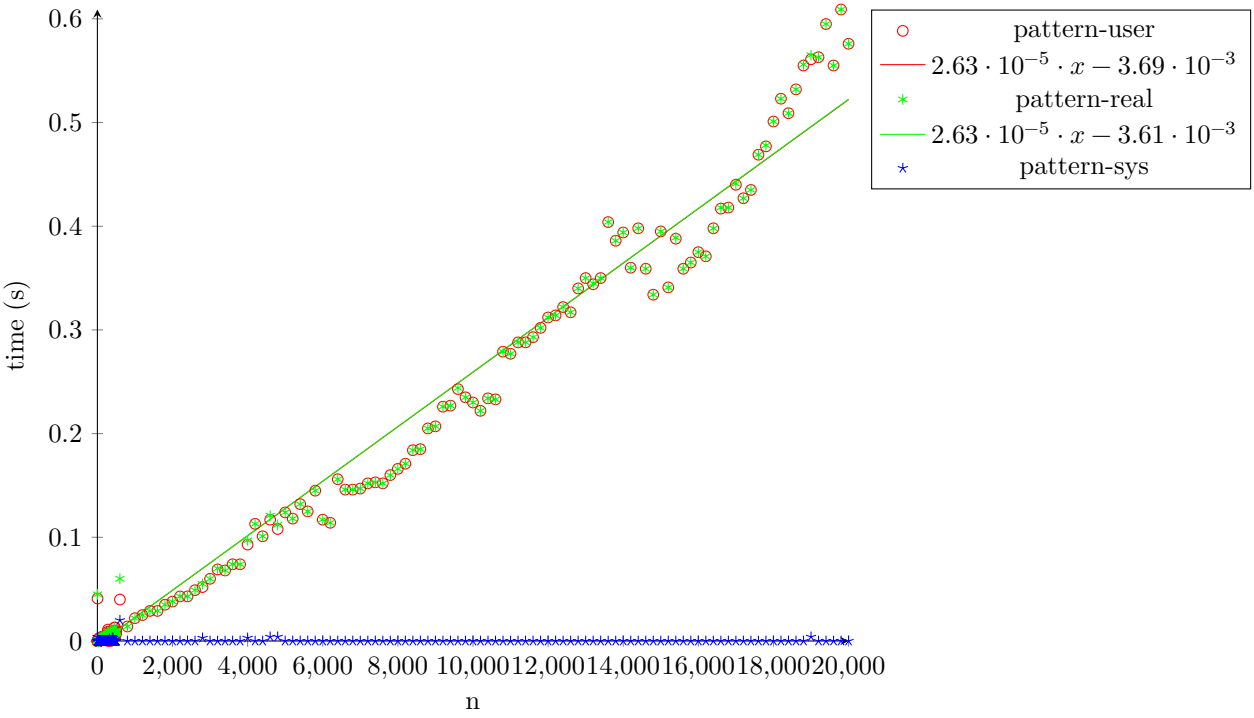


Figure 1: timing-pattern

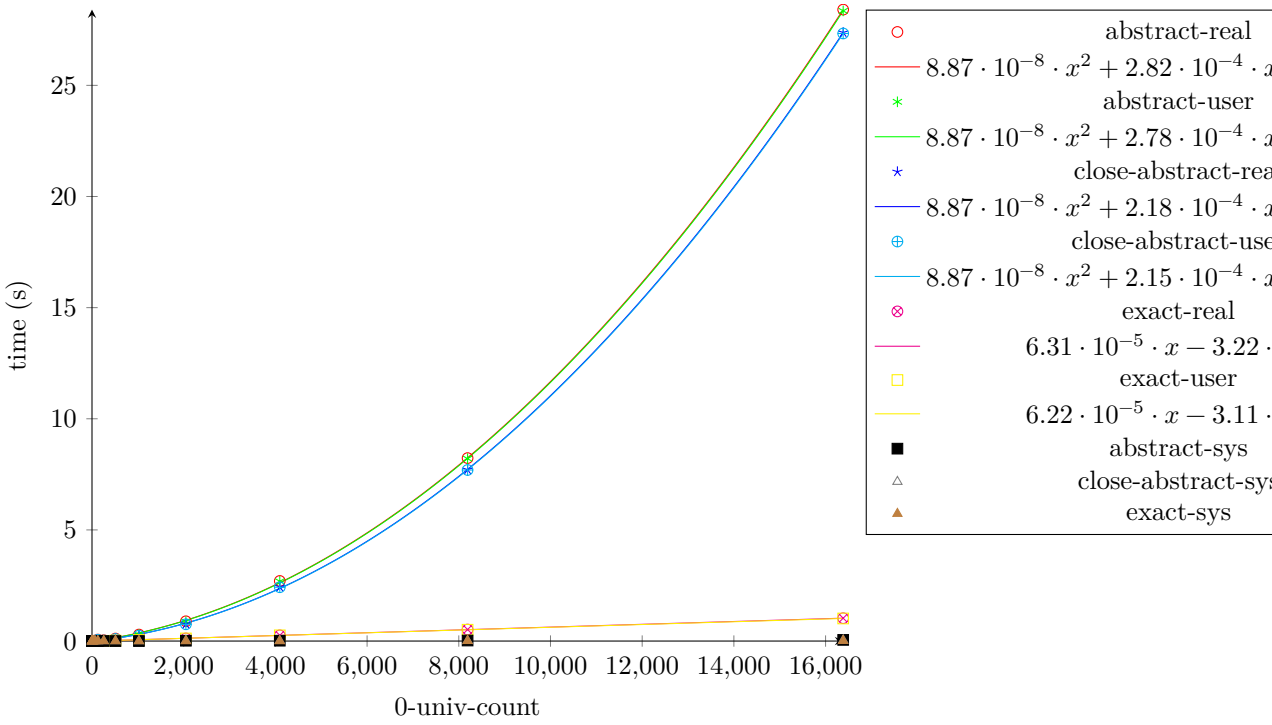


