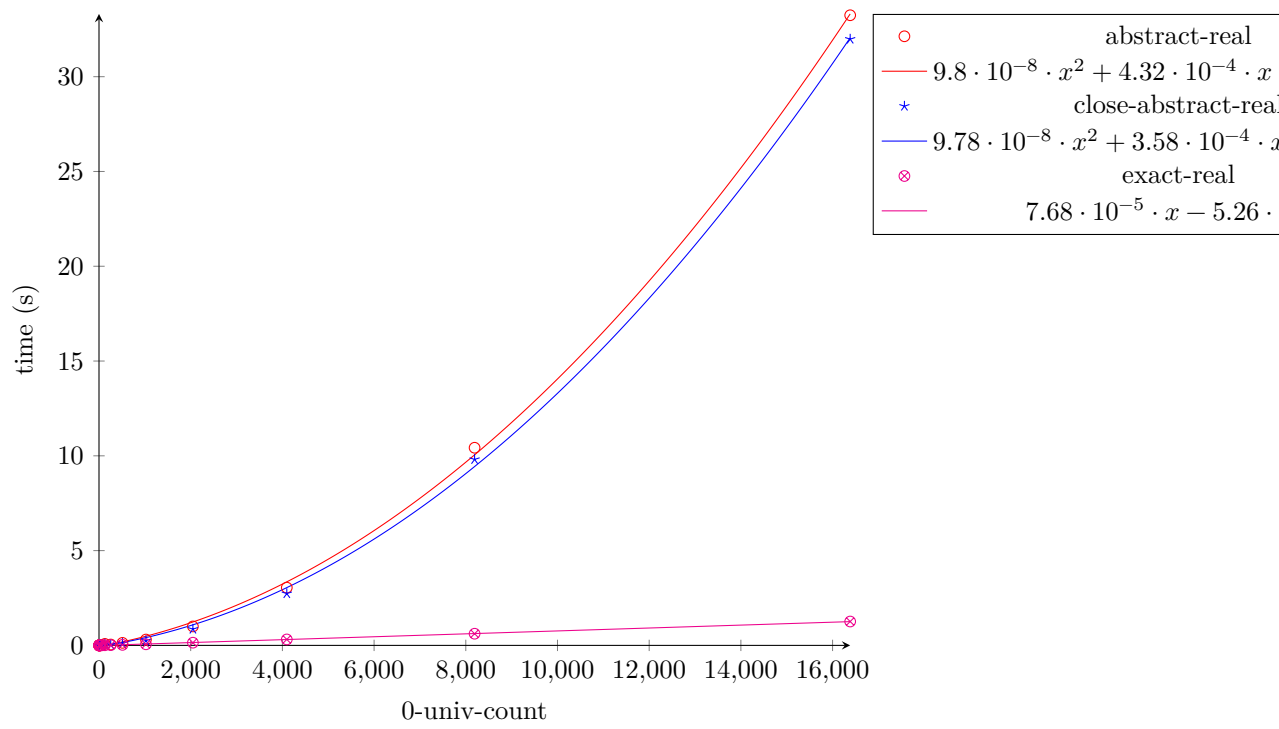Figure 1: timing-pattern

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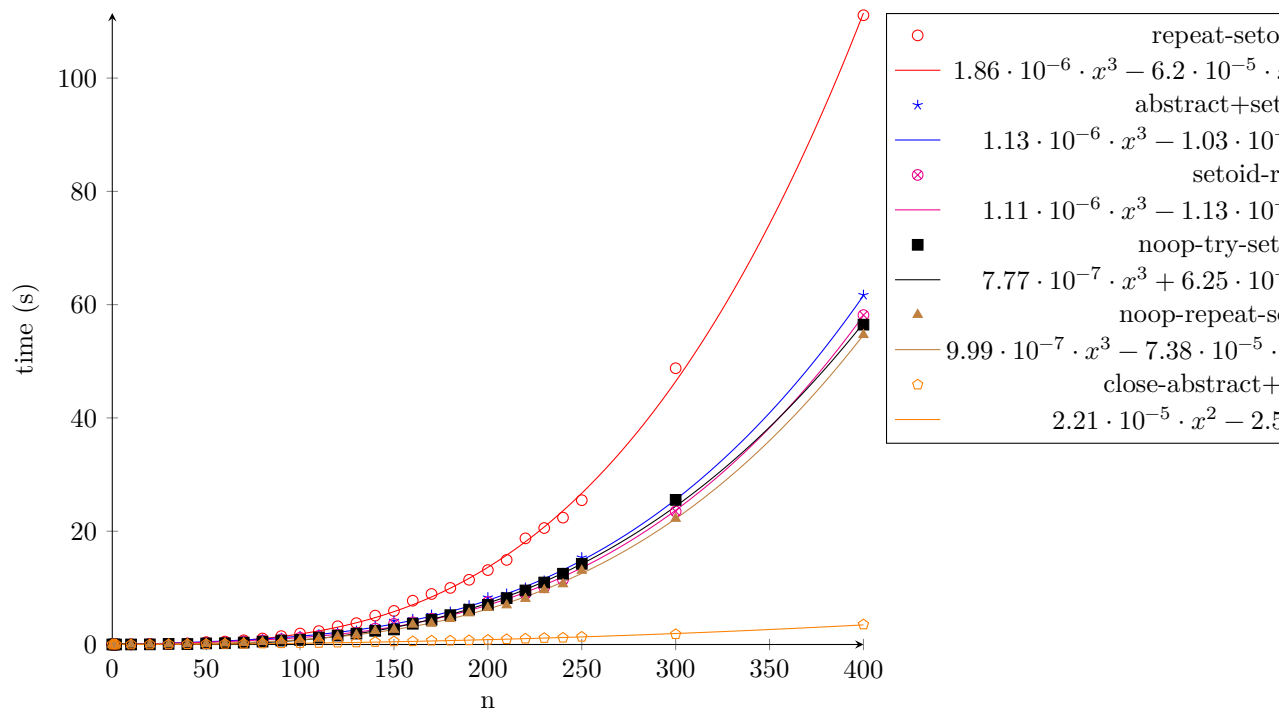
Figure 3: timing-repeat-setoid-rewrite-under-binders
