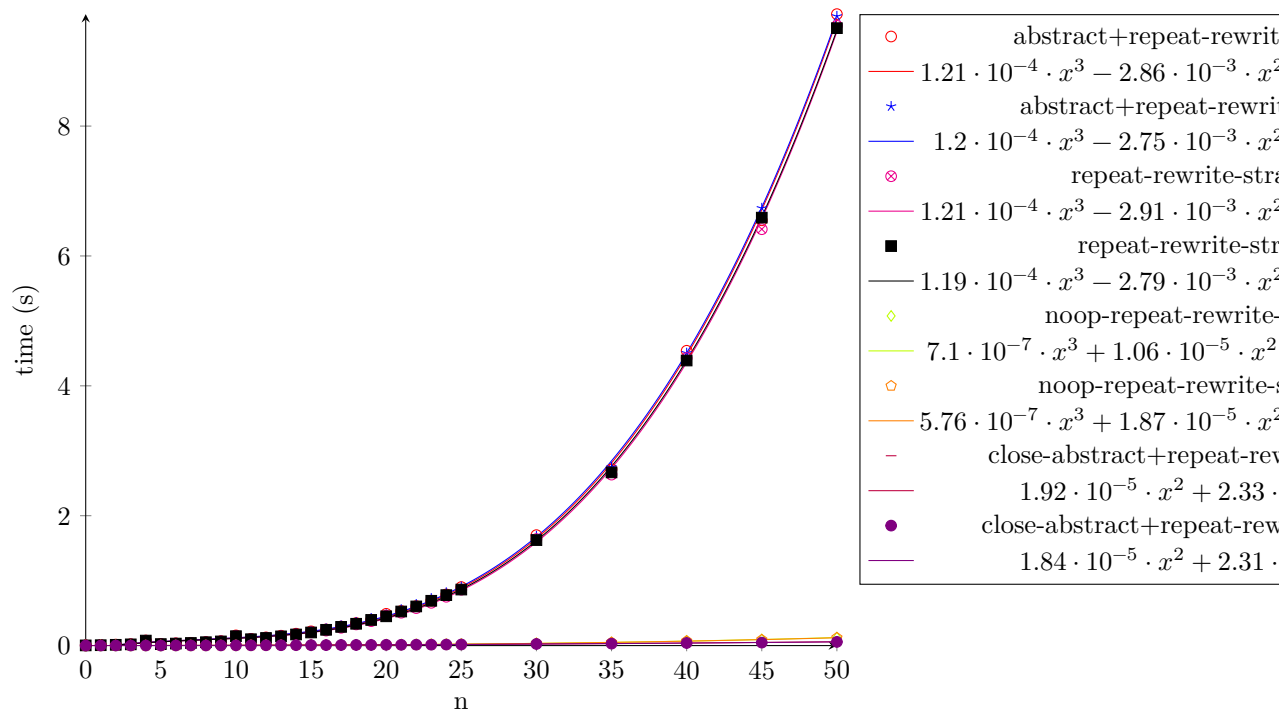Figure 4: timing-repeat-setoid-rewrite-under-binders-noop

4

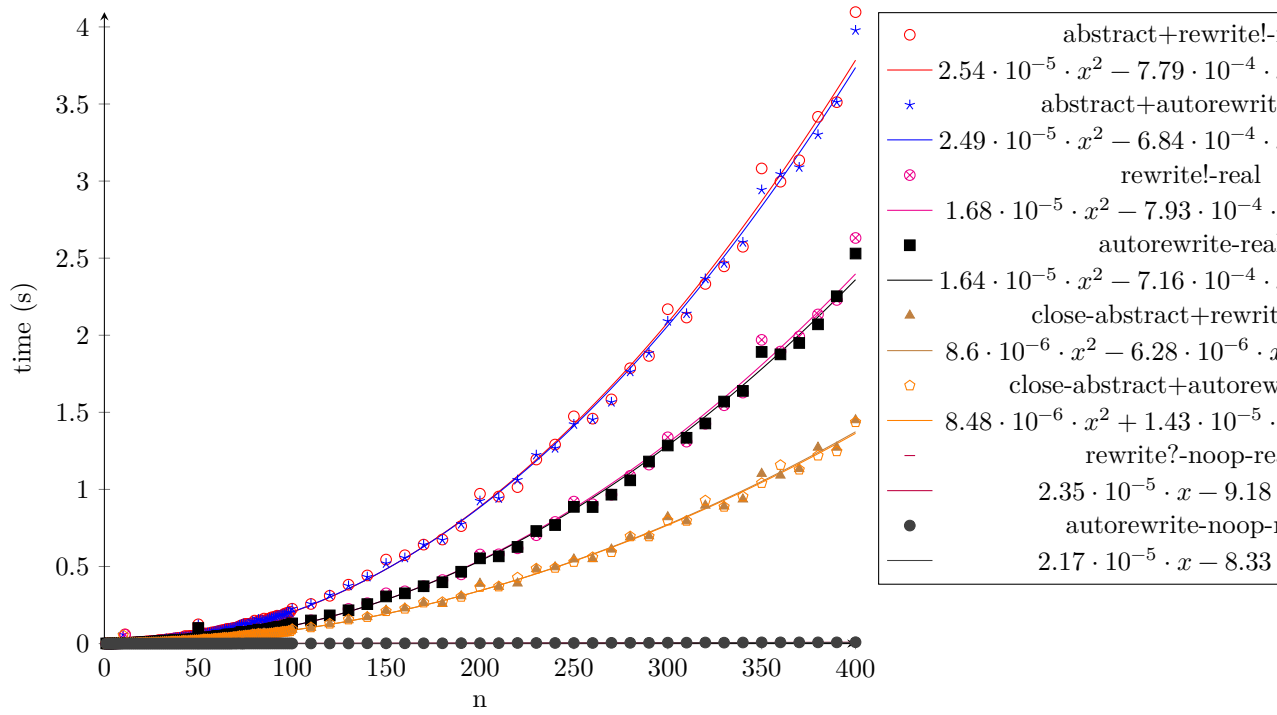Figure 5: timing-rewrite-strat-under-binders
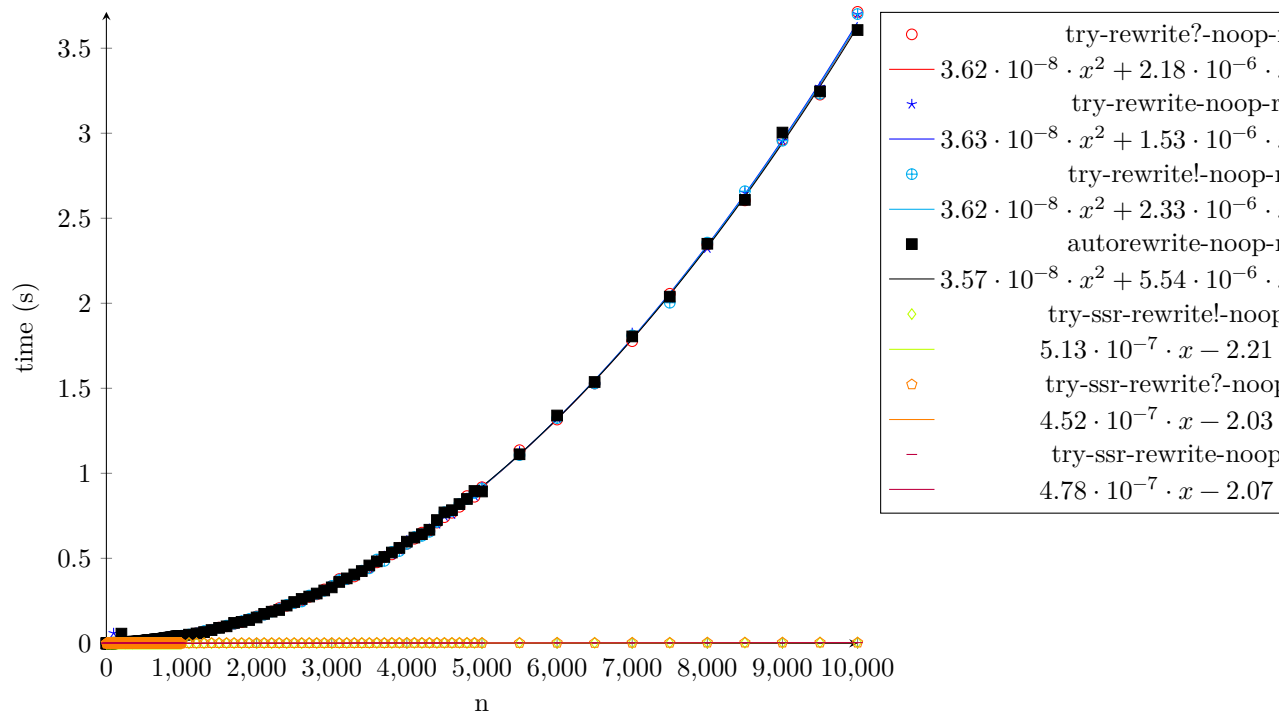
Figure 6: timing-rewrite-repeated-app-autorewrite

