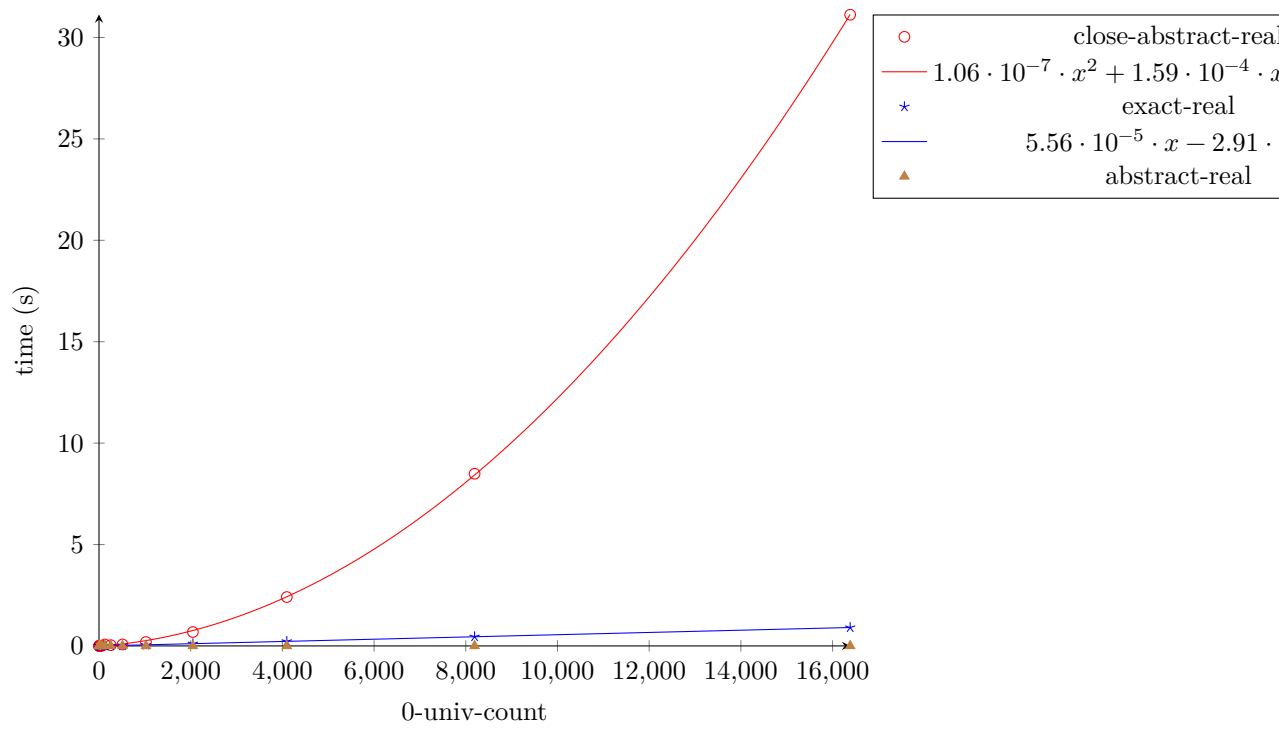Figure 1: timing-pattern

1

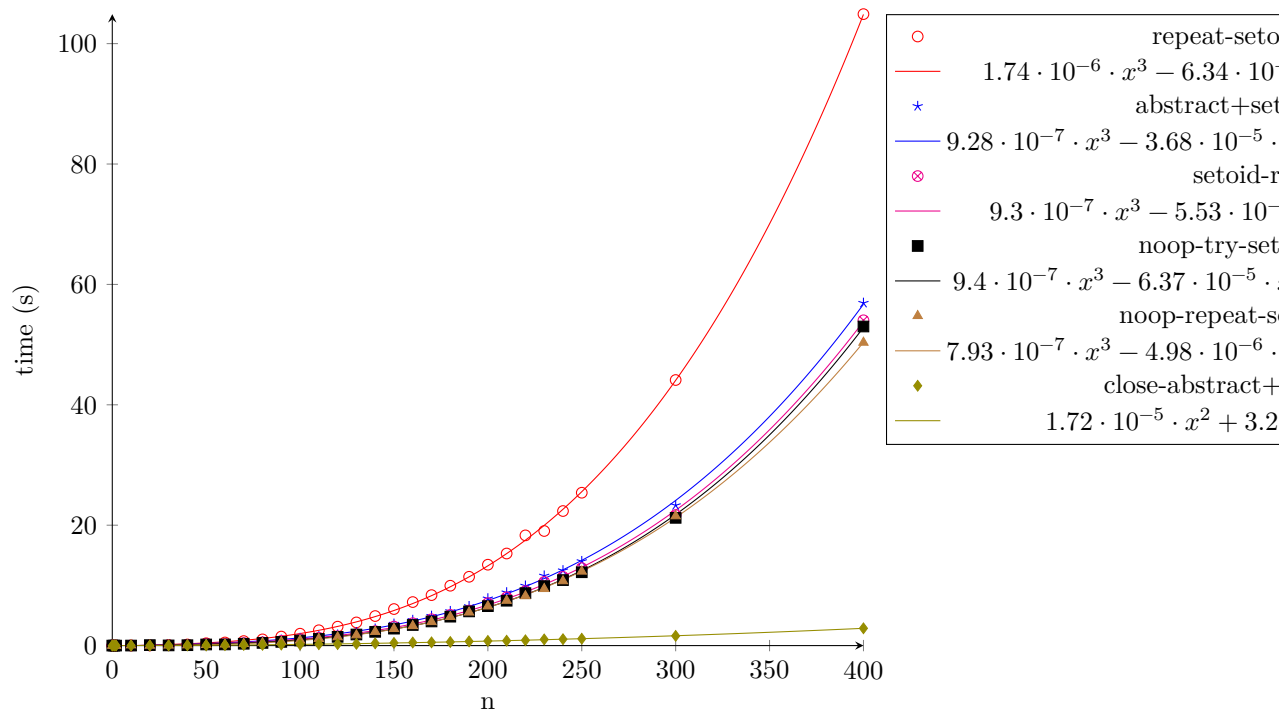Figure 2: timing-n-polymorphic-universes param-1-n   0