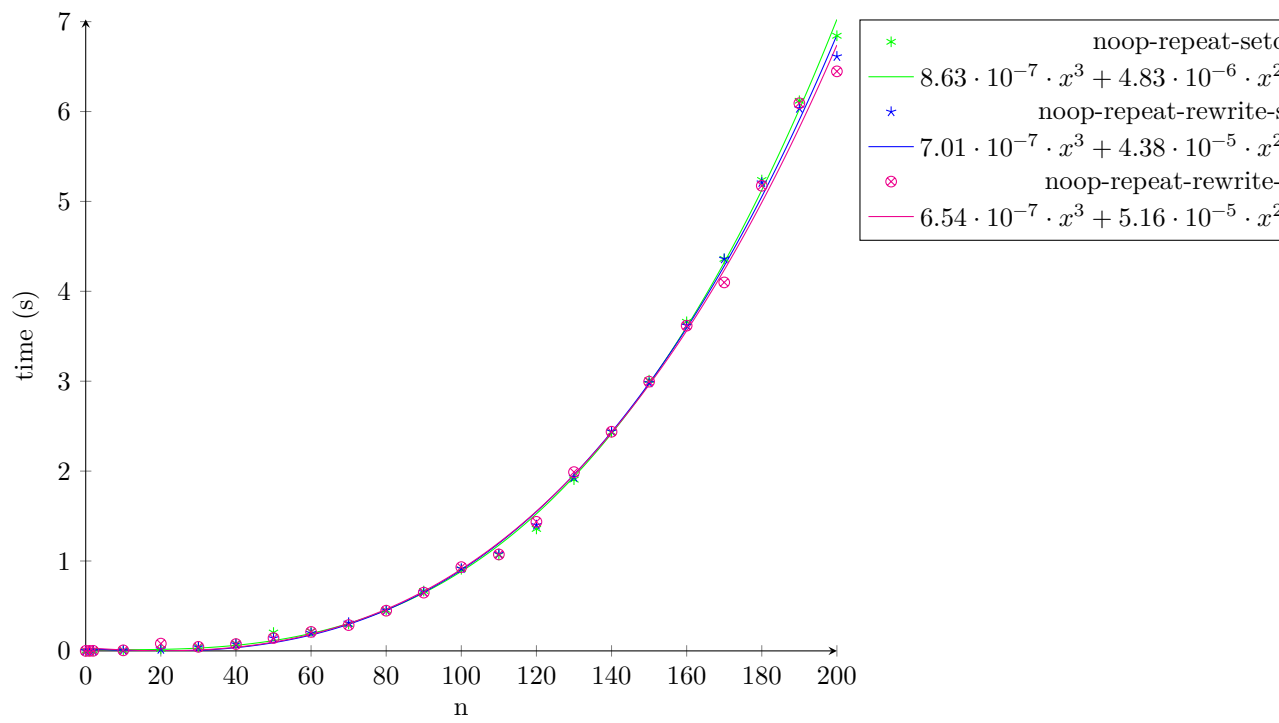
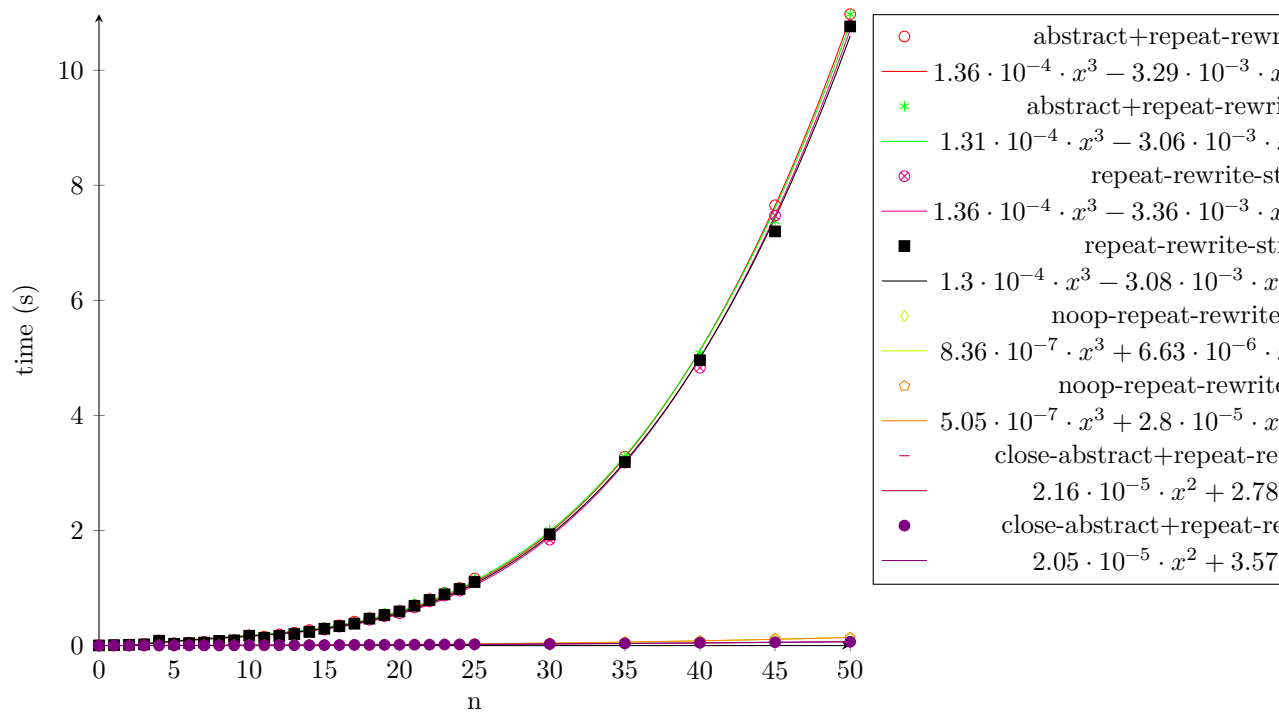Figure 4: timing-repeat-setoid-rewrite-under-binders-noop
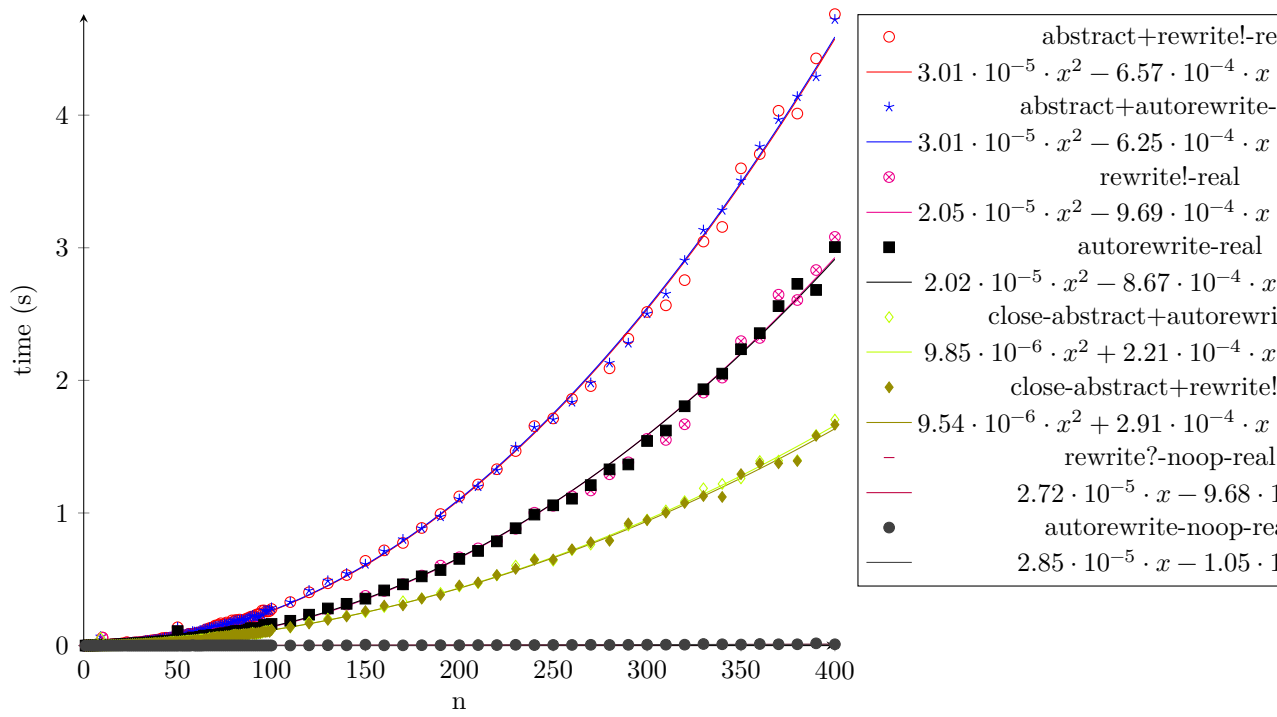
4

