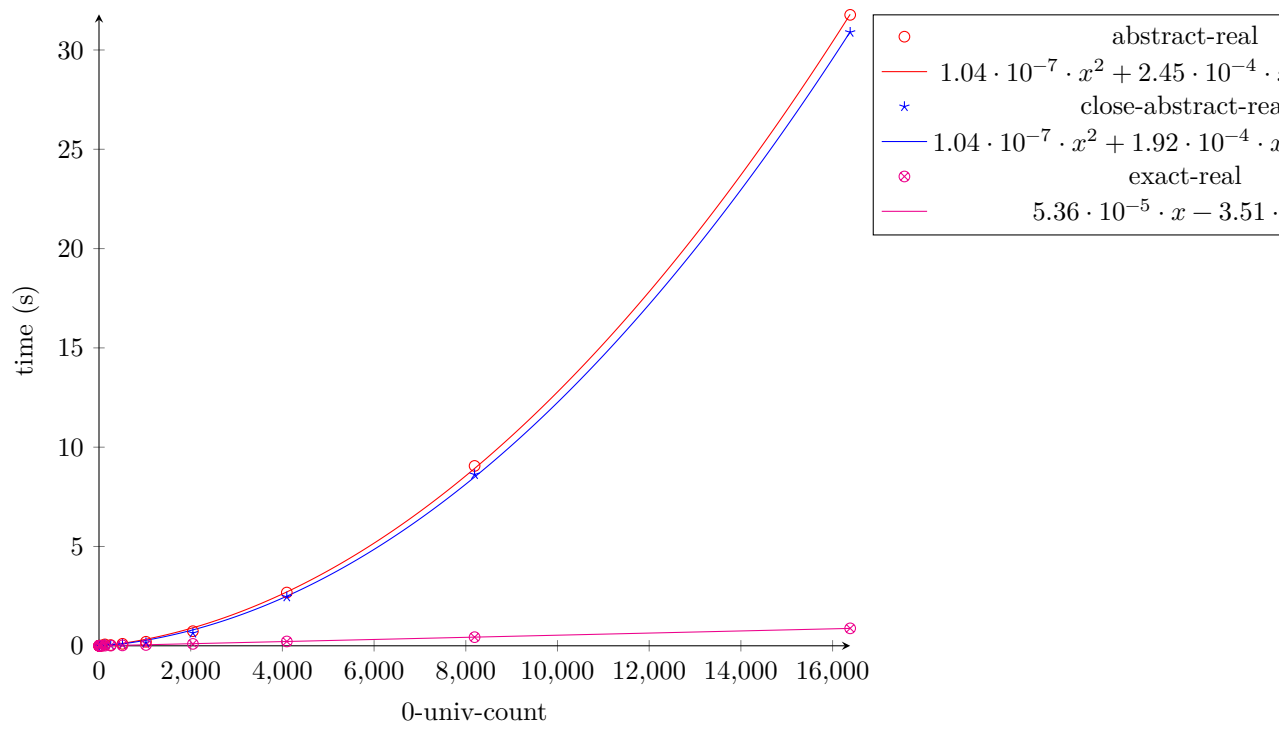Figure 1: timing-pattern

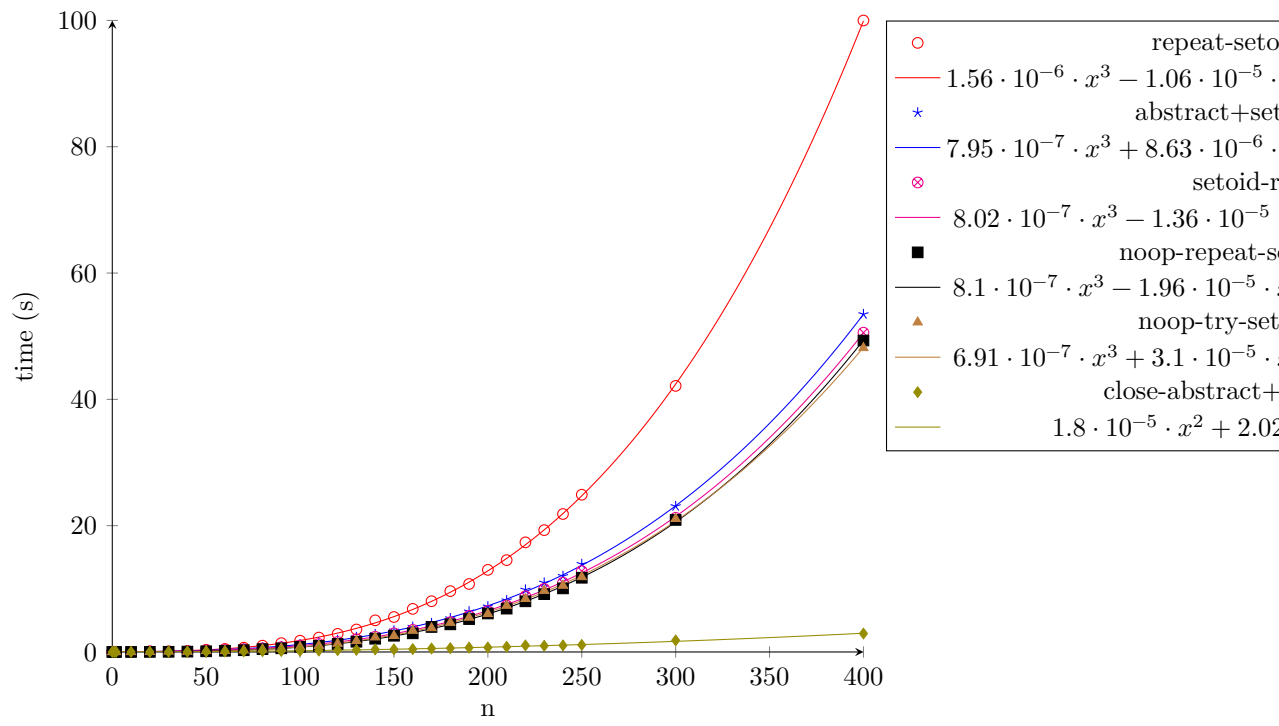Figure 2: timing-n-polymorphic-universes param-1-n  0