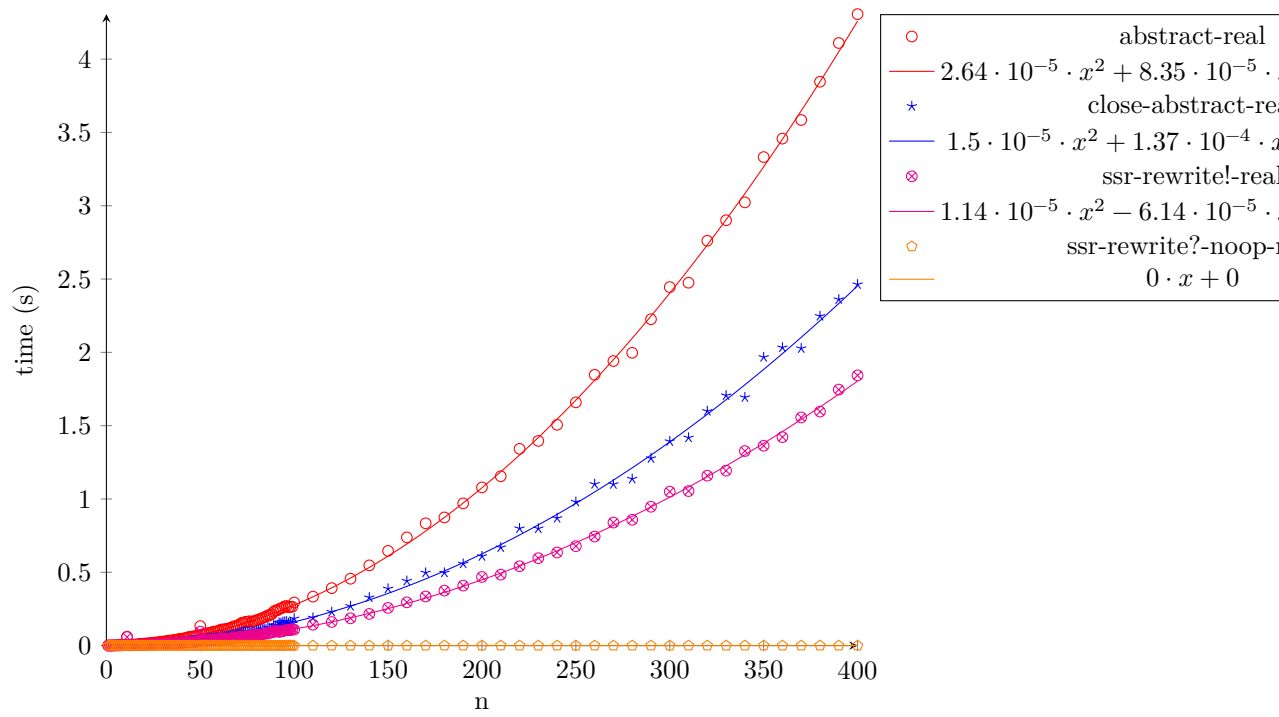Figure 7: timing-rewrite-repeated-app-autorewrite-noop

The figure legend contains the following entries:

- try-rewrite?-noop-
- $3.62 \cdot 10^{-8} \cdot x^2 + 2.18 \cdot 10^{-6} \cdot$
- try-rewrite-noop-
- $3.63 \cdot 10^{-8} \cdot x^2 + 1.53 \cdot 10^{-6} \cdot$
- try-rewrite!-noop-
- $3.62 \cdot 10^{-8} \cdot x^2 + 2.33 \cdot 10^{-6} \cdot$
- autorewrite-noop-
- $3.57 \cdot 10^{-8} \cdot x^2 + 5.54 \cdot 10^{-6} \cdot$
- try-ssr-rewrite!-noop
- $5.13 \cdot 10^{-7} \cdot x - 2.21$
- try-ssr-rewrite?-noop
- $4.52 \cdot 10^{-7} \cdot x - 2.03$
- try-ssr-rewrite-noop
- $4.78 \cdot 10^{-7} \cdot x - 2.07$

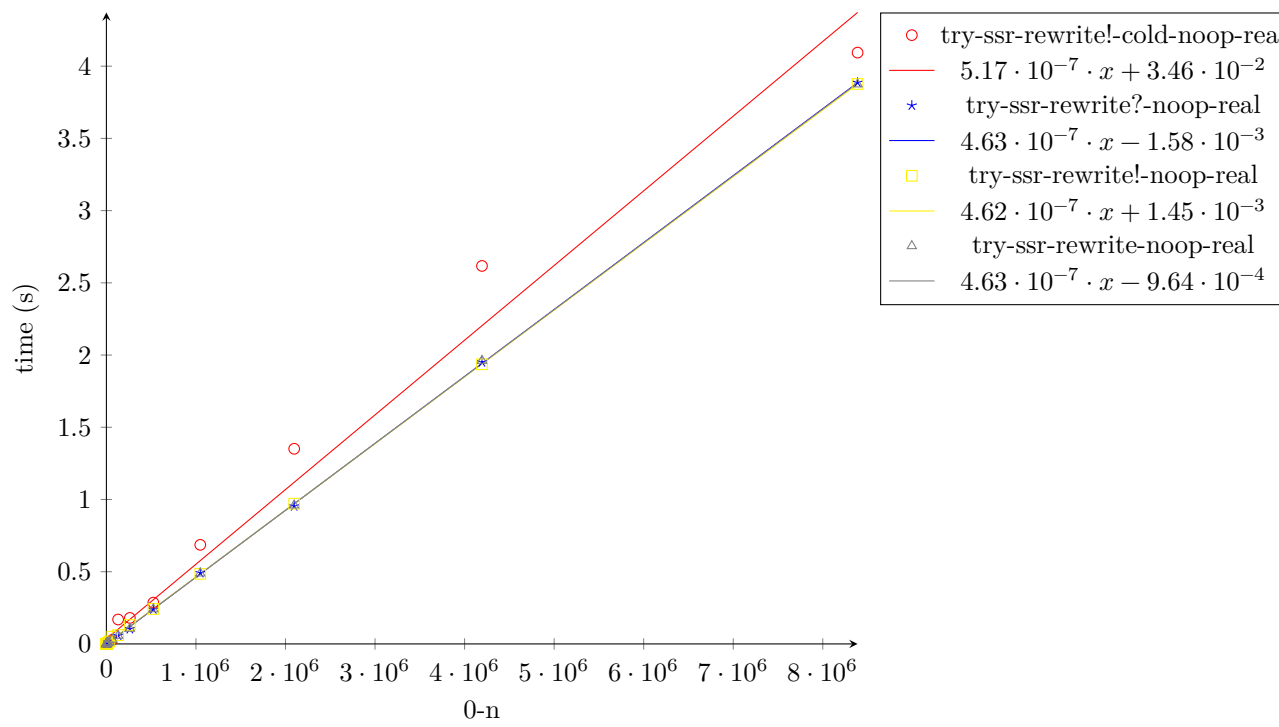Figure 8: timing-rewrite-repeated-app-ssrrewrite

8

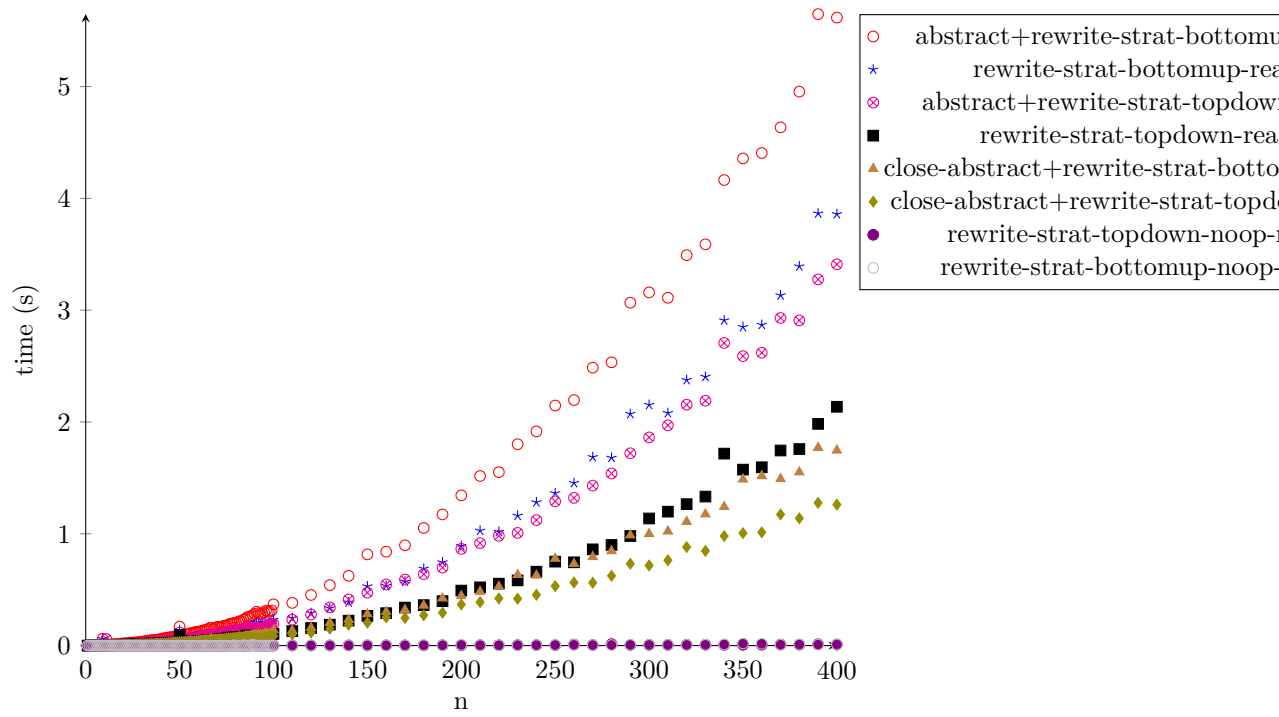Figure 9: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn 1