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

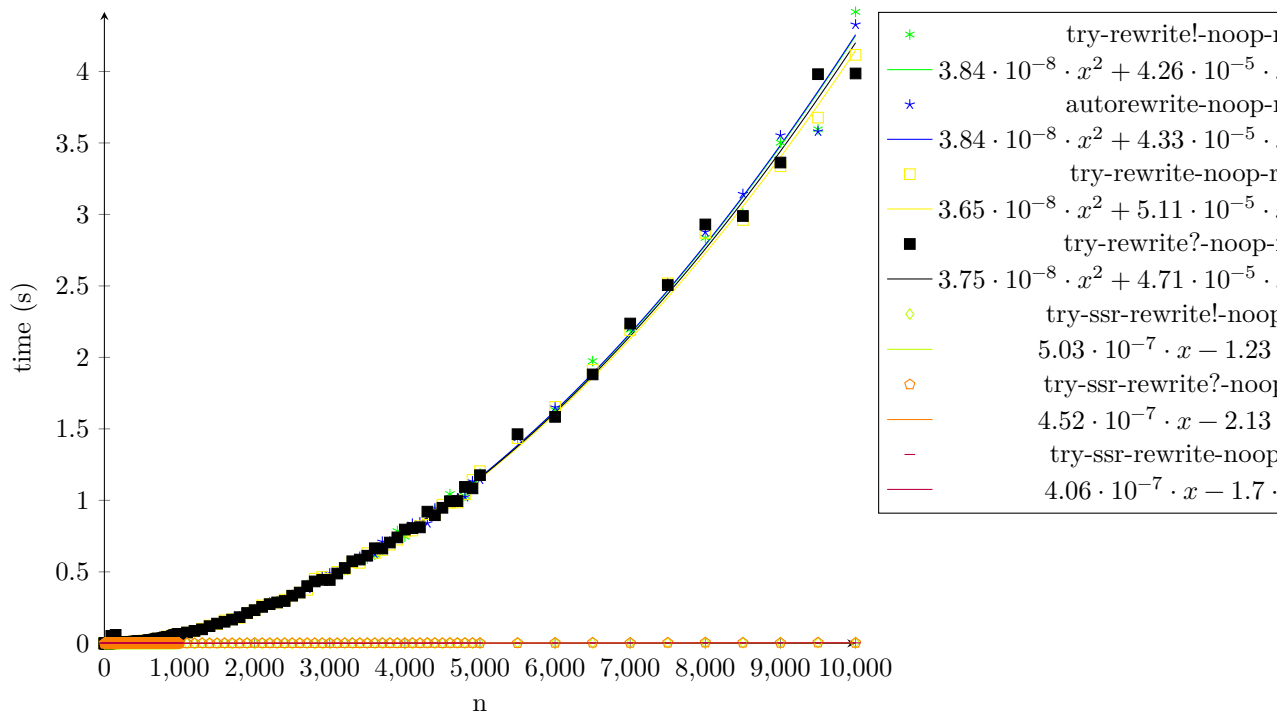Figure 6: timing-rewrite-repeated-app-autorewrite

6

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

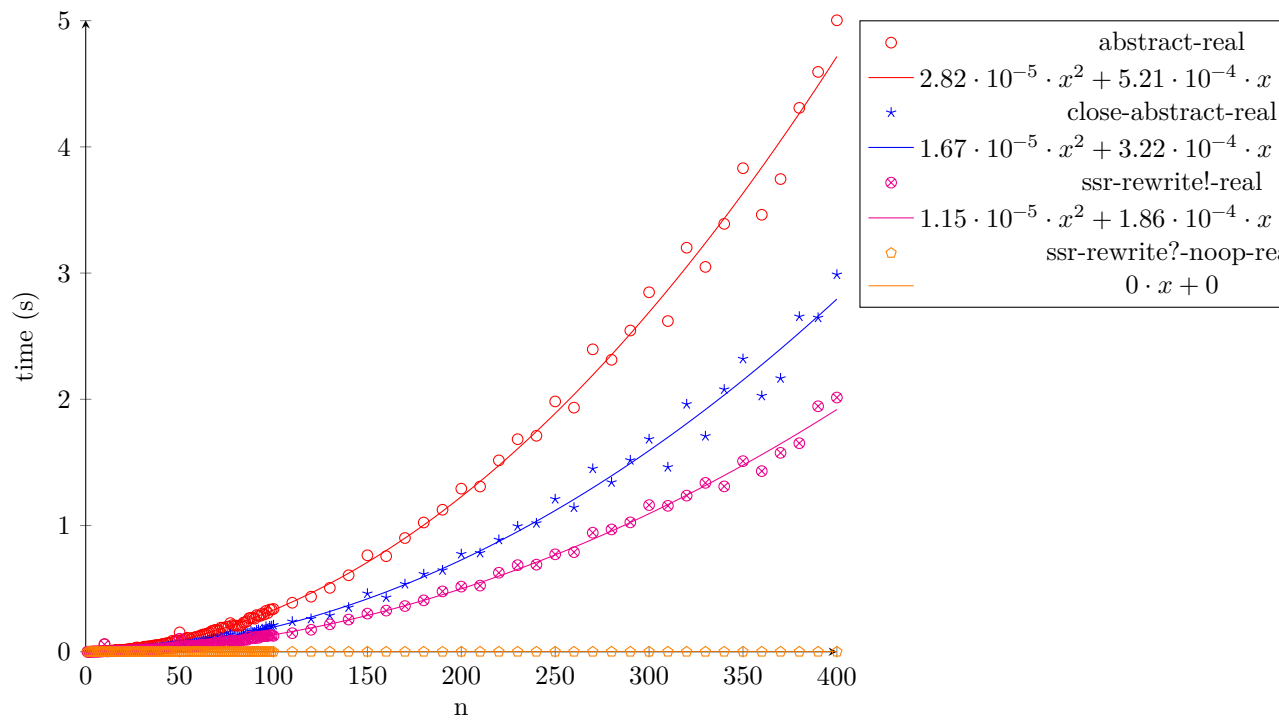Figure 8: timing-rewrite-repeated-app-ssrrewrite