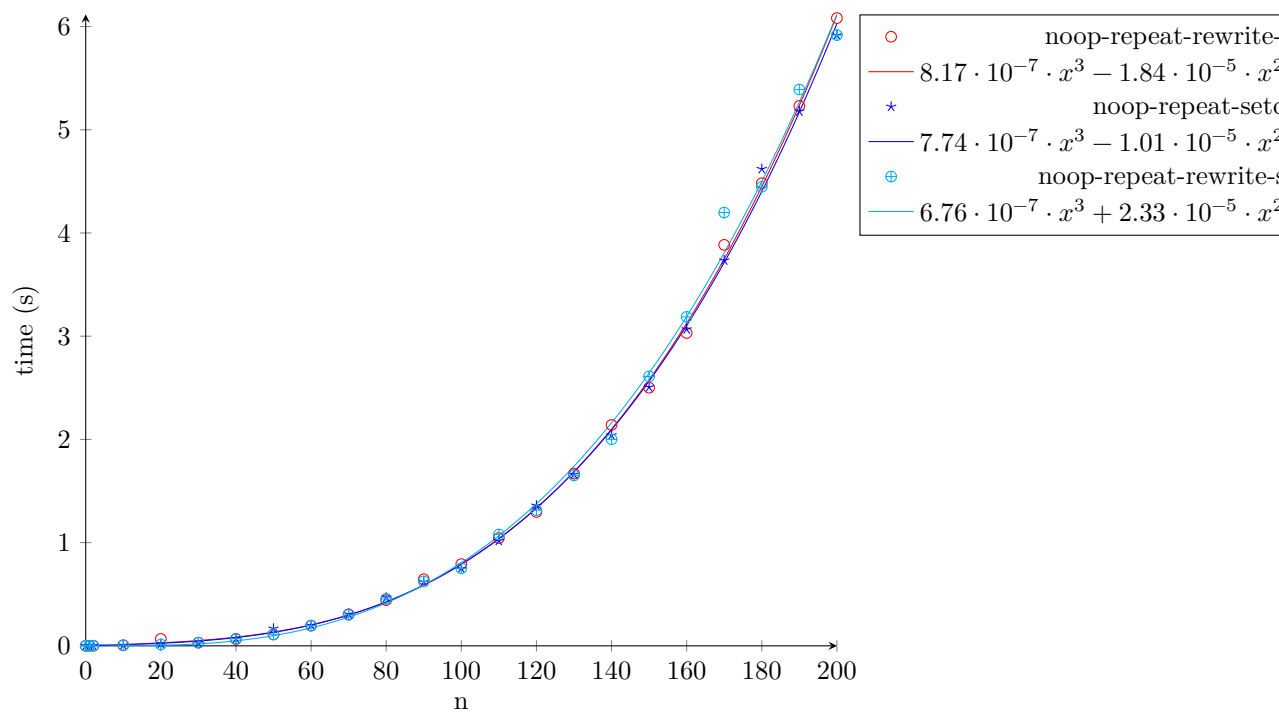Figure 3: timing-repeat-setoid-rewrite-under-binders

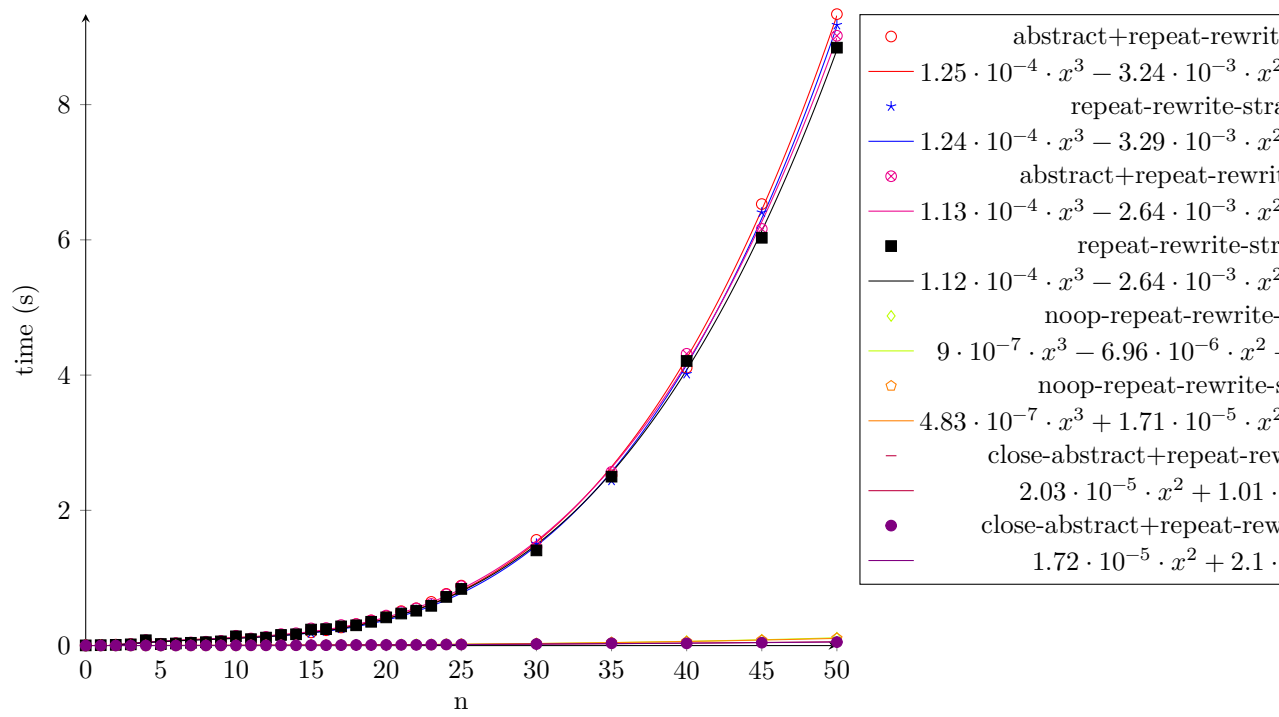Figure 4: timing-repeat-setoid-rewrite-under-binders-noop
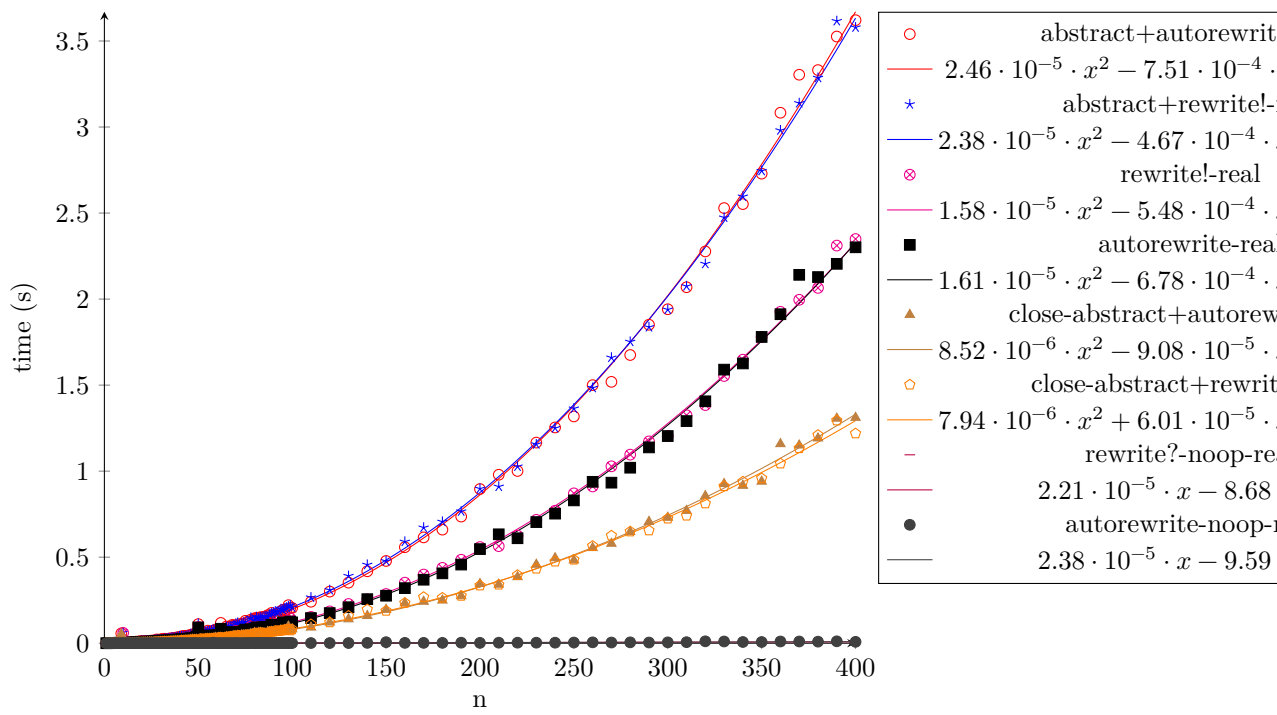
Figure 5: timing-rewrite-strat-under-binders