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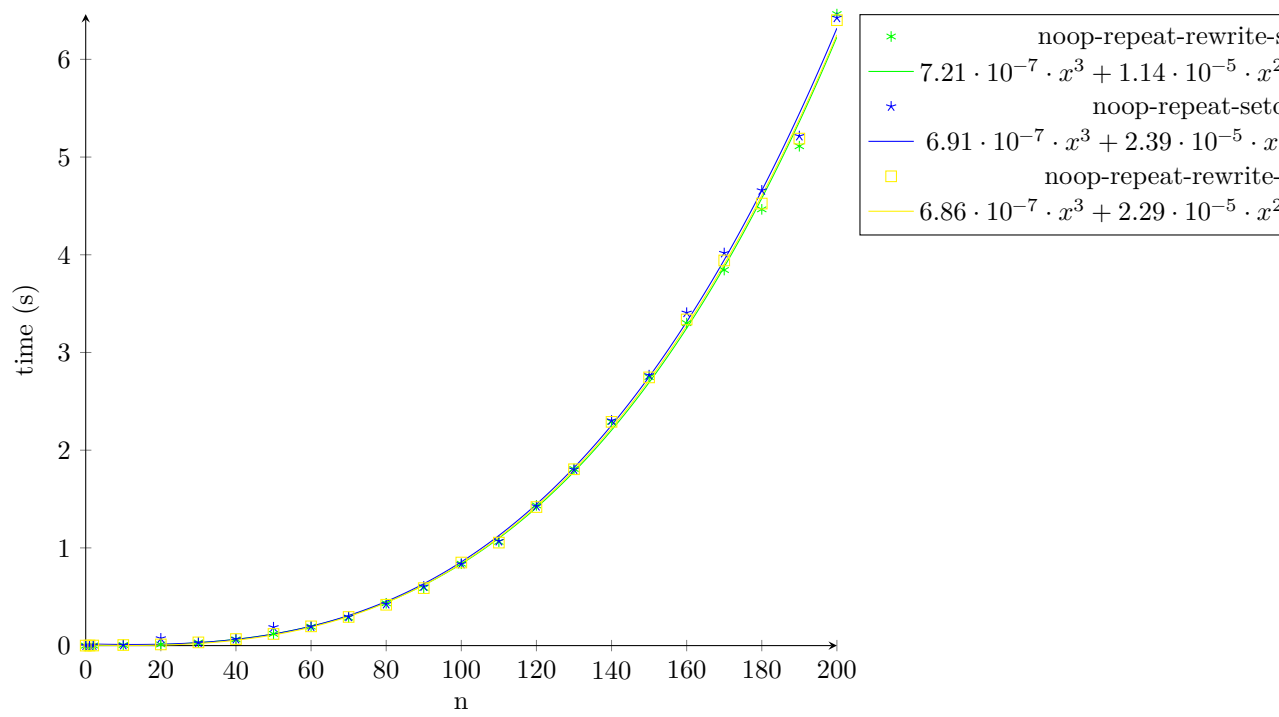
3

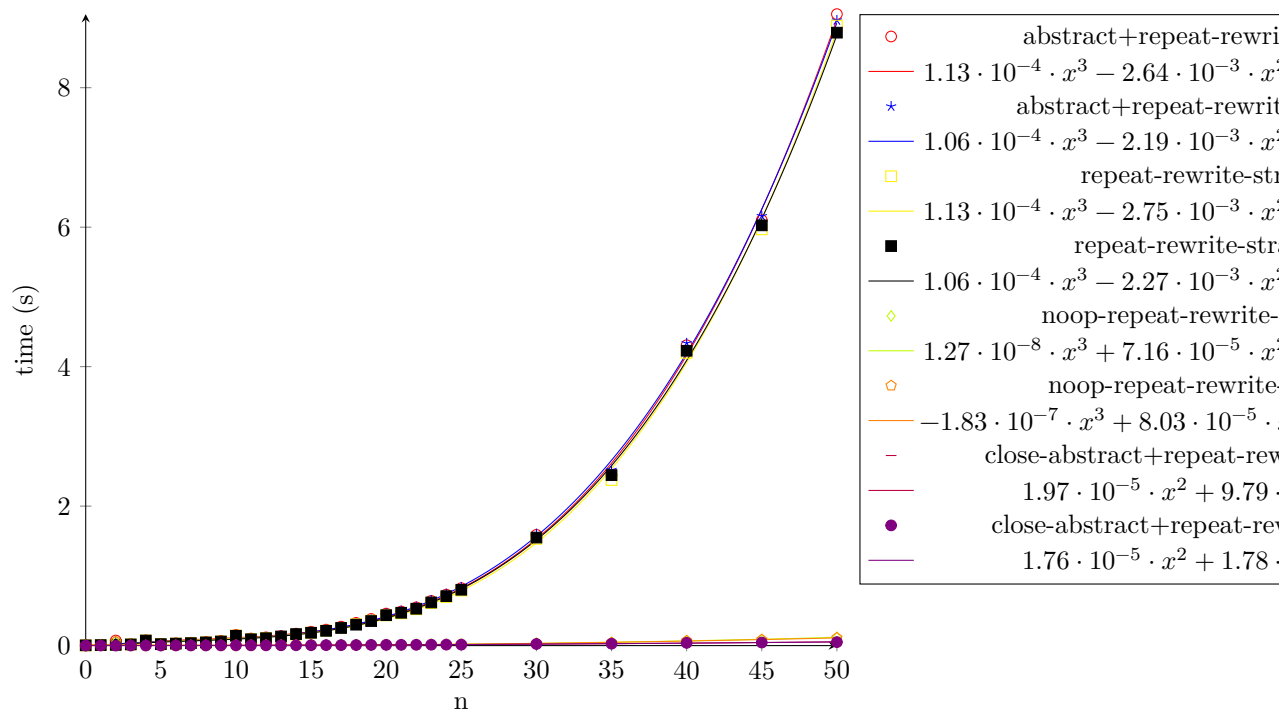Figure 4: timing-repeat-setoid-rewrite-under-binders-noop