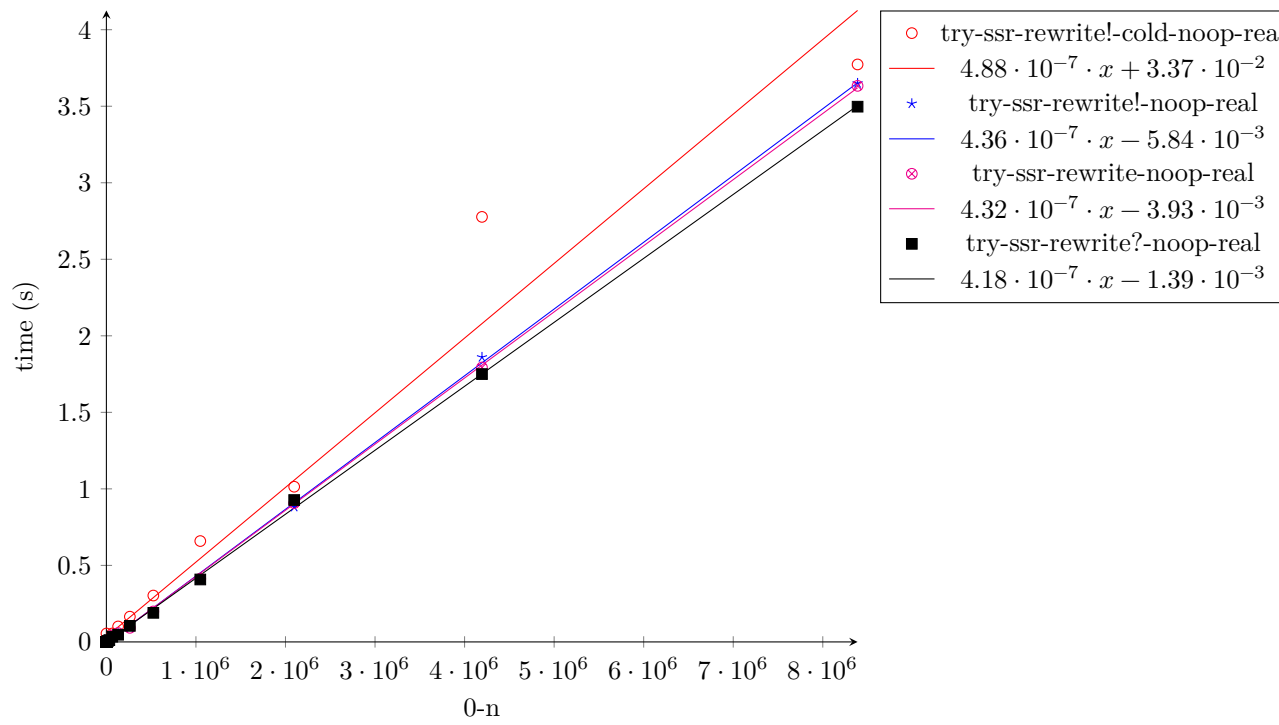Figure 9: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn 1
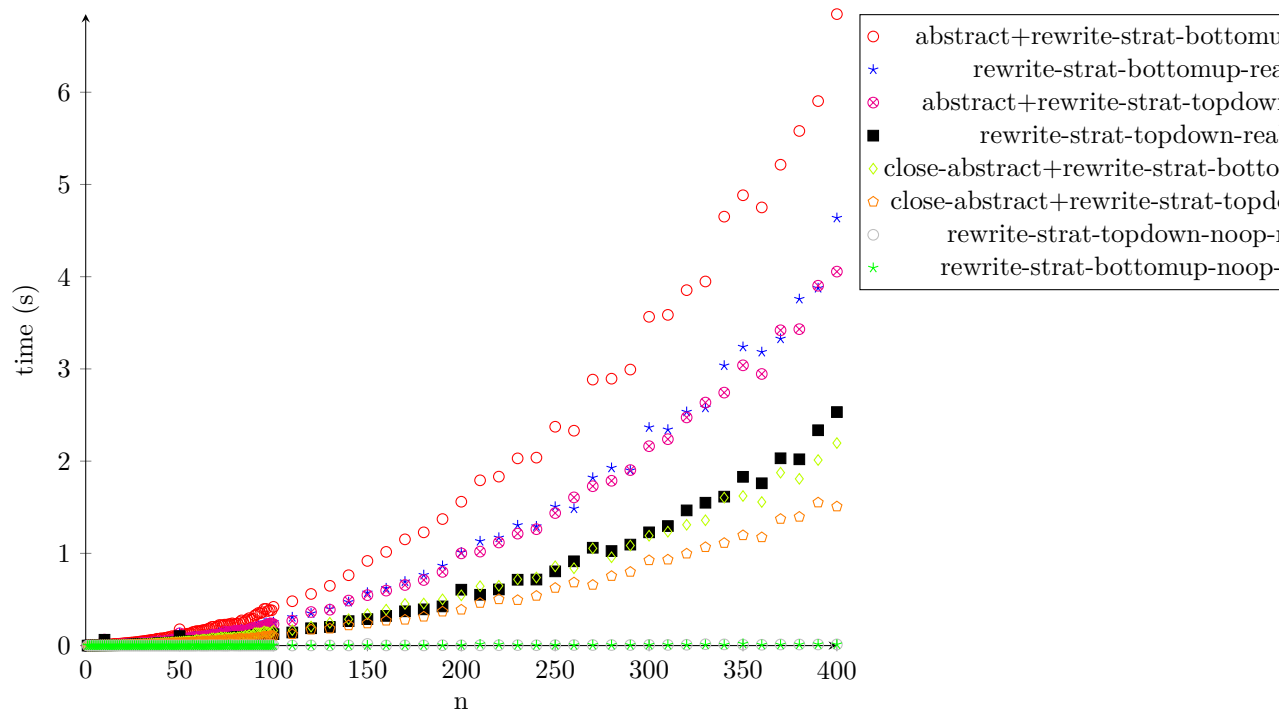
Figure 10: timing-rewrite-repeated-app-rewrite-strat
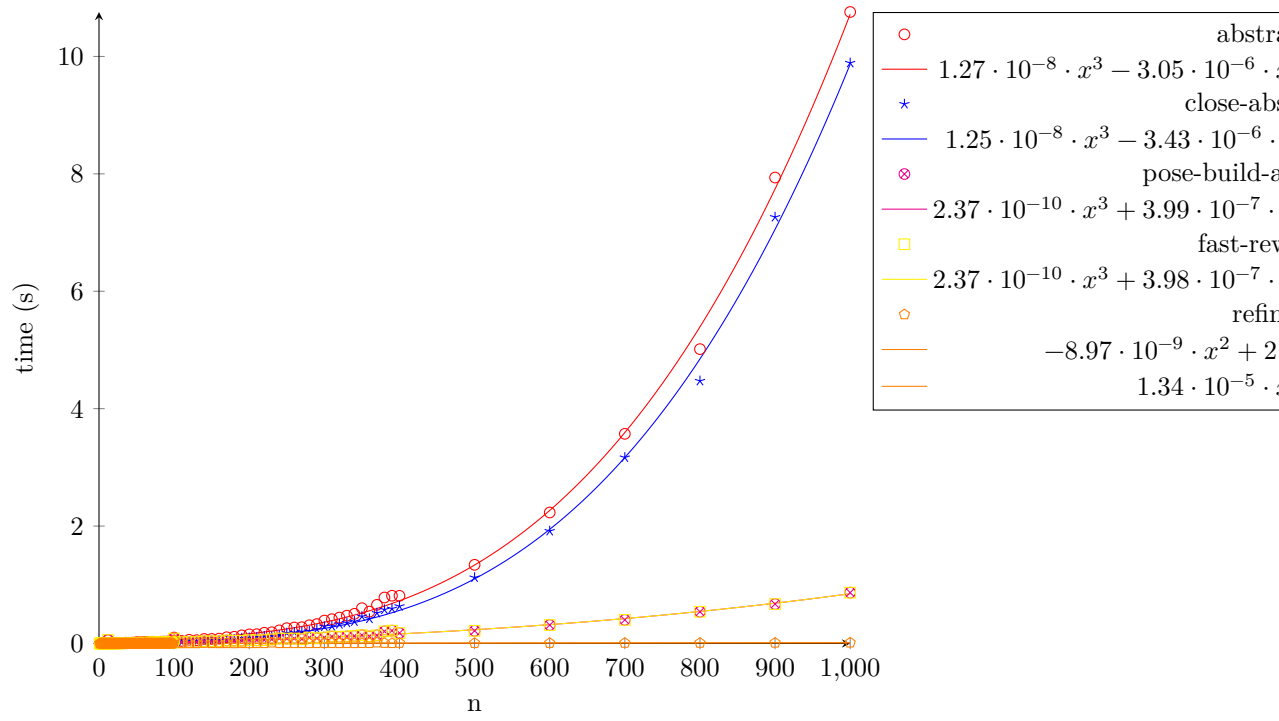
Figure 11: timing-rewrite-repeated-app-fast-rewrite