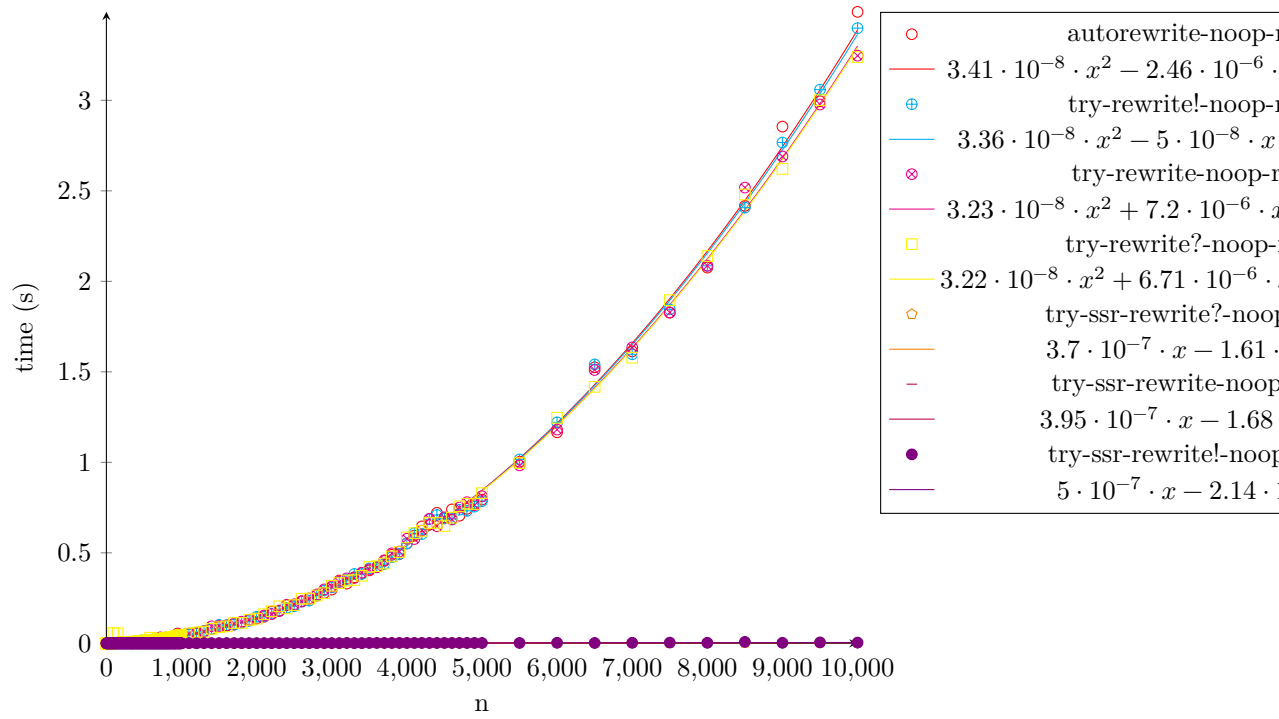Figure 6: timing-rewrite-repeated-app-autorewrite

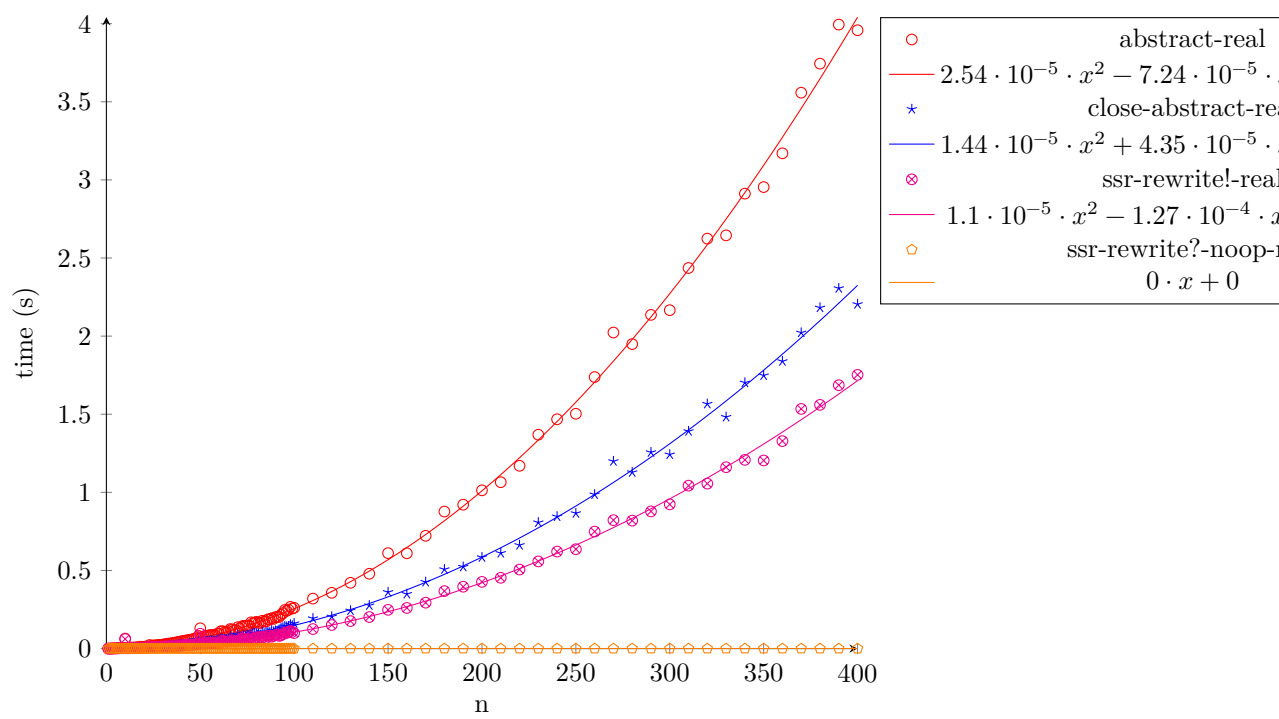Figure 7: timing-rewrite-repeated-app-autorewrite-noop

The legend contains the following entries:

- autorewrite-noop-r
  $3.41 \cdot 10^{-8} \cdot x^2 - 2.46 \cdot 10^{-6} \cdot$
- try-rewrite!-noop-r
  $3.36 \cdot 10^{-8} \cdot x^2 - 5 \cdot 10^{-8} \cdot x$
- try-rewrite-noop-r
  $3.23 \cdot 10^{-8} \cdot x^2 + 7.2 \cdot 10^{-6} \cdot x$
- try-rewrite?-noop-
  $3.22 \cdot 10^{-8} \cdot x^2 + 6.71 \cdot 10^{-6} \cdot$
- try-ssr-rewrite?-noop
  $3.7 \cdot 10^{-7} \cdot x - 1.61 \cdot$
- try-ssr-rewrite-noop
  $3.95 \cdot 10^{-7} \cdot x - 1.68$
- try-ssr-rewrite!-noop
  $5 \cdot 10^{-7} \cdot x - 2.14 \cdot$

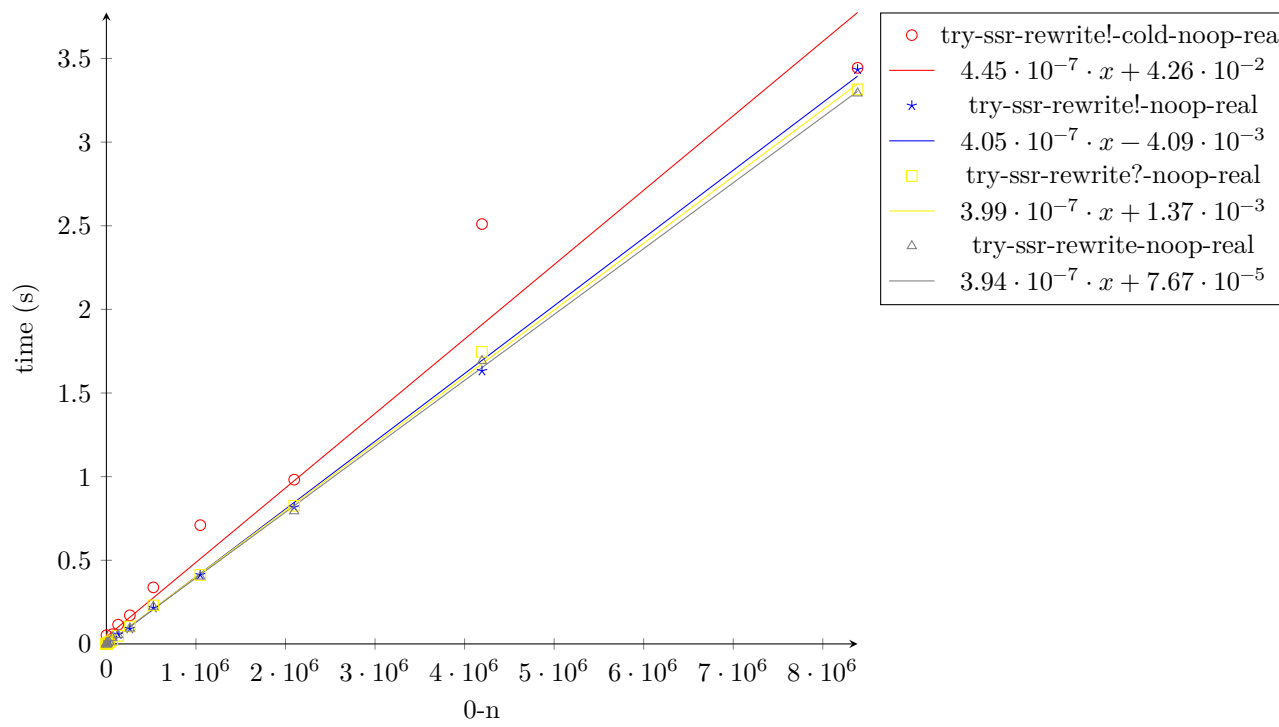Figure 8: timing-rewrite-repeated-app-ssrrewrite