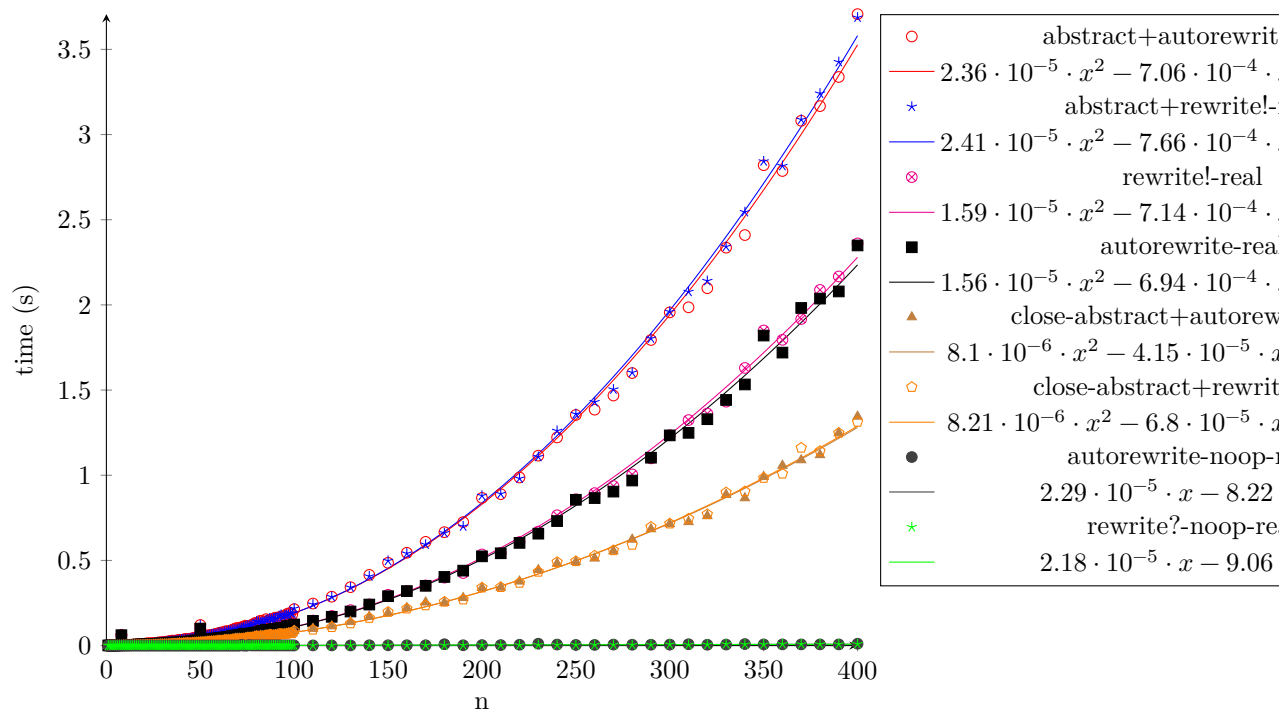Figure 5: timing-rewrite-strat-under-binders

The legend of the figure contains the following entries:

- abstract+repeat-rewri...
  $1.13 \cdot 10^{-4} \cdot x^3 - 2.64 \cdot 10^{-3} \cdot x^?$
- abstract+repeat-rewrit...
  $1.06 \cdot 10^{-4} \cdot x^3 - 2.19 \cdot 10^{-3} \cdot x^?$
- repeat-rewrite-str...
  $1.13 \cdot 10^{-4} \cdot x^3 - 2.75 \cdot 10^{-3} \cdot x^?$
- repeat-rewrite-stra...
  $1.06 \cdot 10^{-4} \cdot x^3 - 2.27 \cdot 10^{-3} \cdot x^?$
- noop-repeat-rewrite-...
  $1.27 \cdot 10^{-8} \cdot x^3 + 7.16 \cdot 10^{-5} \cdot x^?$
- noop-repeat-rewrite-...
  $-1.83 \cdot 10^{-7} \cdot x^3 + 8.03 \cdot 10^{-5} \cdot x^?$
- close-abstract+repeat-rew...
  $1.97 \cdot 10^{-5} \cdot x^2 + 9.79 \cdot$
- close-abstract+repeat-rew...
  $1.76 \cdot 10^{-5} \cdot x^2 + 1.78 \cdot$

5

Figure 6: timing-rewrite-repeated-app-autorewrite
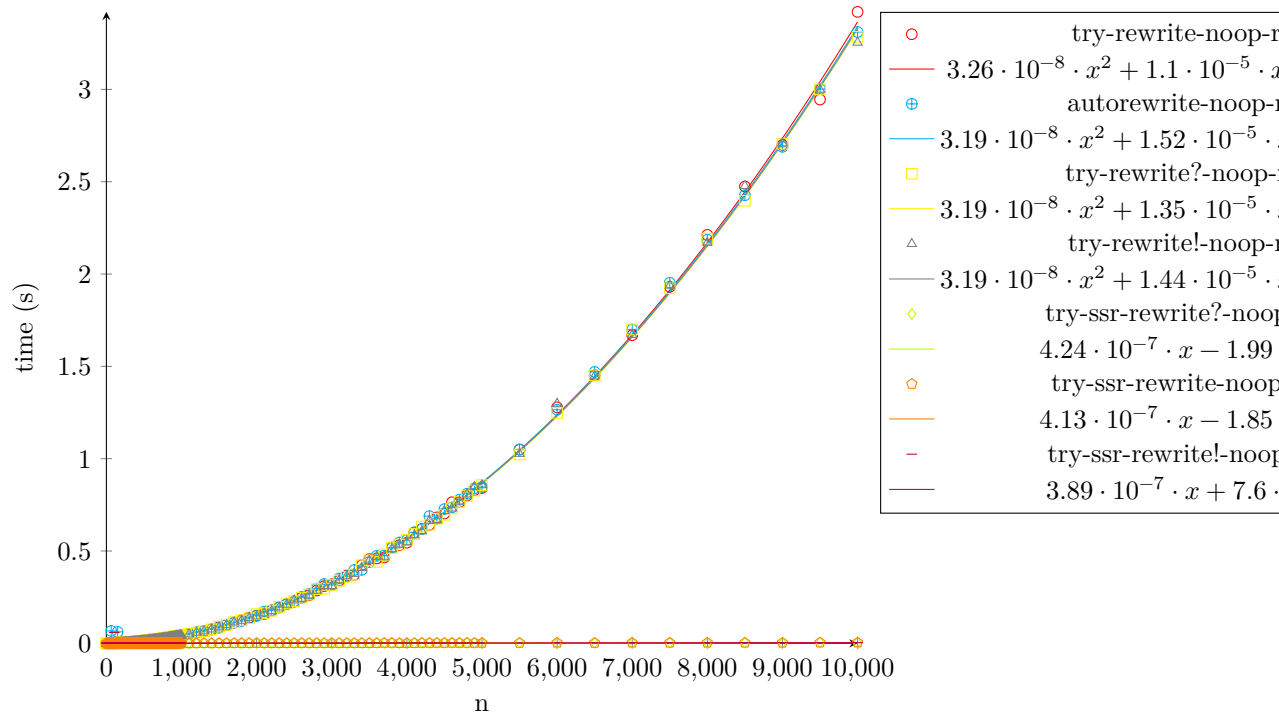
Figure 7: timing-rewrite-repeated-app-autorewrite-noop

The legend entries (partially cut off) read:

- try-rewrite-noop-n
- $3.26 \cdot 10^{-8} \cdot x^2 + 1.1 \cdot 10^{-5} \cdot x$
- autorewrite-noop-n
- $3.19 \cdot 10^{-8} \cdot x^2 + 1.52 \cdot 10^{-5} \cdot x$
- try-rewrite?-noop-n
- $3.19 \cdot 10^{-8} \cdot x^2 + 1.35 \cdot 10^{-5} \cdot x$
- try-rewrite!-noop-n
- $3.19 \cdot 10^{-8} \cdot x^2 + 1.44 \cdot 10^{-5} \cdot x$
- try-ssr-rewrite?-noop
- $4.24 \cdot 10^{-7} \cdot x - 1.99$
- try-ssr-rewrite-noop
- $4.13 \cdot 10^{-7} \cdot x - 1.85$
- try-ssr-rewrite!-noop
- $3.89 \cdot 10^{-7} \cdot x + 7.6$
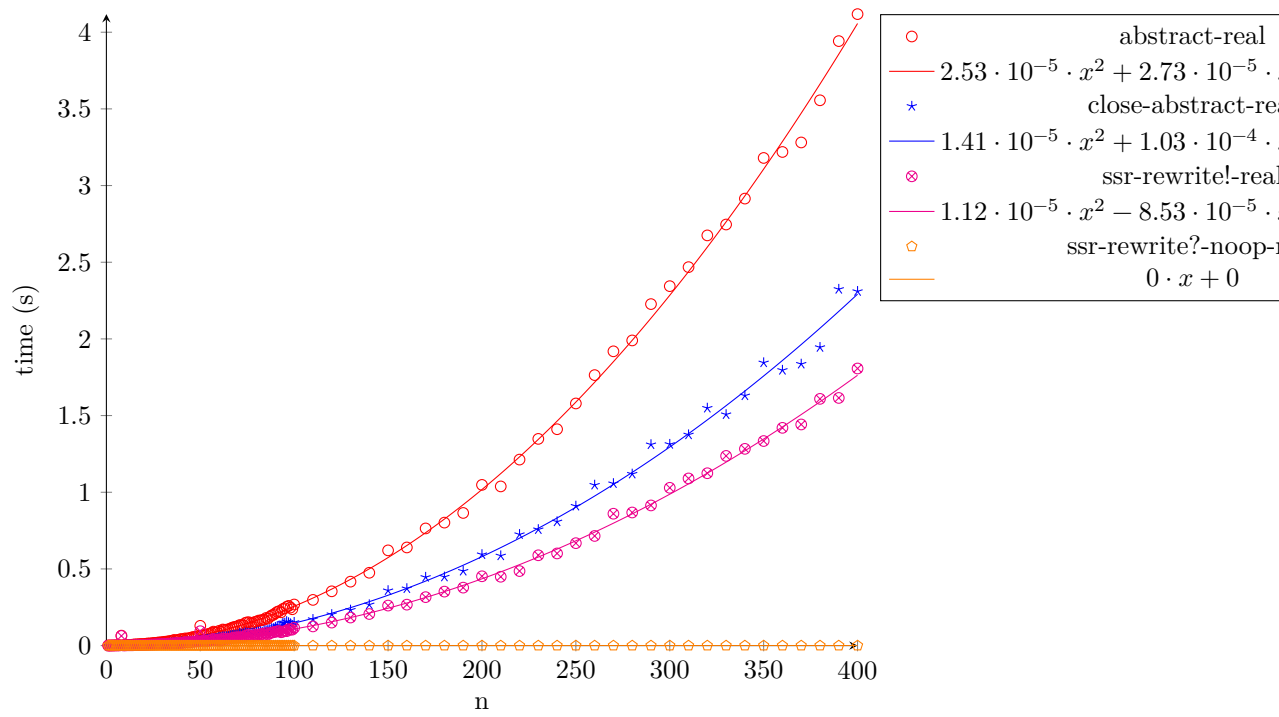
Figure 8: timing-rewrite-repeated-app-ssrrewrite
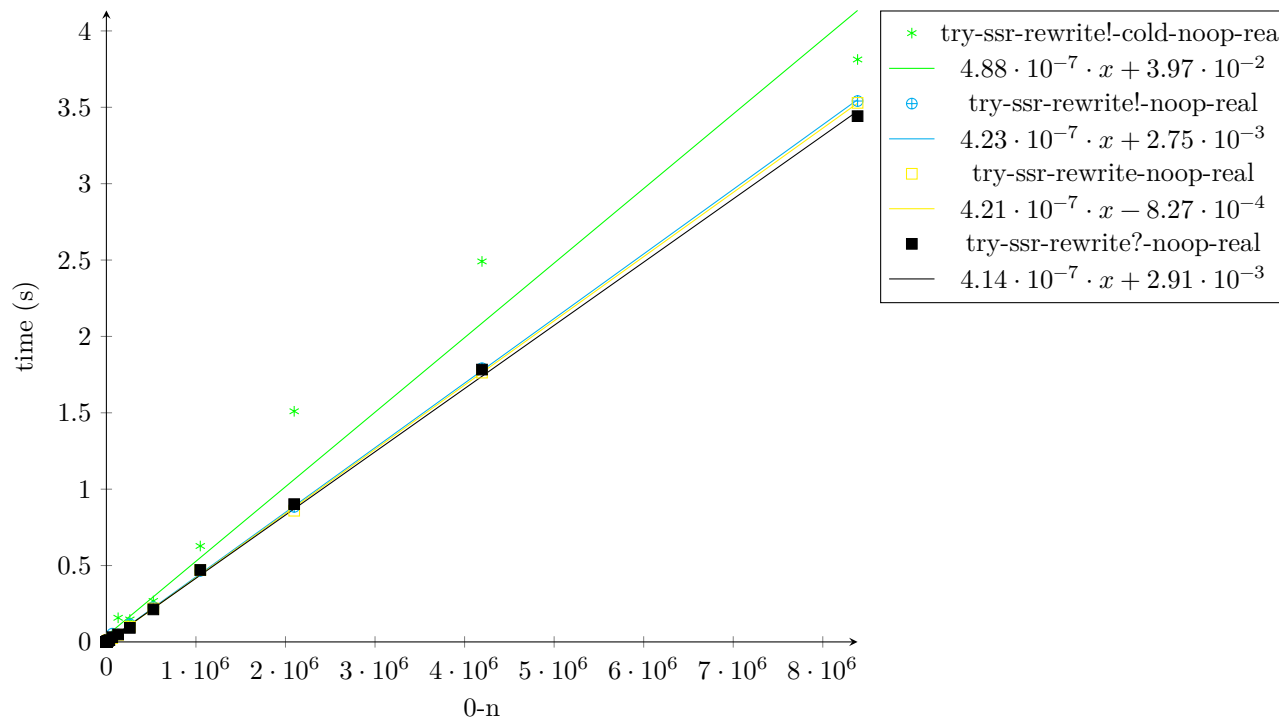
Figure 9: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn 1
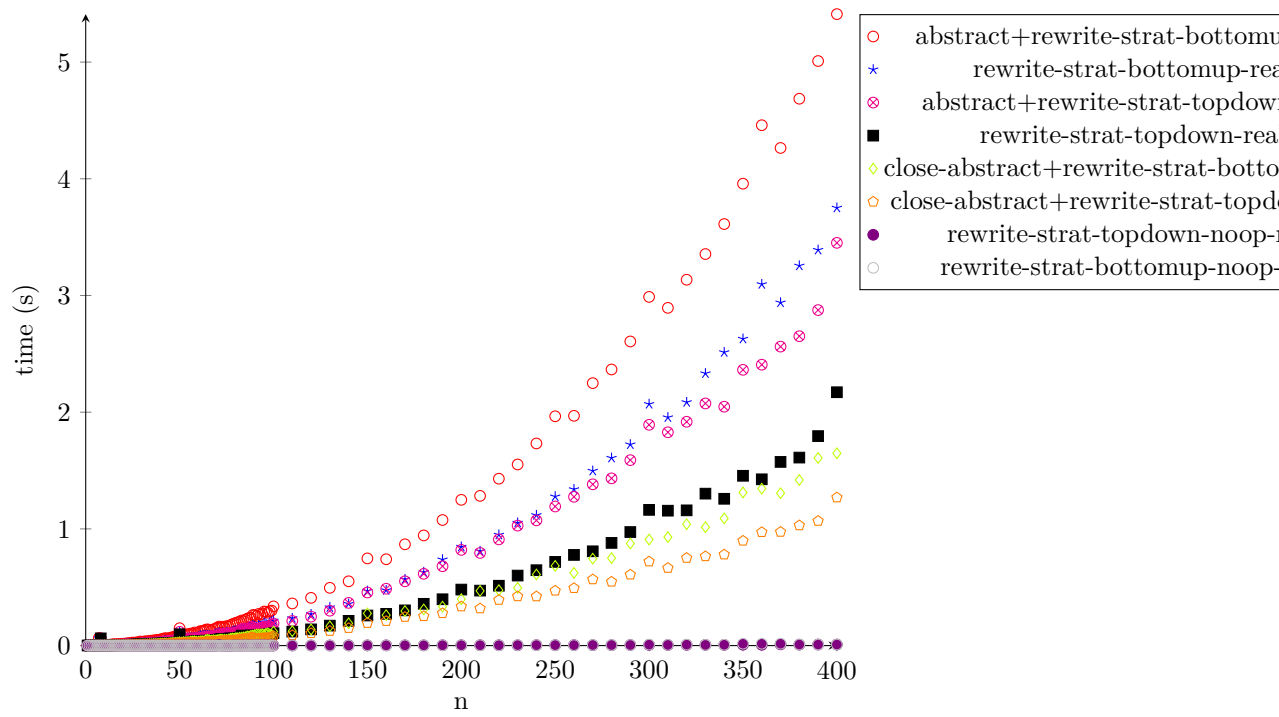
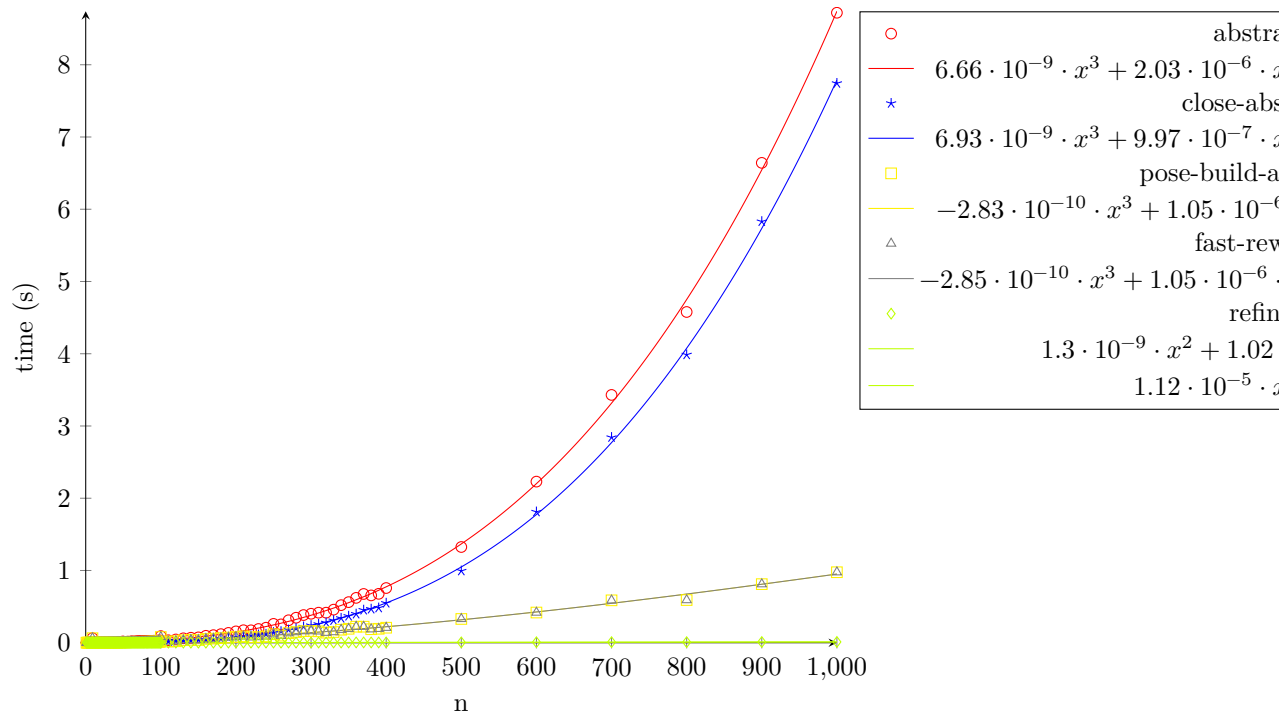Figure 10: timing-rewrite-repeated-app-rewrite-strat