Figure 2: timing-n-polymorphic-universes param-1-n 0

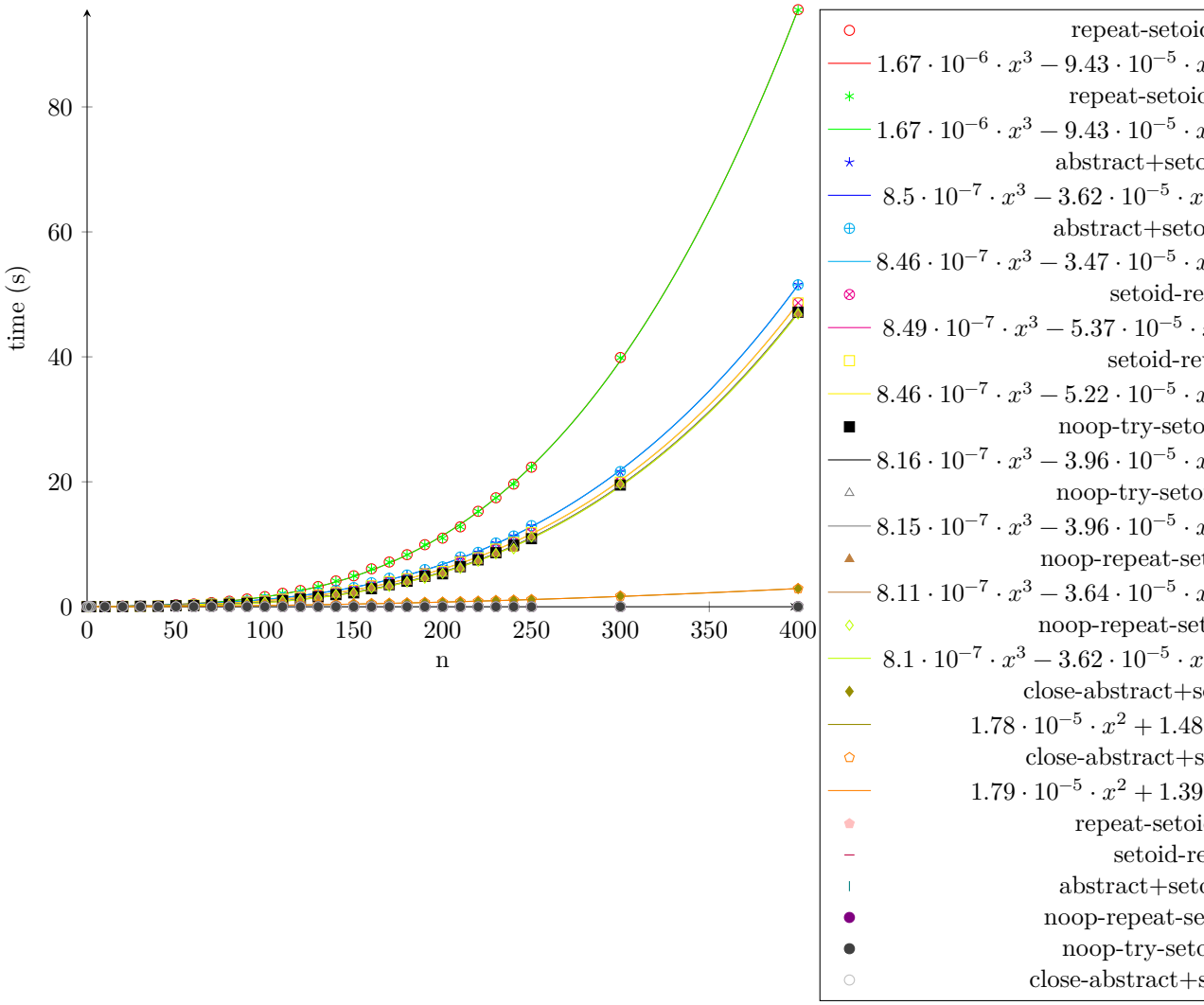