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

9

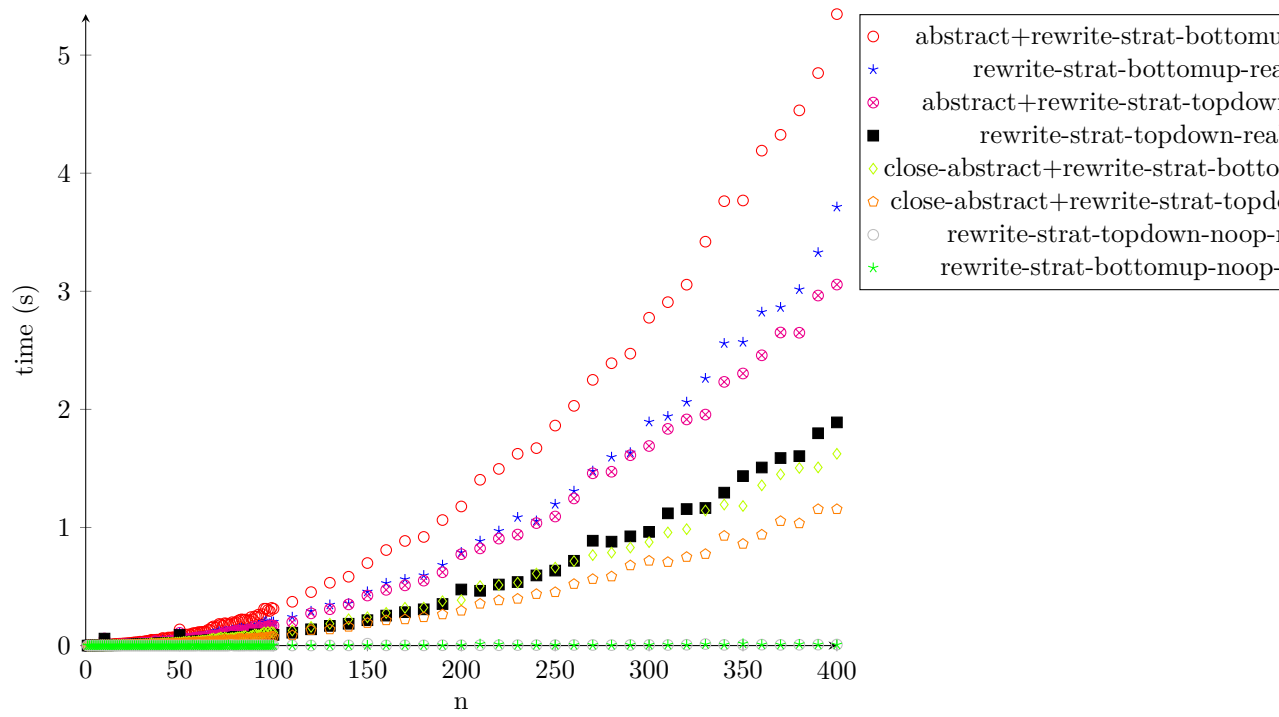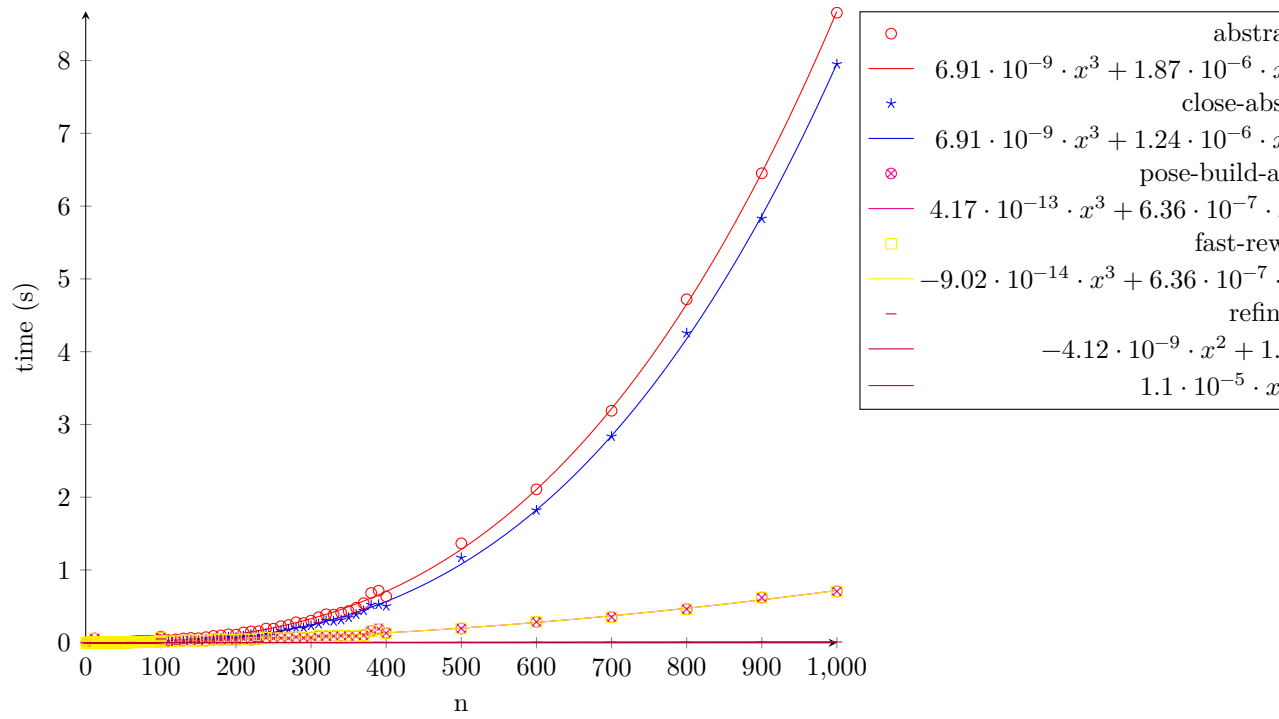Figure 10: timing-rewrite-repeated-app-rewrite-strat
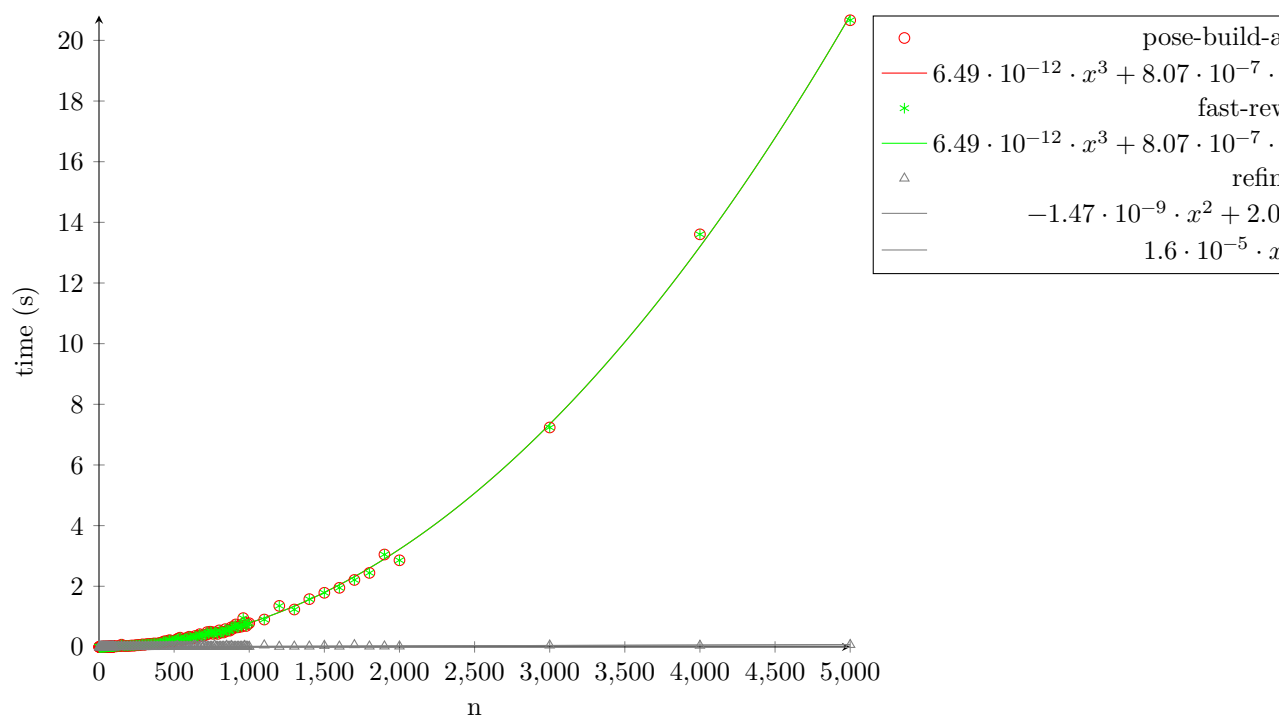
Figure 11: timing-rewrite-repeated-app-fast-rewrite

time (s)

| | pose-build-a |
| ○ | |
| —— | $6.49 \cdot 10^{-12} \cdot x^3 + 8.07 \cdot 10^{-7} \cdot$ |
| * | fast-rev |
| —— | $6.49 \cdot 10^{-12} \cdot x^3 + 8.07 \cdot 10^{-7} \cdot$ |
| △ | refin |
| —— | $-1.47 \cdot 10^{-9} \cdot x^2 + 2.0$ |
| —— | $1.6 \cdot 10^{-5} \cdot x$ |