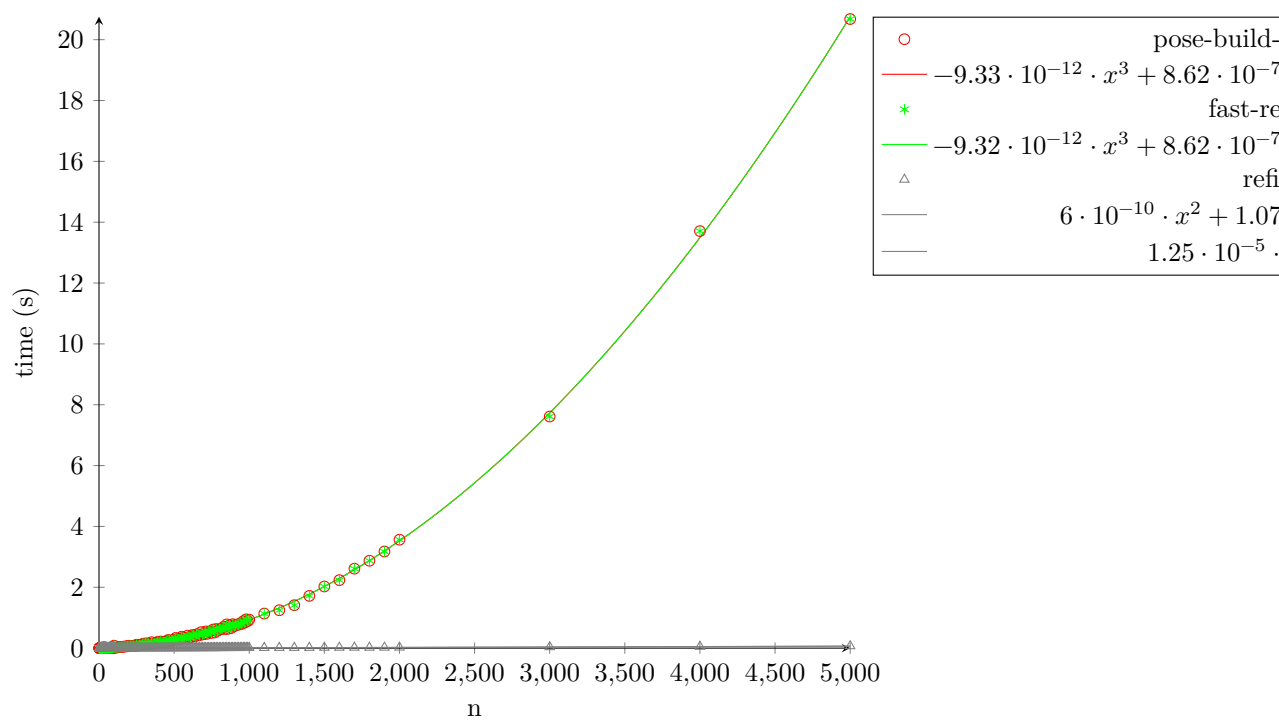Figure 11: timing-rewrite-repeated-app-fast-rewrite