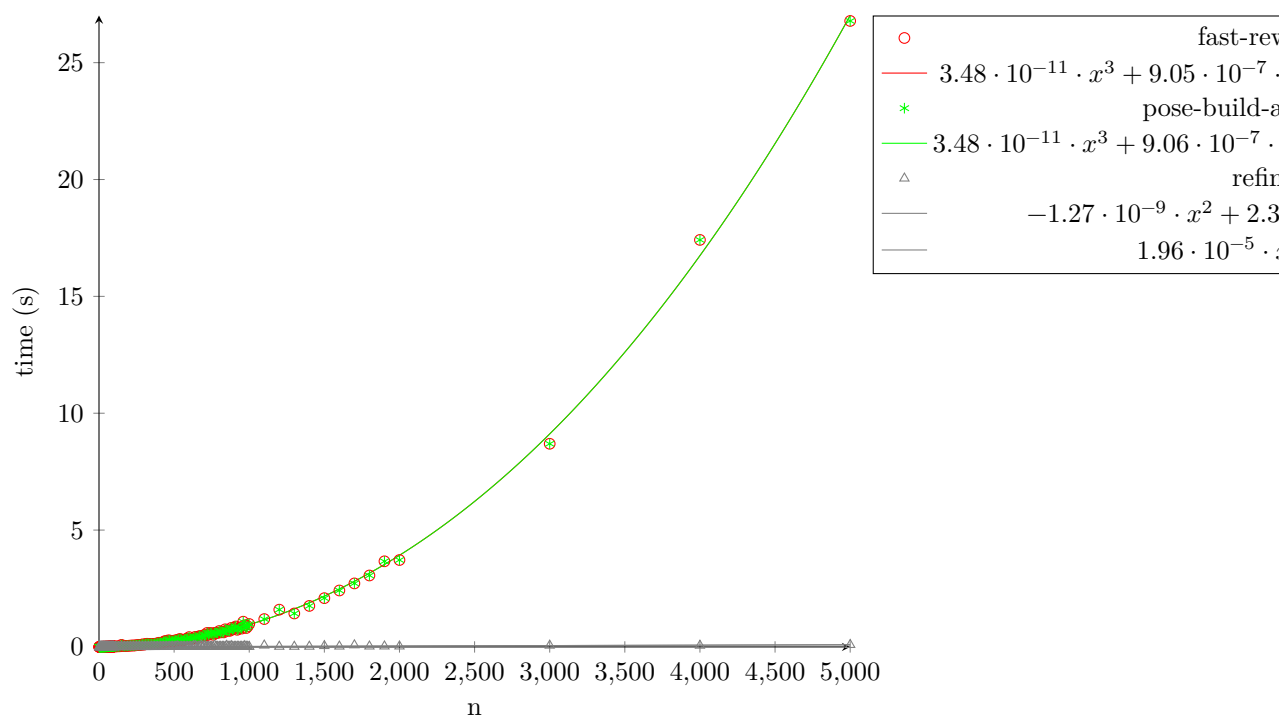
Figure 12: timing-rewrite-repeated-app-fast-rewrite-no-abstract
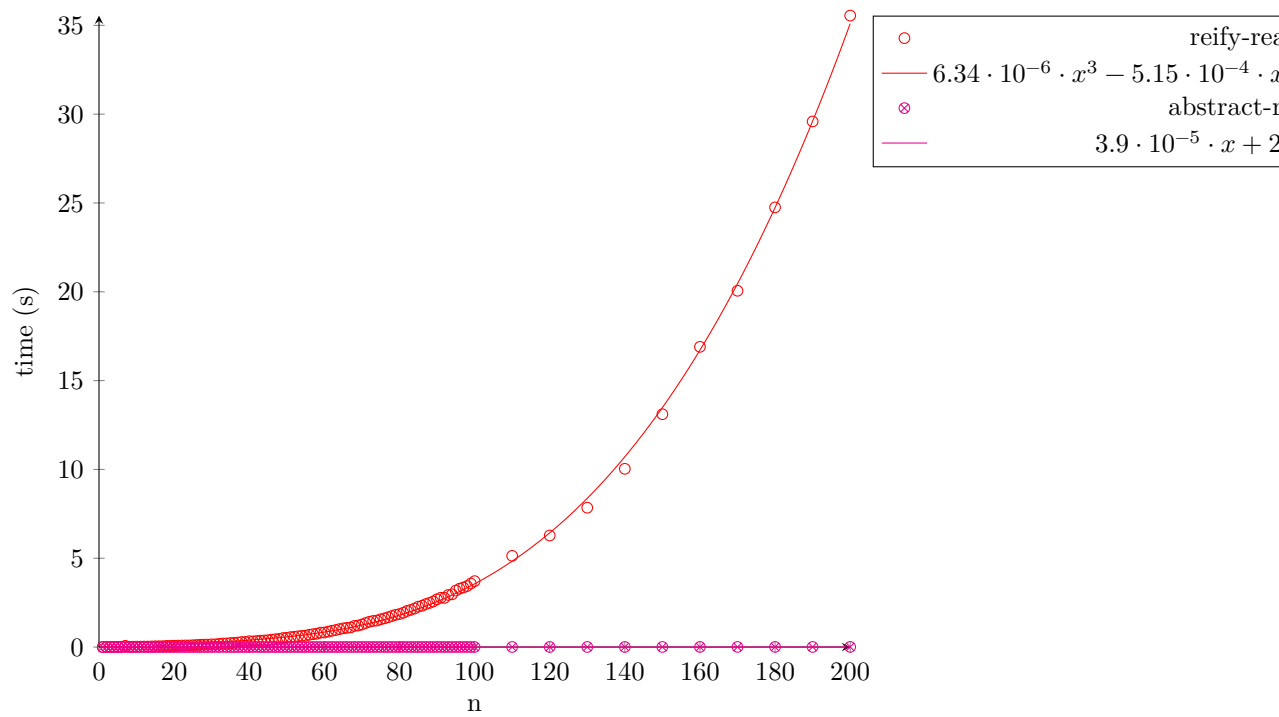
Figure 13: timing-typeclass-reification-let-in-HOAS
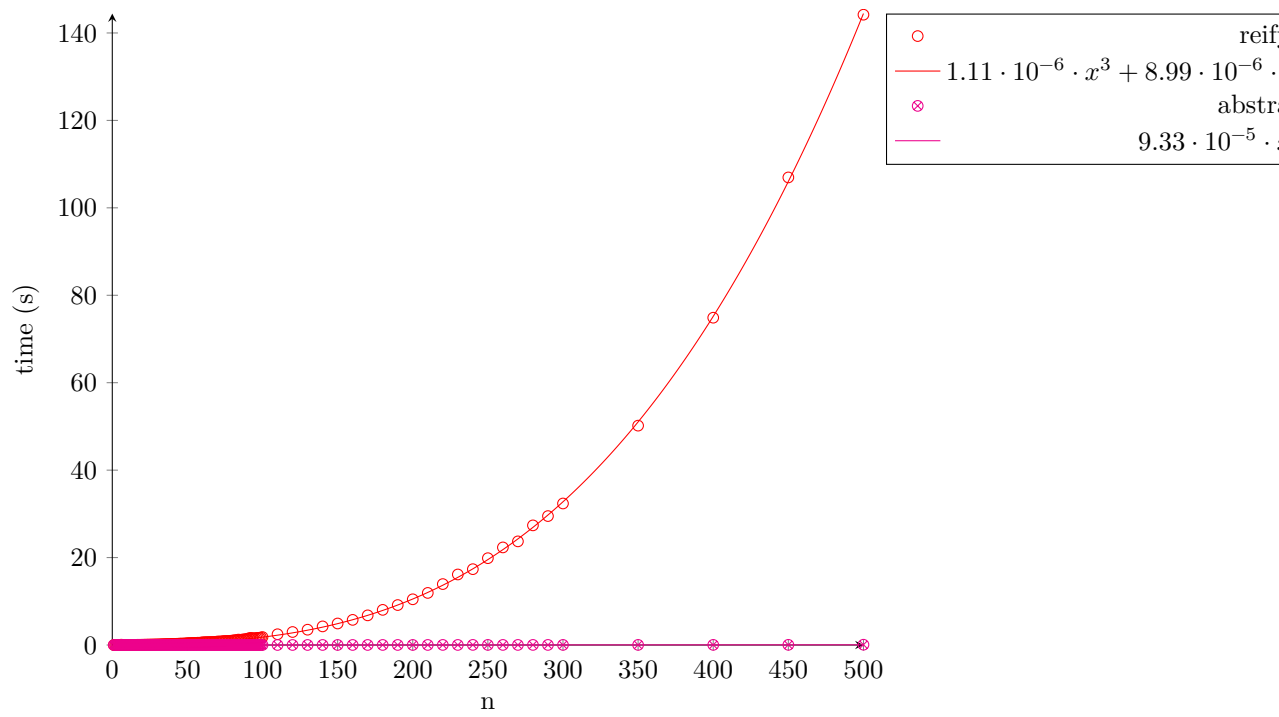
Figure 14: timing-typeclass-reification-let-in-PHOAS