n

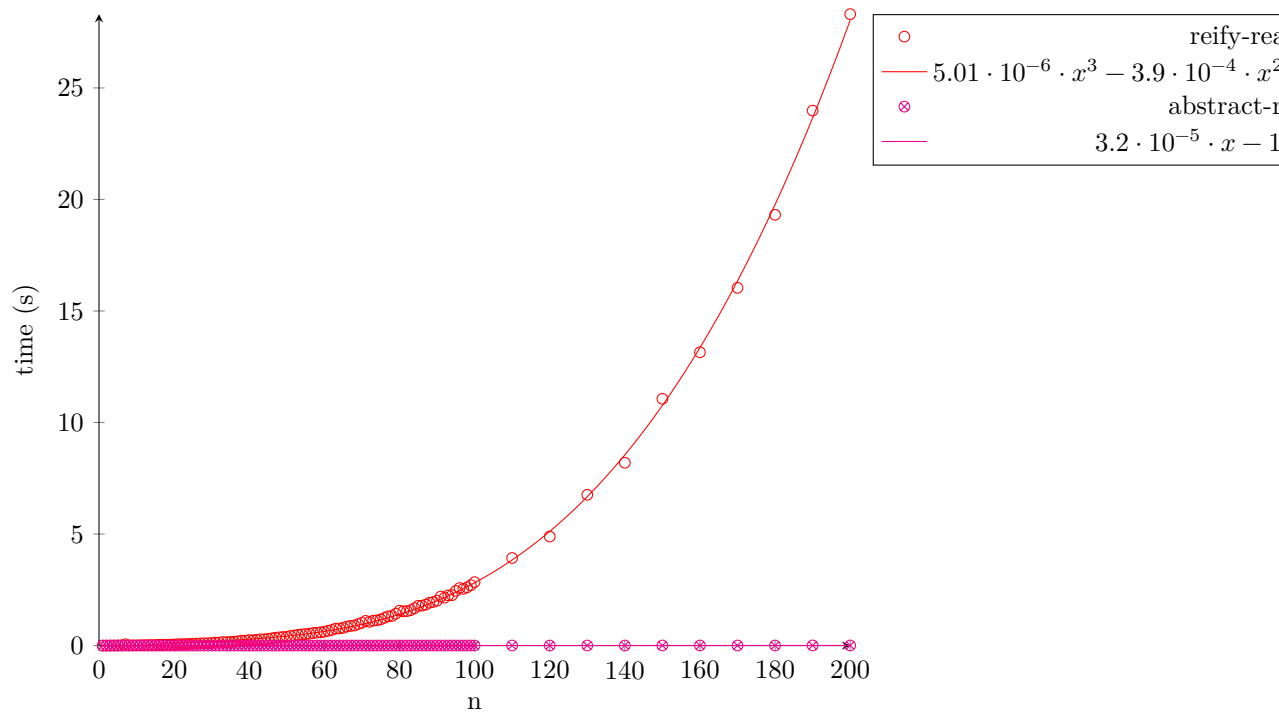Figure 12: timing-rewrite-repeated-app-fast-rewrite-no-abstract

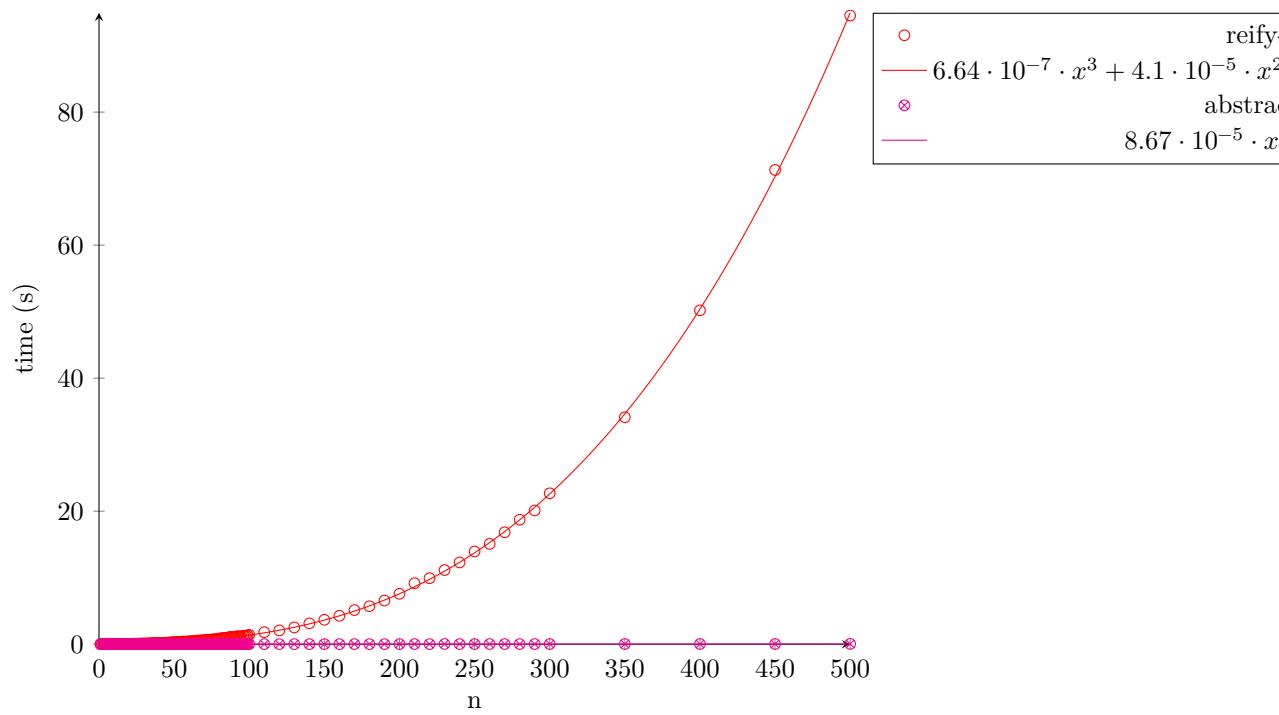Figure 13: timing-typeclass-reification-let-in-HOAS

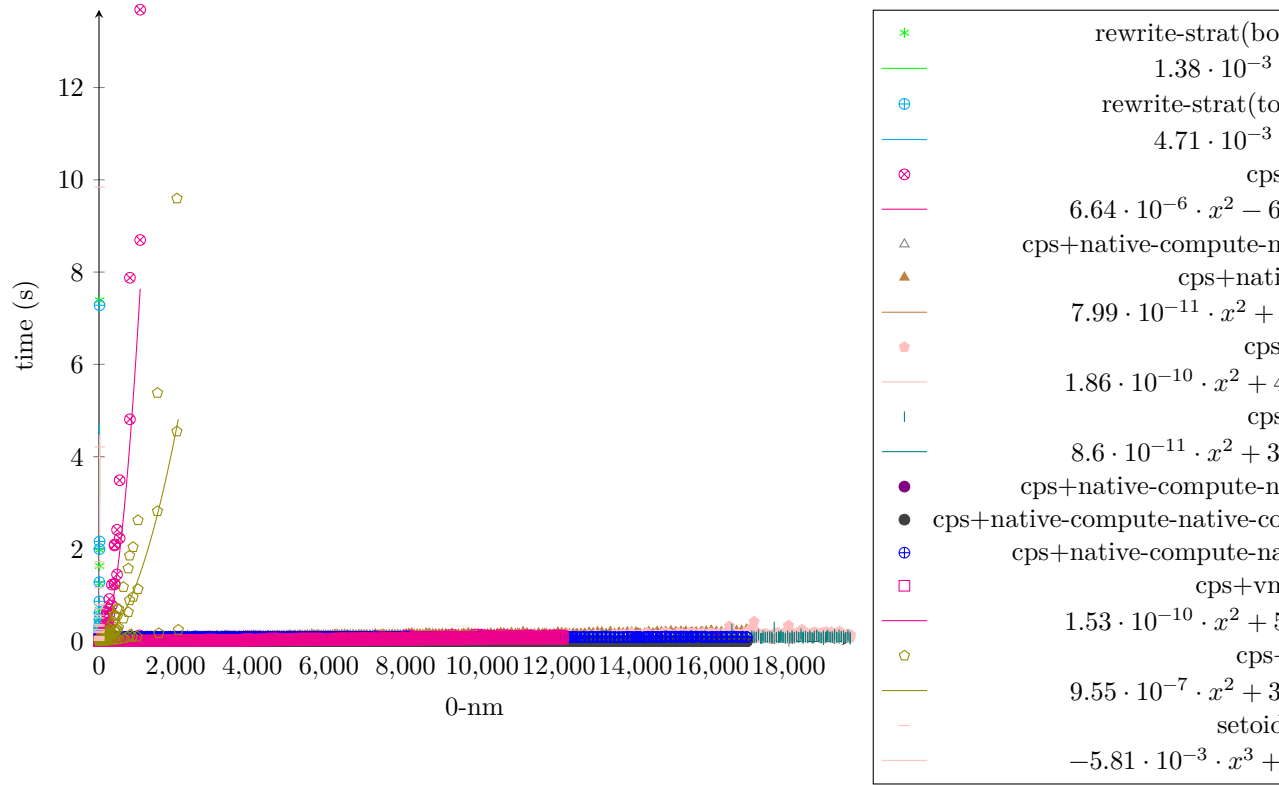Figure 14: timing-typeclass-reification-let-in-PHOAS