11

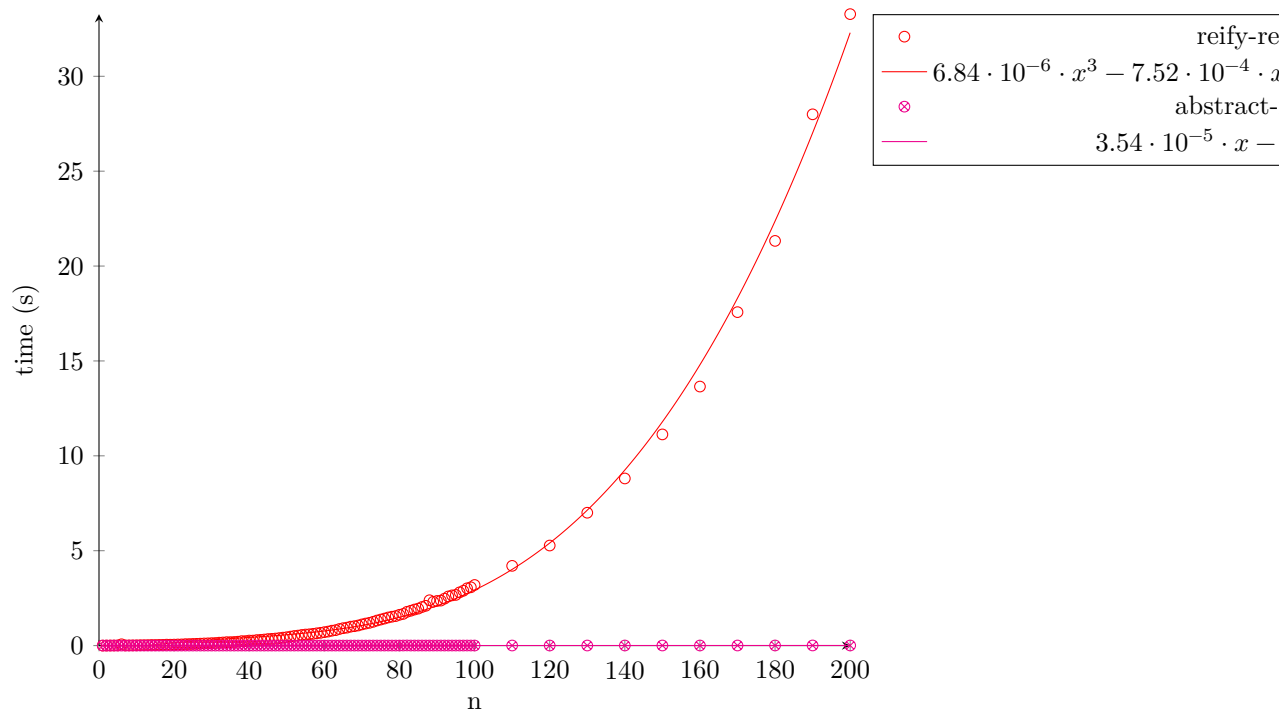Figure 12: timing-rewrite-repeated-app-fast-rewrite-no-abstract

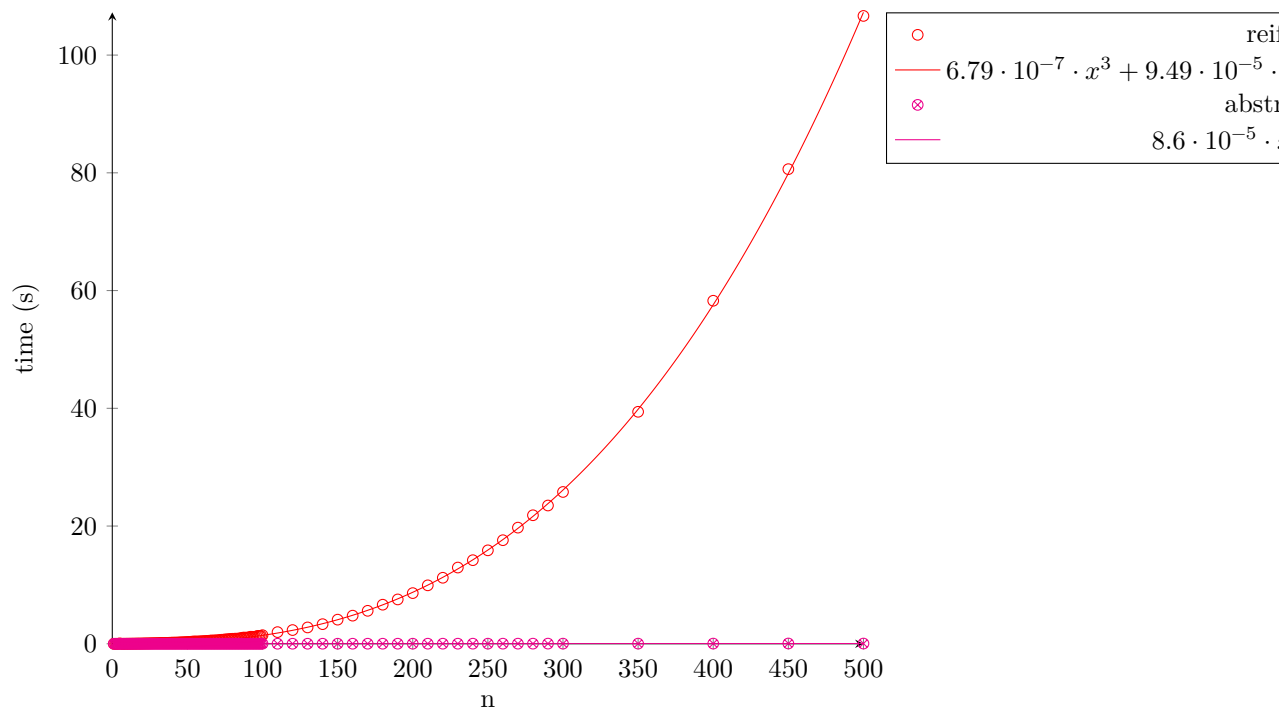Figure 13: timing-typeclass-reification-let-in-HOAS