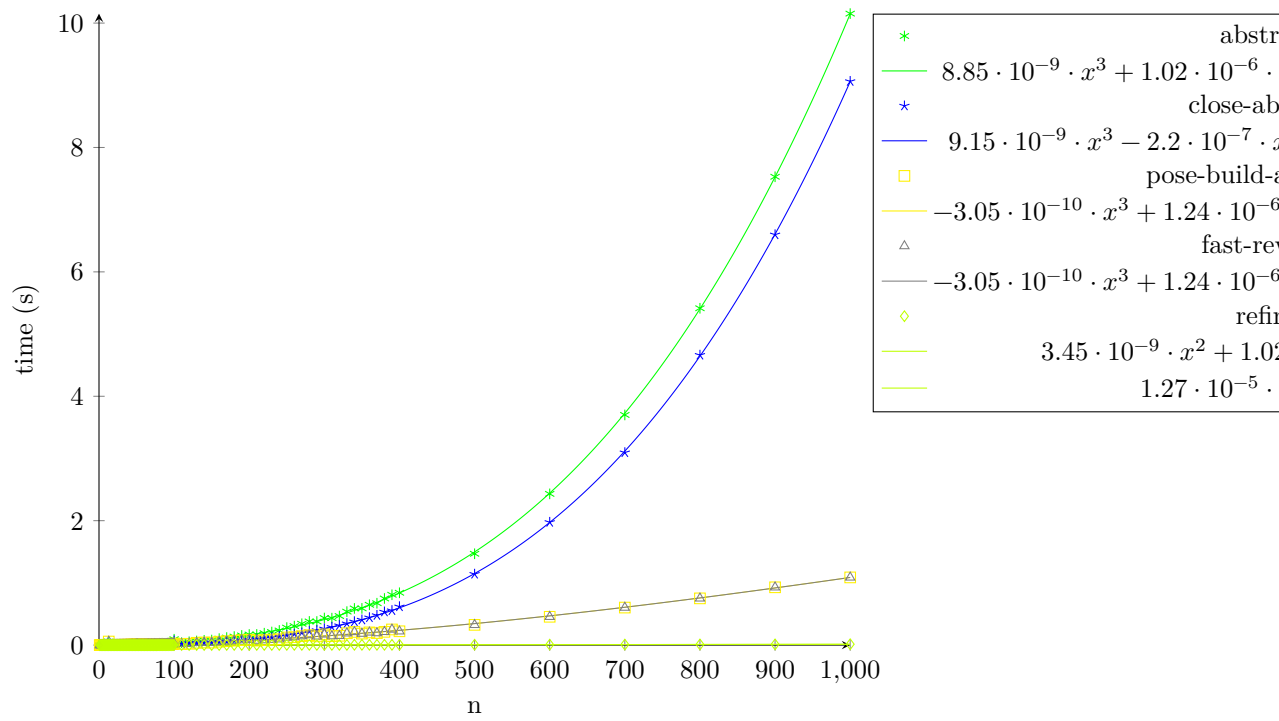Figure 10: timing-rewrite-repeated-app-rewrite-strat

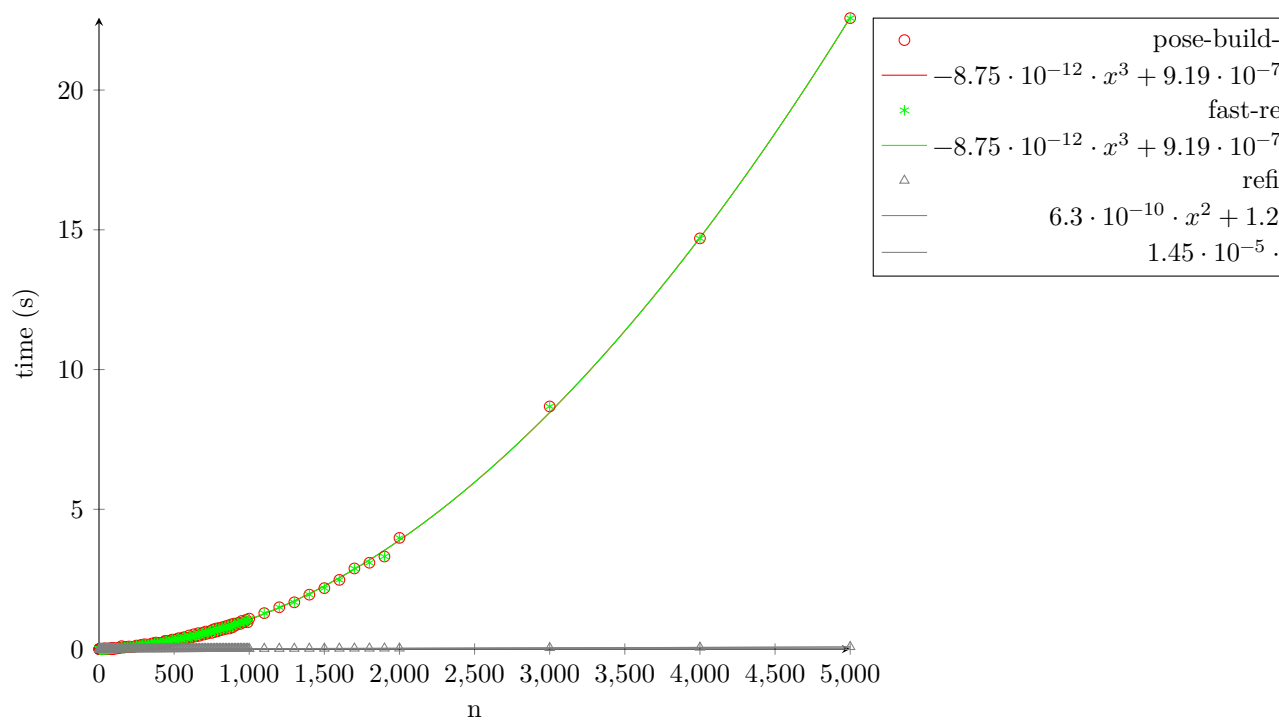Figure 11: timing-rewrite-repeated-app-fast-rewrite