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

Figure 17: timing-sieve-of-eratosthenes

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

time (s)

n

abstract-real

$1.98 \cdot 10^{-6} \cdot x^2 + 4.57 \cdot 10^{-4} \cdot x$

fast-rewrite-real

$1.64 \cdot 10^{-6} \cdot x^2 + 3.92 \cdot 10^{-4} \cdot x$
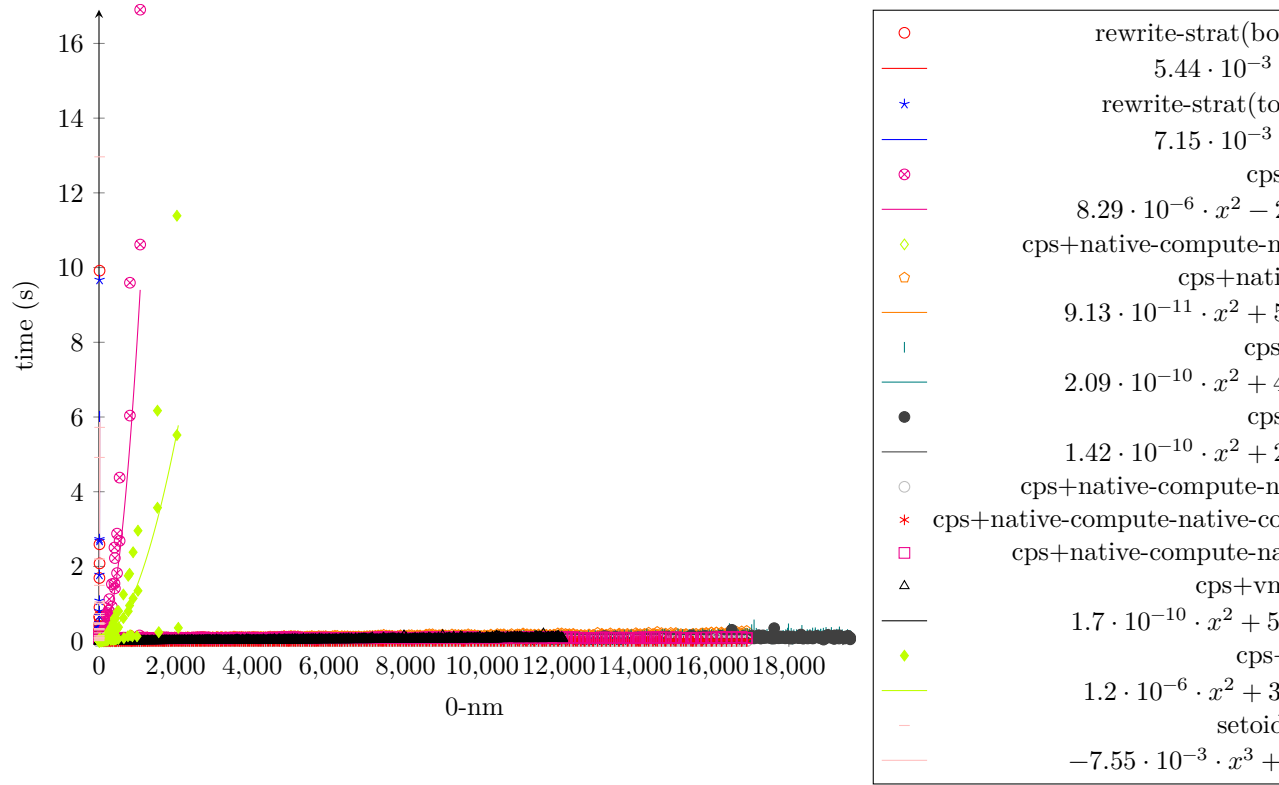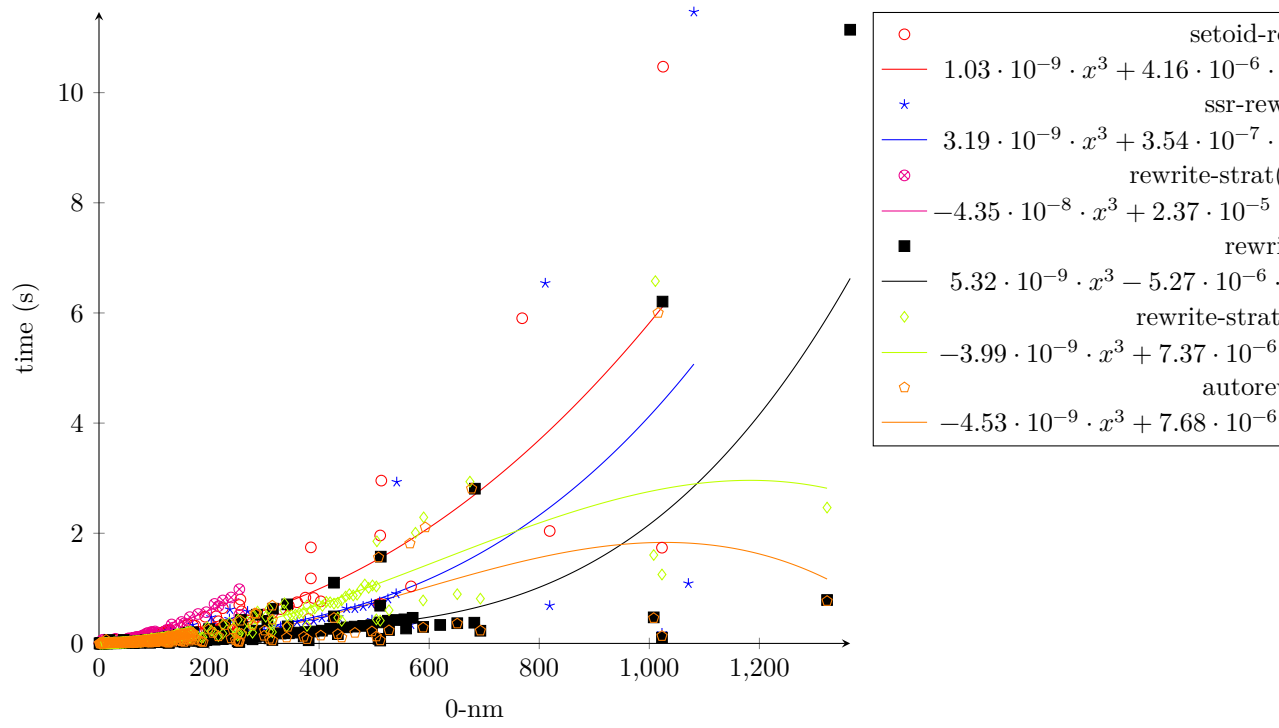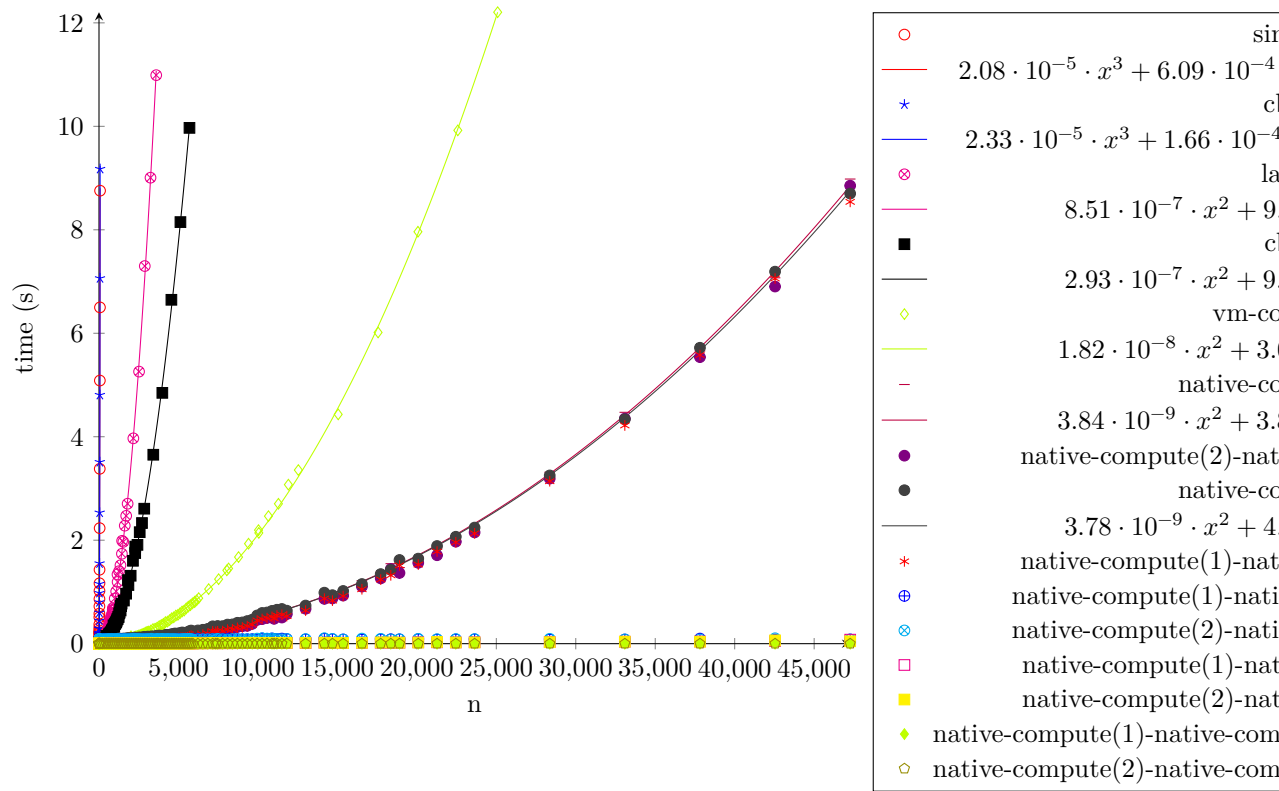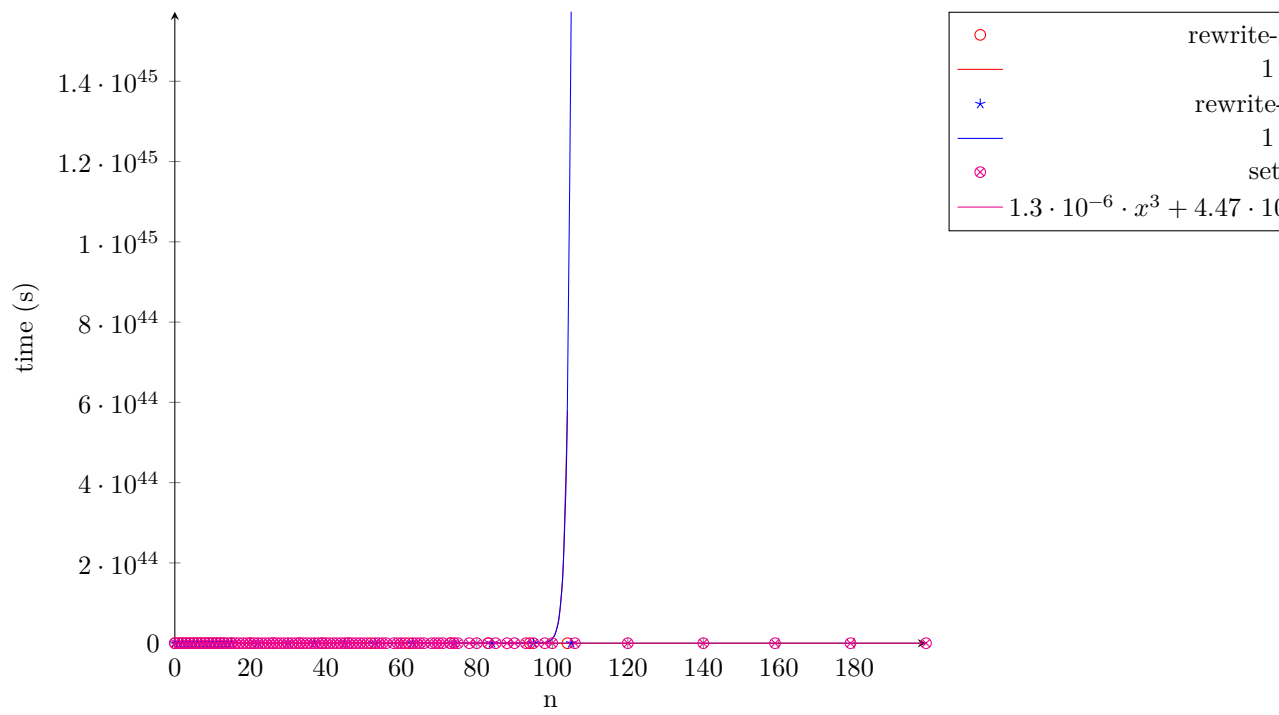
close-abstract-real