Figure 3: timing-repeat-setoid-rewrite-under-binders

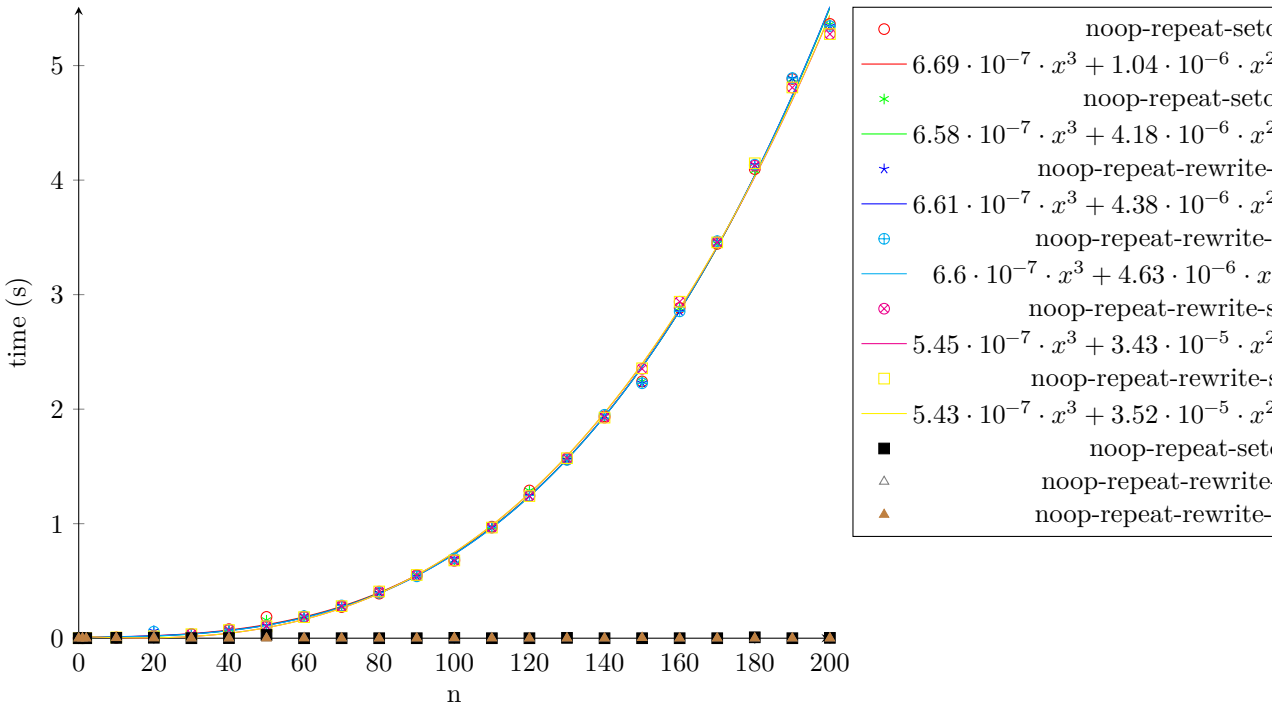