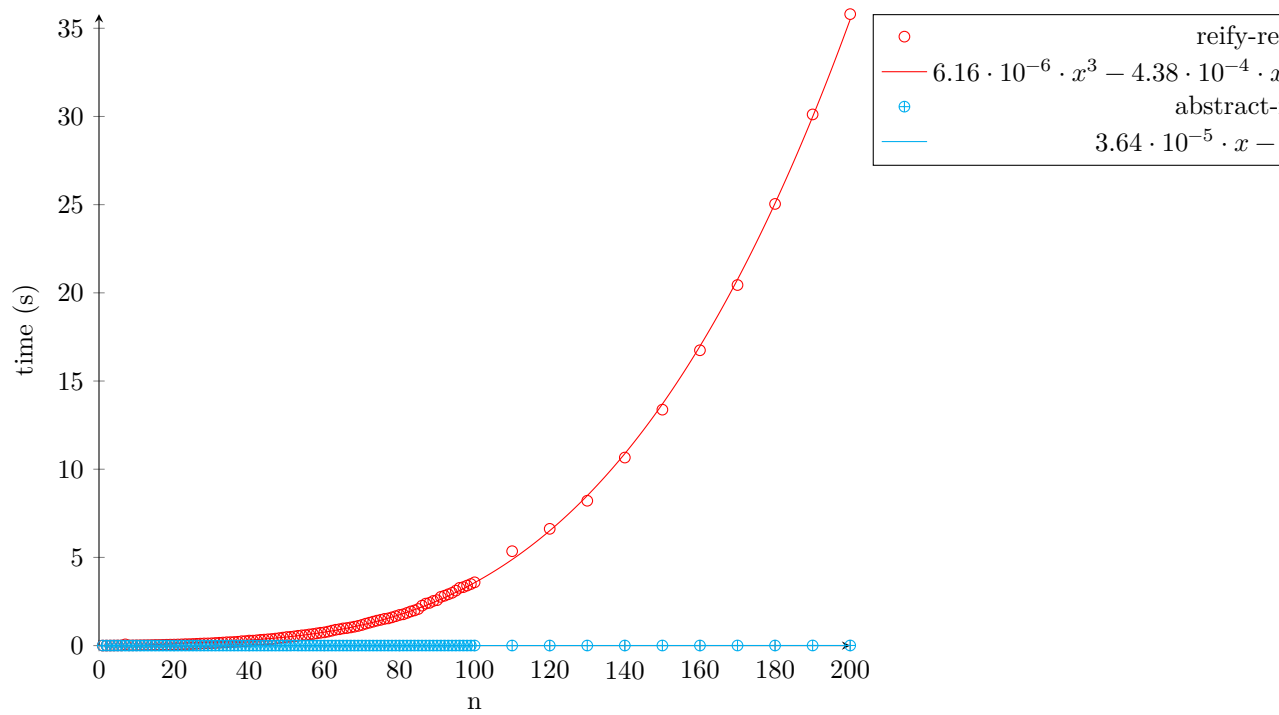Figure 12: timing-rewrite-repeated-app-fast-rewrite-no-abstract

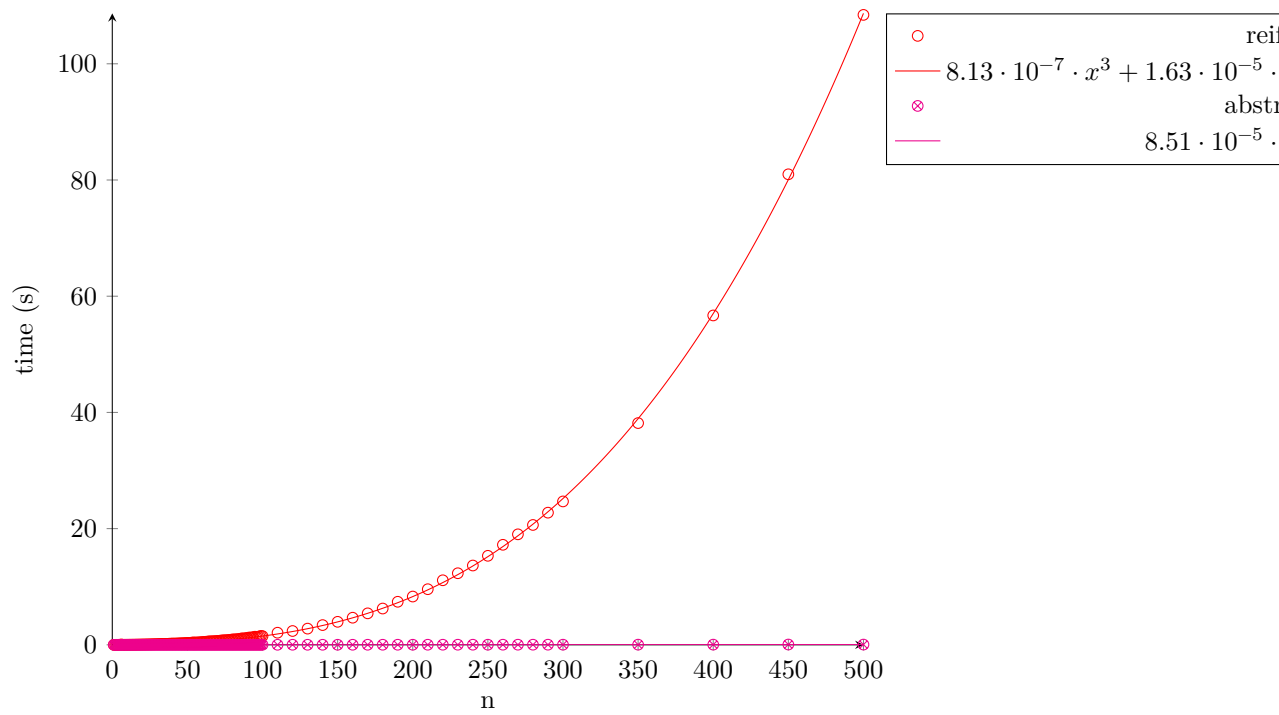Figure 13: timing-typeclass-reification-let-in-HOAS