$3.4 \cdot 10^{-7} \cdot x^2 + 6.35 \cdot 10^{-5} \cdot x$

check-admit-real

$2.22 \cdot 10^{-7} \cdot x^2 + 3.31 \cdot 10^{-5} \cdot x$

type-pf-cast-real

$2.62 \cdot 10^{-7} \cdot x^2 - 1.6 \cdot 10^{-5} \cdot x$

type-admit-real

$2.71 \cdot 10^{-7} \cdot x^2 - 1.48 \cdot 10^{-5} \cdot x$

type-admit-cast-real

$2.56 \cdot 10^{-7} \cdot x^2 + 6.86 \cdot 10^{-6} \cdot x$

refine-real

$2.53 \cdot 10^{-7} \cdot x^2 + 1.29 \cdot 10^{-5} \cdot x$

$5.38 \cdot 10^{-4} \cdot x - 5.79$

check-admit-cast-real

$2.63 \cdot 10^{-7} \cdot x^2 - 4.22 \cdot 10^{-5} \cdot x$

check-pf-cast-real

$1.09 \cdot 10^{-7} \cdot x^2 + 2.35 \cdot 10^{-4} \cdot x$

build-eval-thunk-real

$1.13 \cdot 10^{-4} \cdot x + 2.24$

build-thunk-real

$1.12 \cdot 10^{-4} \cdot x + 1.65$

check-I-real

$1.97 \cdot 10^{-5} \cdot x - 3.81$

type-I-real

$1.98 \cdot 10^{-5} \cdot x - 3.62$

build-admit-real

$7.9 \cdot 10^{-6} \cdot x - 5.18$

build-I-real

$6.85 \cdot 10^{-6} \cdot x - 2.55$

build-pf-cast-real

$6.55 \cdot 10^{-6} \cdot x - 3.79$

build-admit-cast-real

$6.57 \cdot 10^{-6} \cdot x - 3.25$
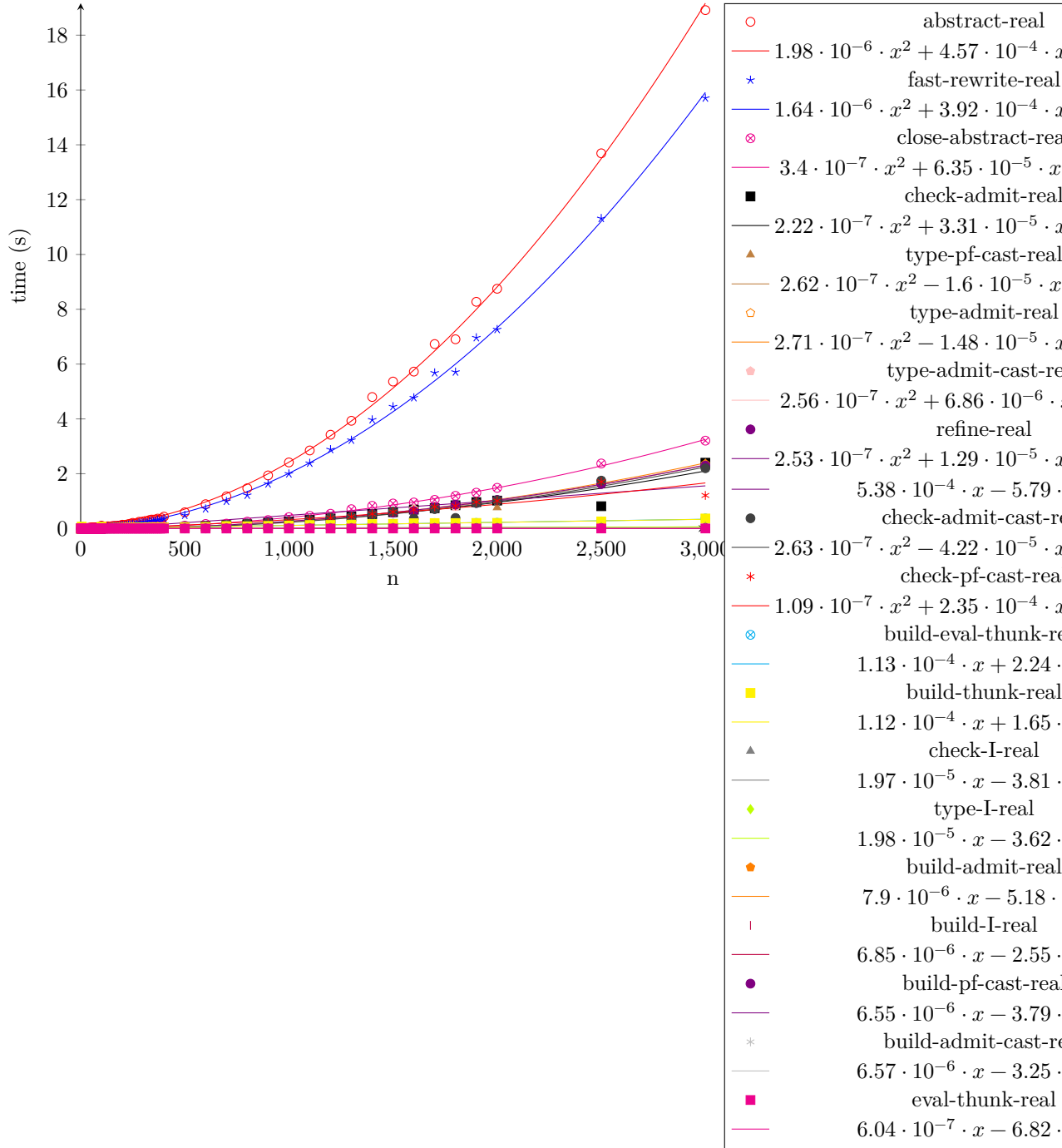
eval-thunk-real

$6.04 \cdot 10^{-7} \cdot x - 6.82$

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