Figure 15: timing-rewrite-lift-lets-map param-1-n  1, param-2-m  1
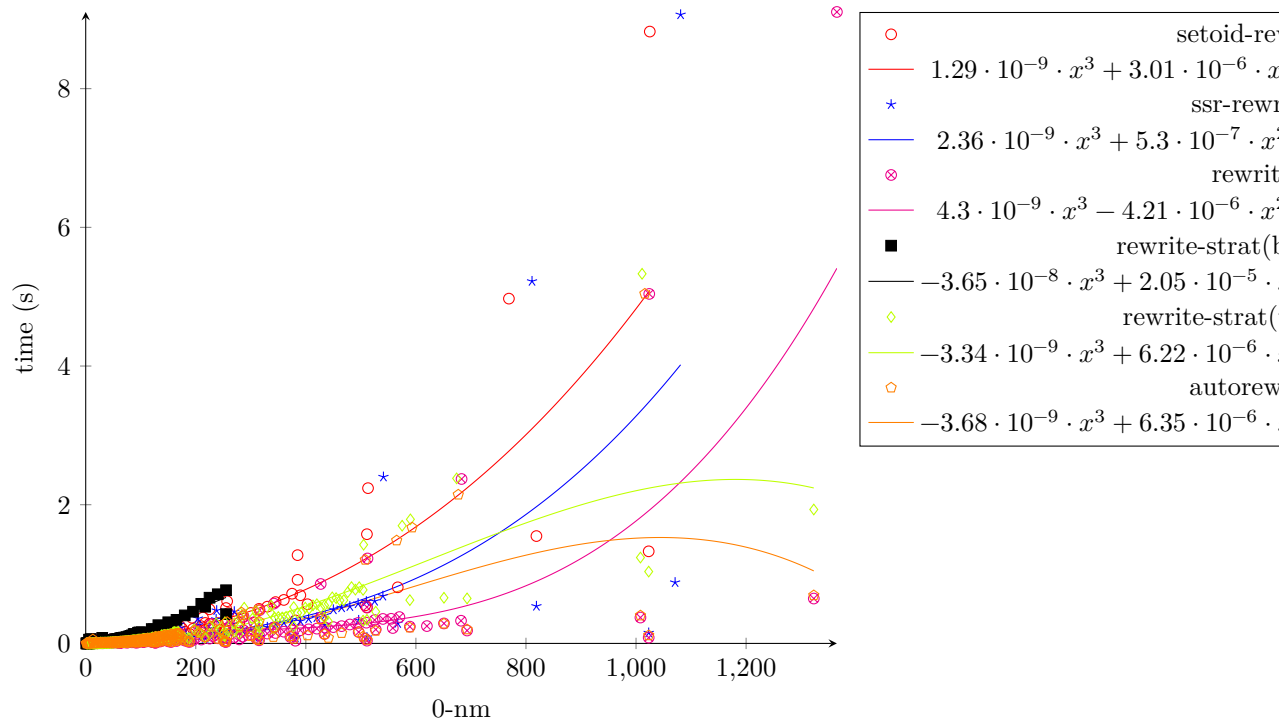
Figure 16: timing-rewrite-plus-0-tree param-1-n 0, param-2-m 1, param-3-input-size 5, param-4-output-size 3, param-5-num-rewrites 1