Figure 14: timing-typeclass-reification-let-in-PHOAS
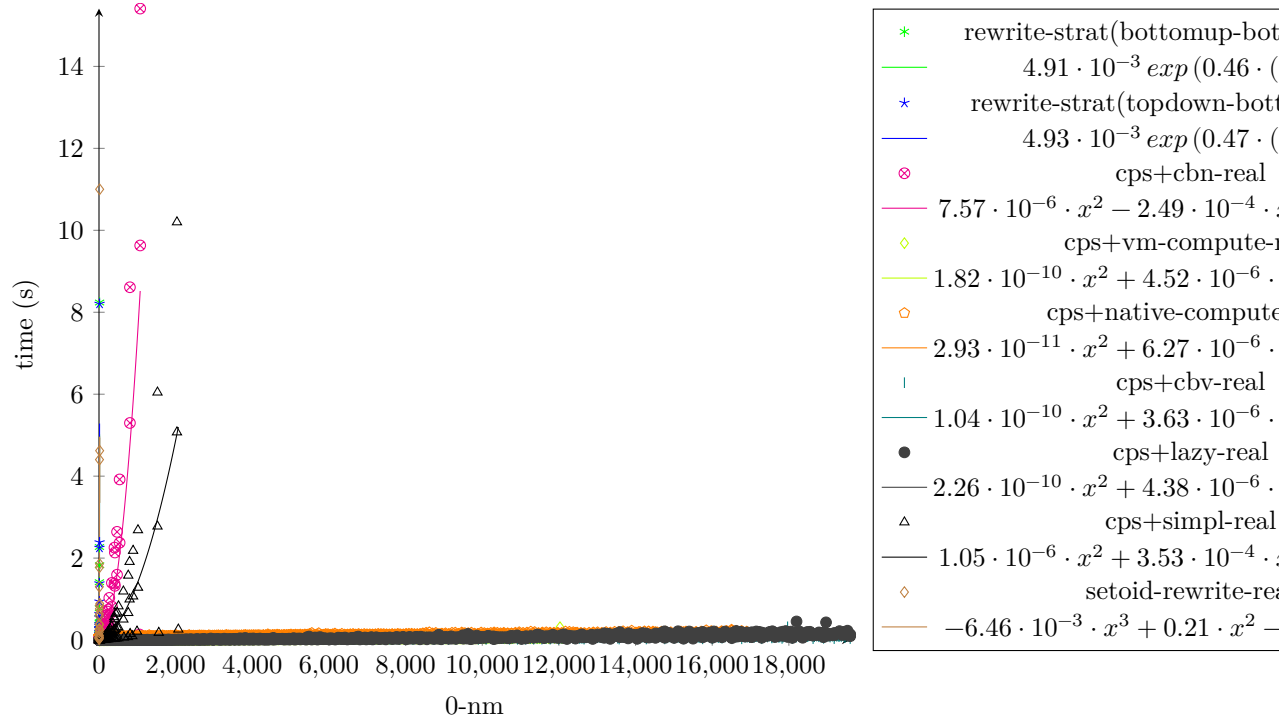
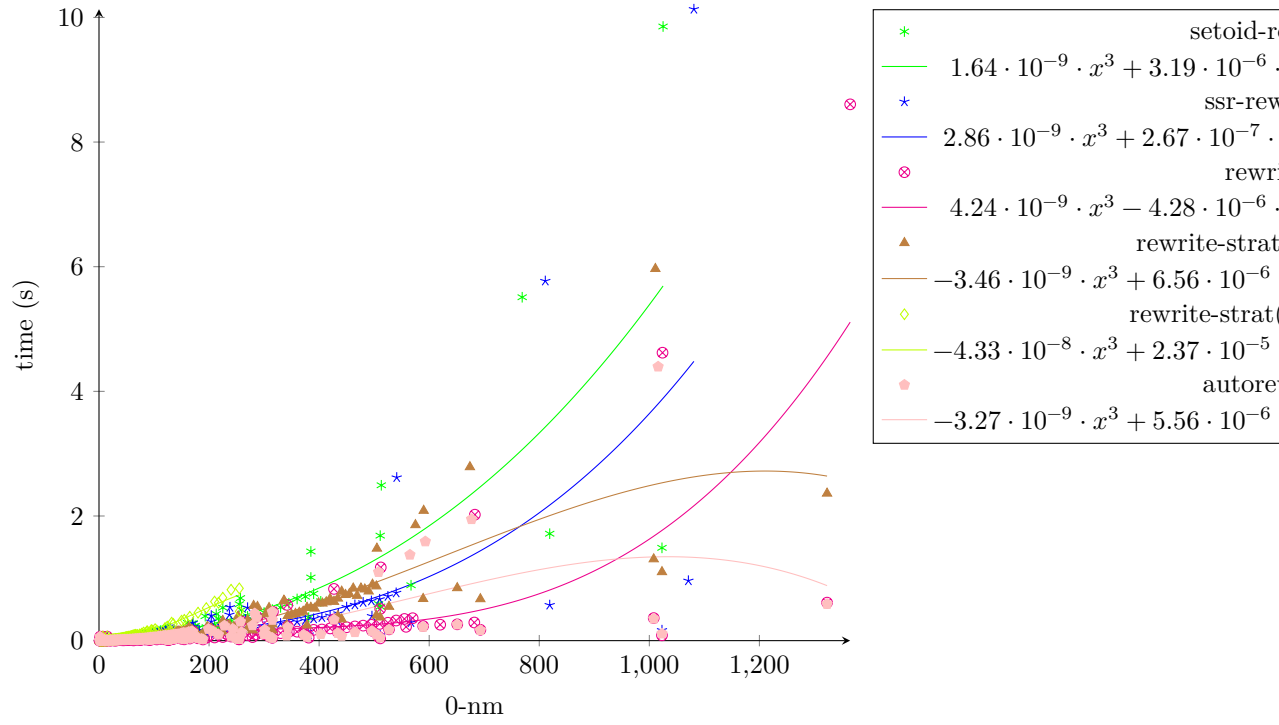Figure 15: timing-rewrite-lift-lets-map param-1-n 1, param-2-m 1