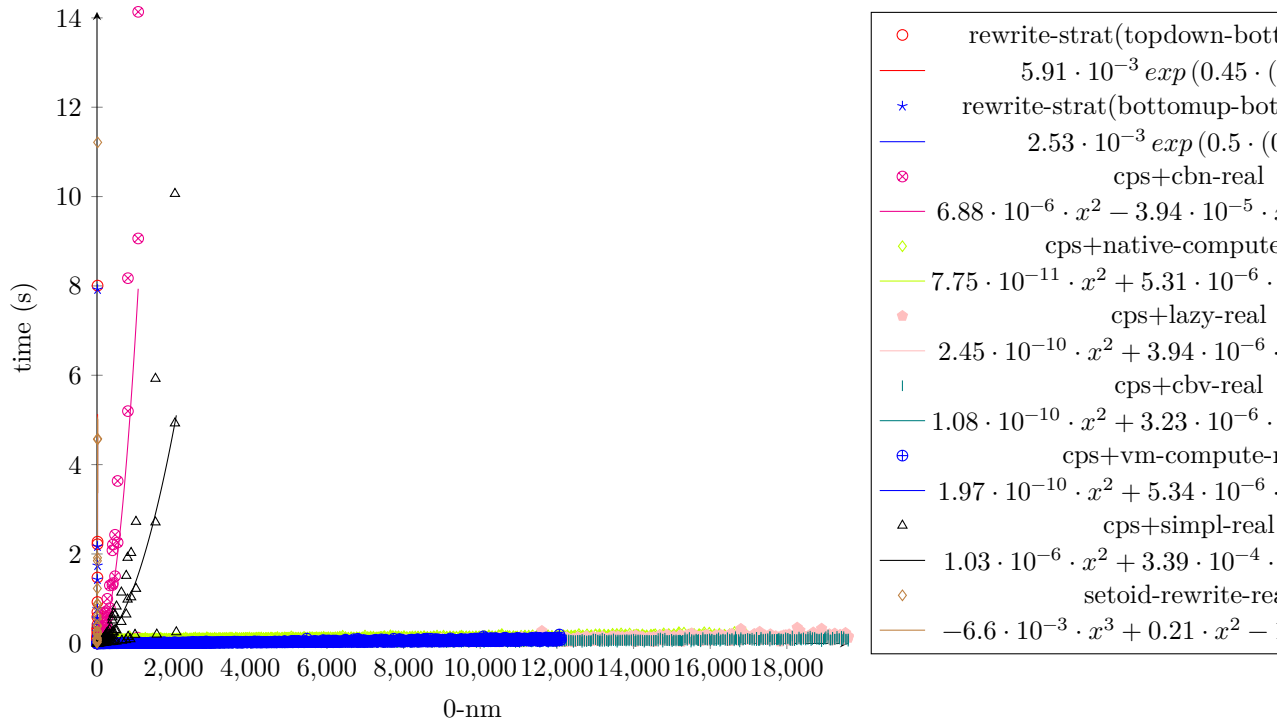Figure 14: timing-typeclass-reification-let-in-PHOAS

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

Legend (partial, cut off on right):