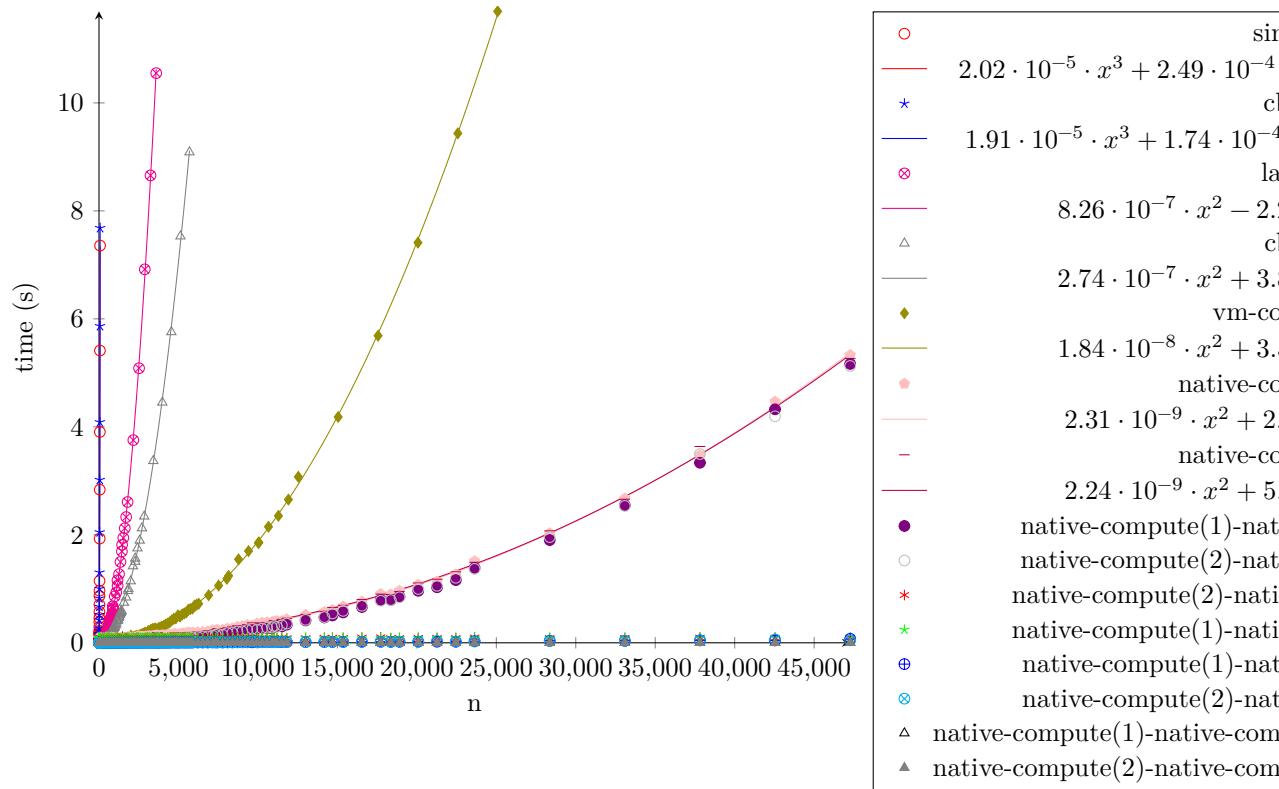
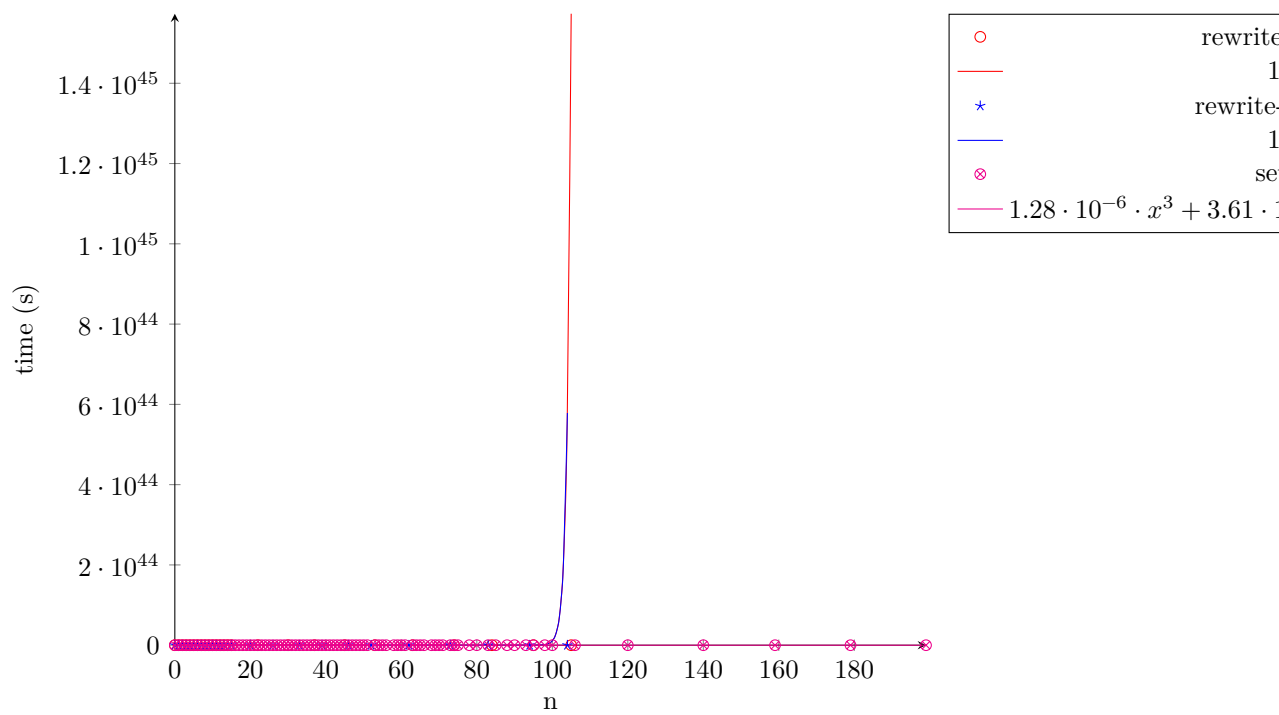Figure 17: timing-sieve-of-eratosthenes
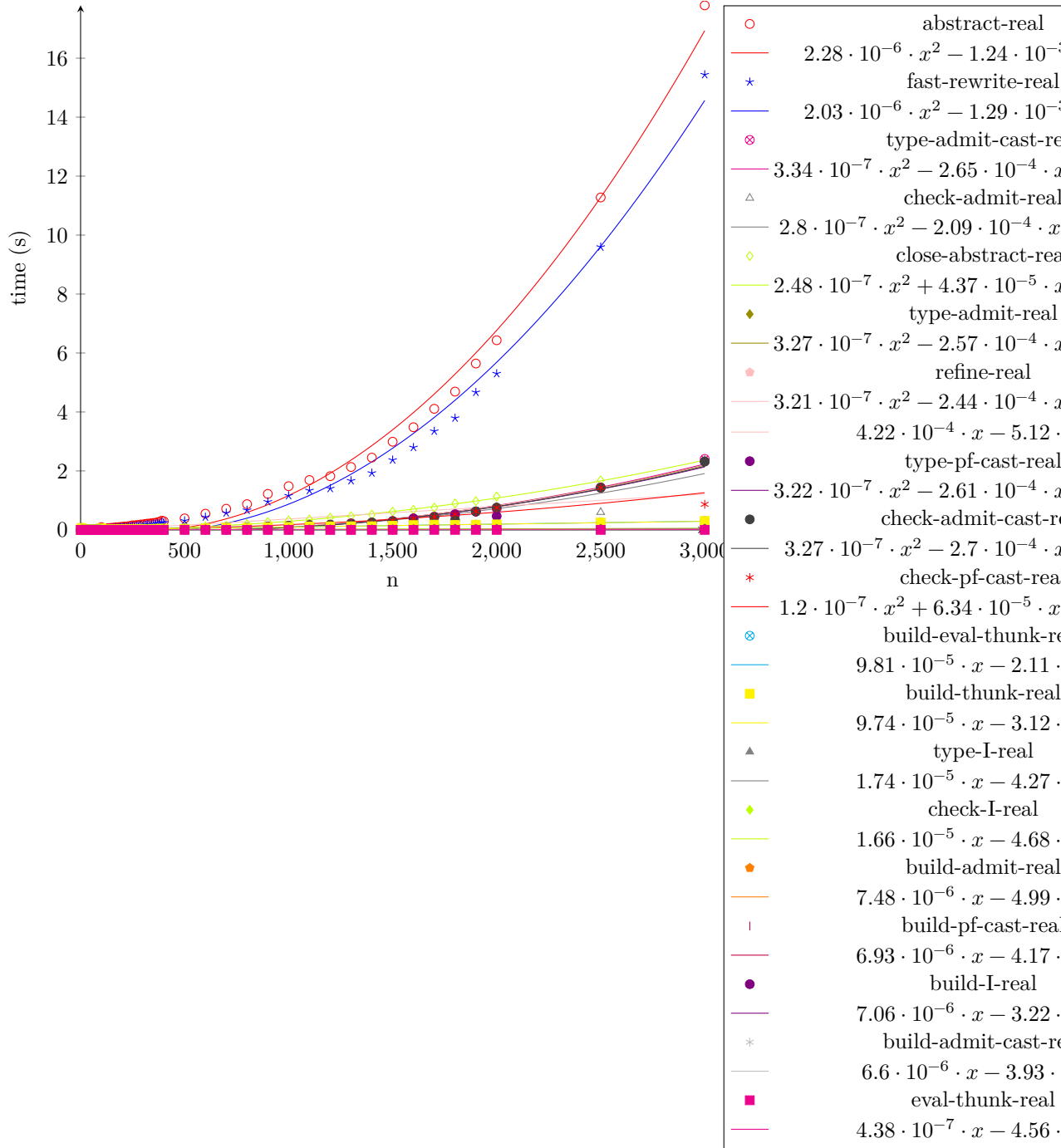
Figure 18: timing-rewrite-under-lets-plus-0

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