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
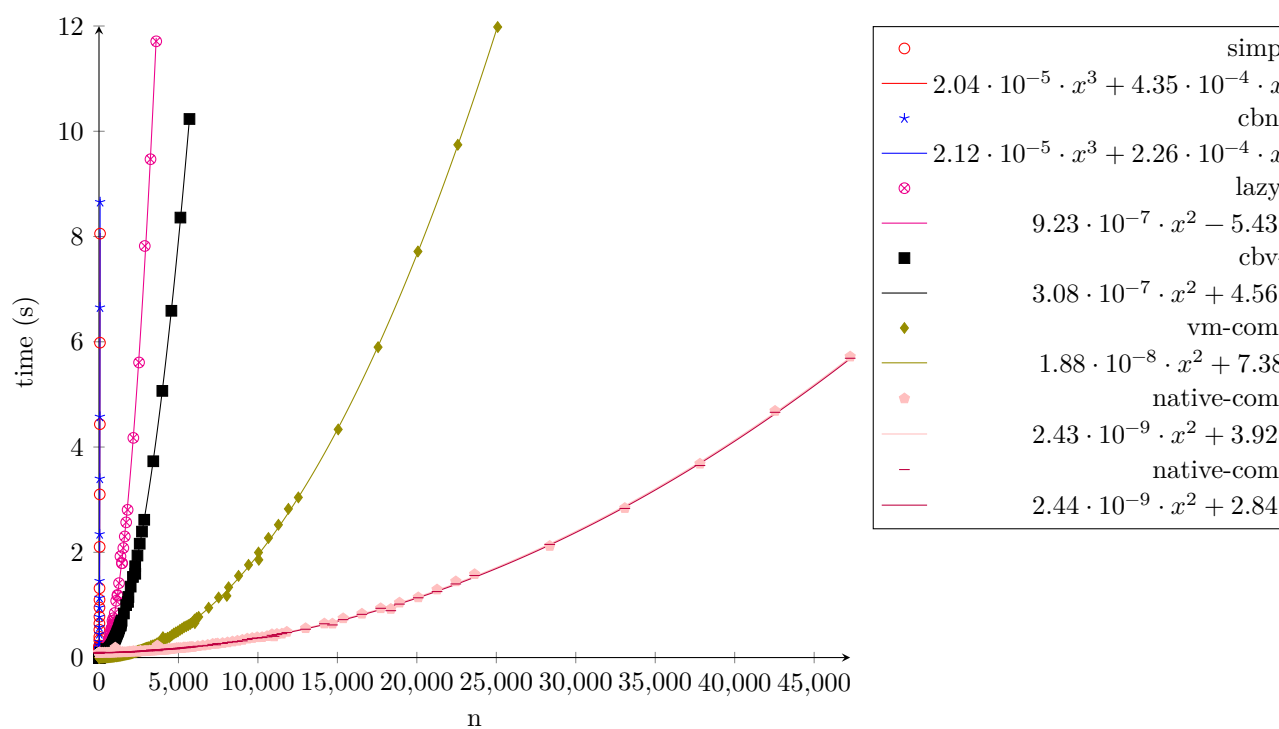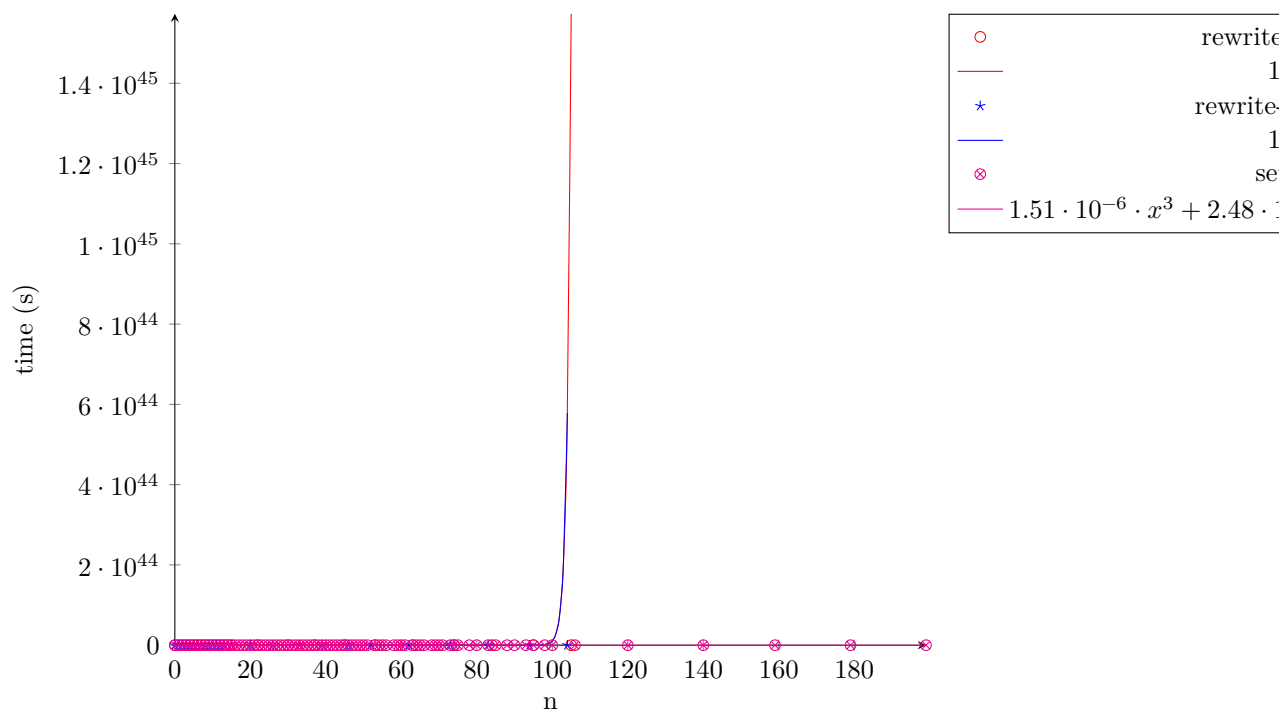
Figure 17: timing-sieve-of-eratosthenes

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