- ○ rewrite-strat(topdown-bott…
- $5.91 \cdot 10^{-3} \, exp\left(0.45 \cdot \right($
- ⋆ rewrite-strat(bottomup-bott…
- $2.53 \cdot 10^{-3} \, exp\left(0.5 \cdot \right($
- ⊗ cps+cbn-real
- $6.88 \cdot 10^{-6} \cdot x^2 - 3.94 \cdot 10^{-5} \cdot$
- ◇ cps+native-compute…
- $7.75 \cdot 10^{-11} \cdot x^2 + 5.31 \cdot 10^{-6} \cdot$
- ⬠ cps+lazy-real
- $2.45 \cdot 10^{-10} \cdot x^2 + 3.94 \cdot 10^{-6} \cdot$
- | cps+cbv-real
- $1.08 \cdot 10^{-10} \cdot x^2 + 3.23 \cdot 10^{-6} \cdot$
- ⊕ cps+vm-compute-r…
- $1.97 \cdot 10^{-10} \cdot x^2 + 5.34 \cdot 10^{-6} \cdot$
- △ cps+simpl-real
- $1.03 \cdot 10^{-6} \cdot x^2 + 3.39 \cdot 10^{-4} \cdot$
- ◇ setoid-rewrite-re…
- $-6.6 \cdot 10^{-3} \cdot x^3 + 0.21 \cdot x^2 -$
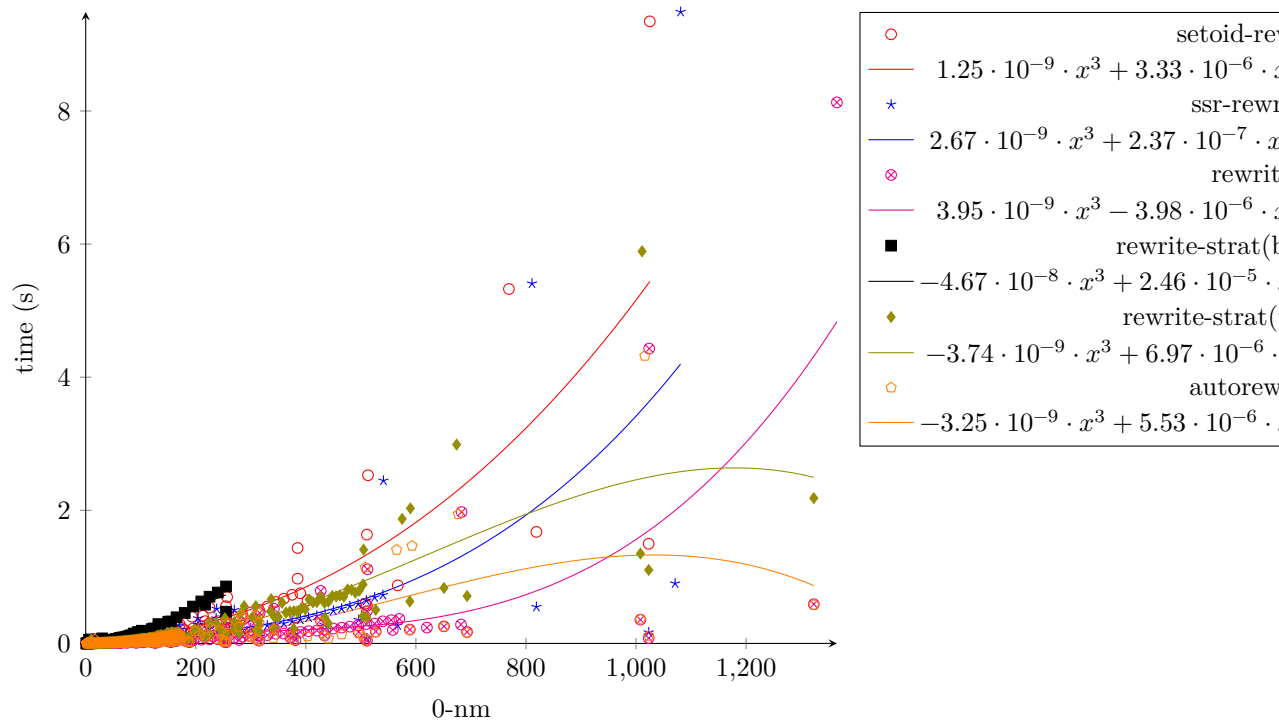
Axis labels: time (s) (vertical), 0-nm (horizontal)

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
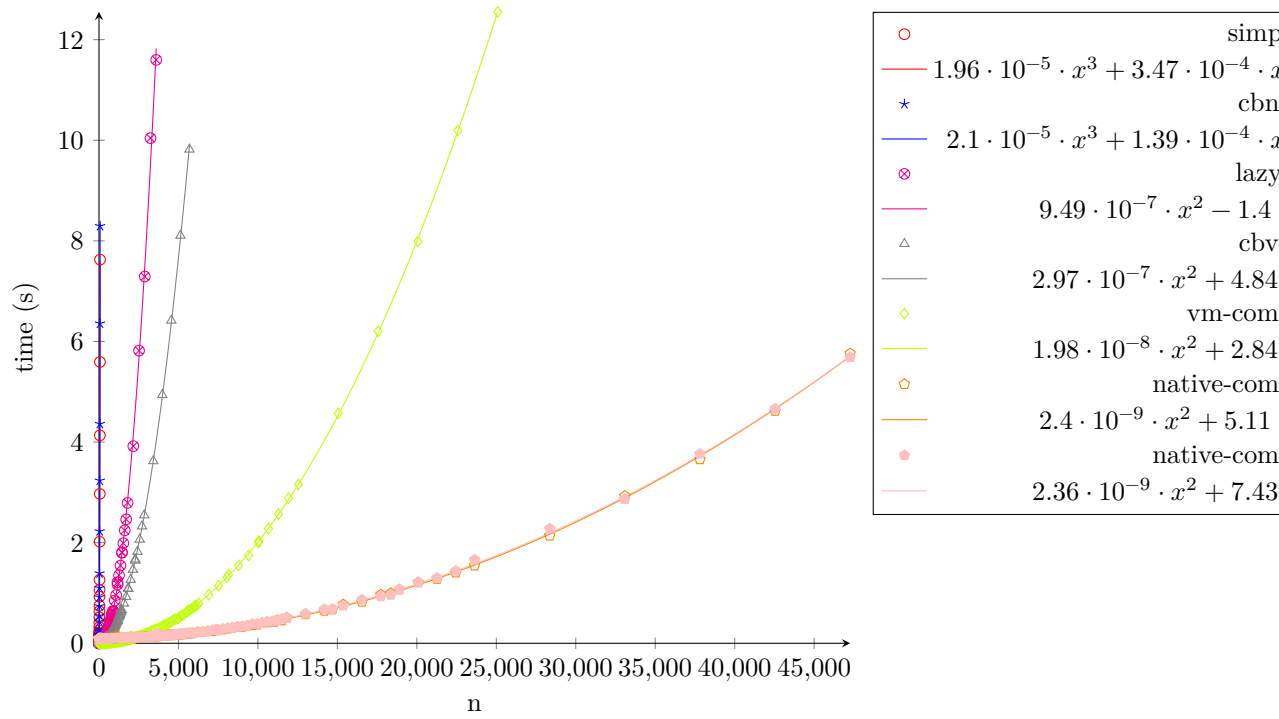
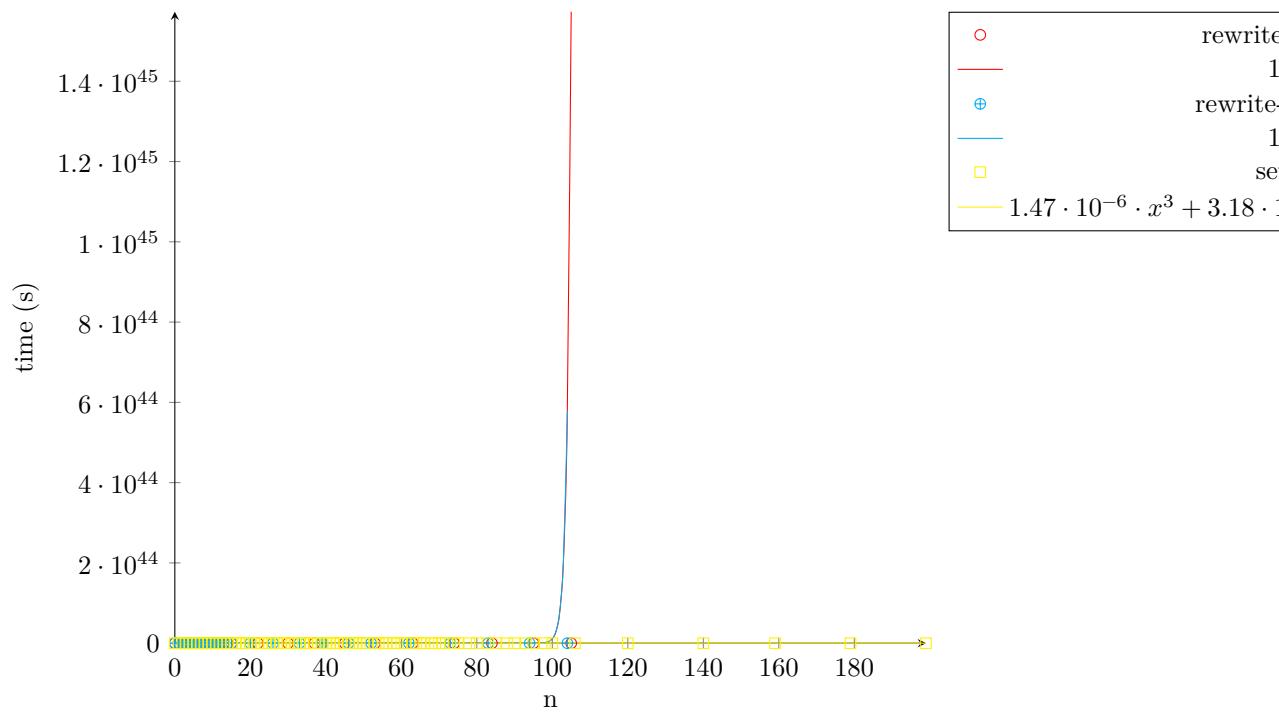Figure 17: timing-sieve-of-eratosthenes
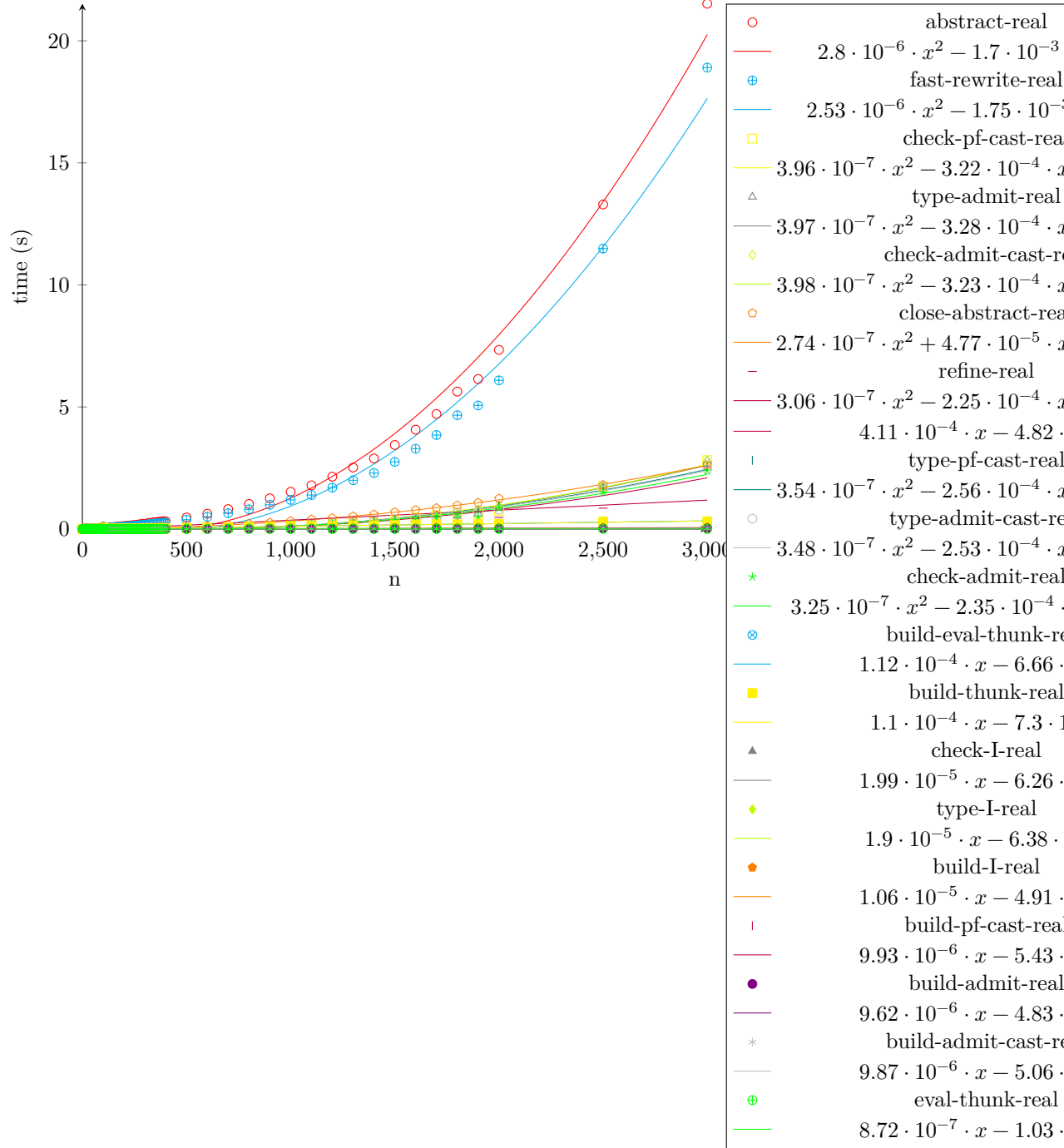
Figure 18: timing-rewrite-under-lets-plus-0

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