Figure 4: timing-repeat-setoid-rewrite-under-binders-noop

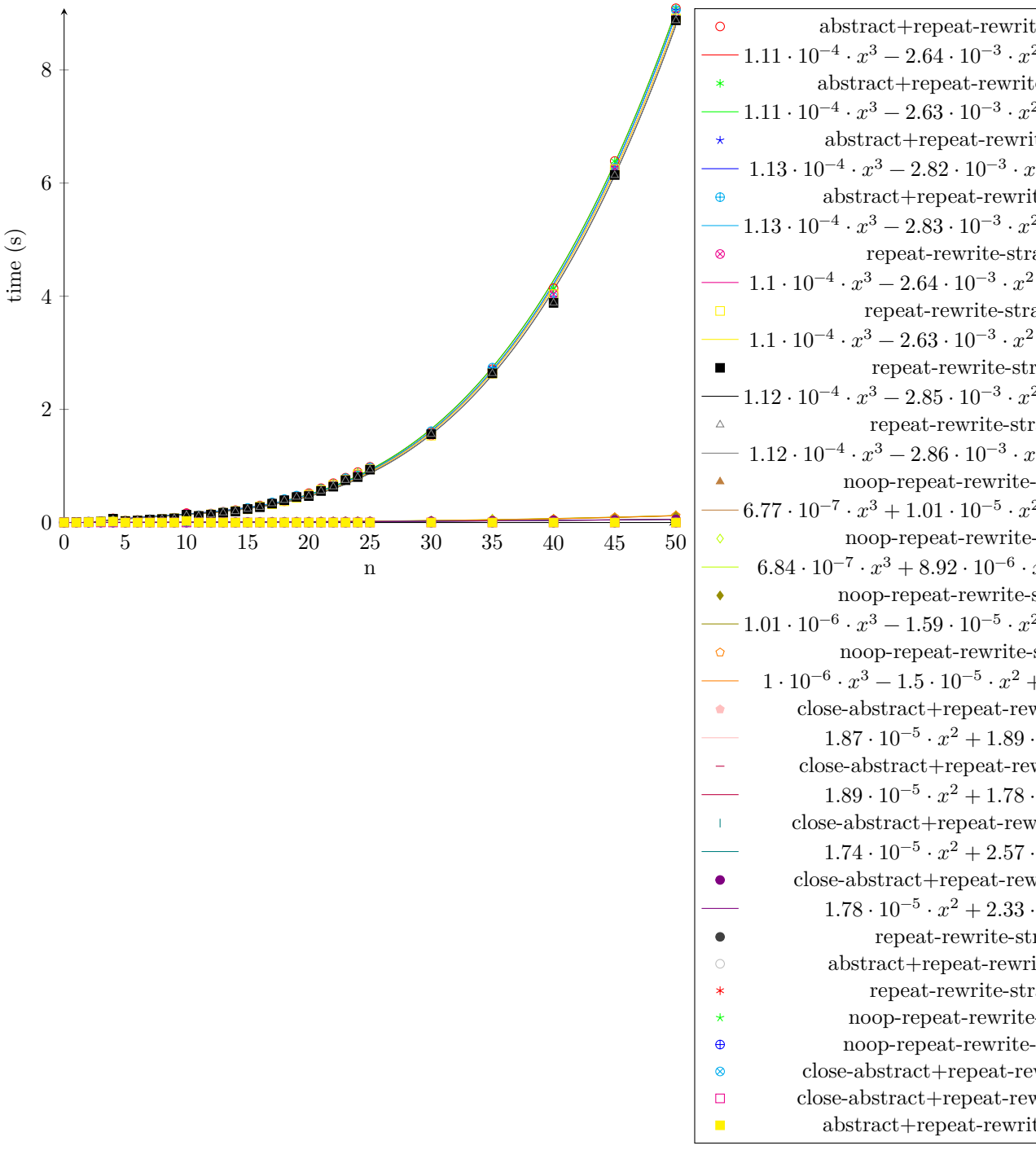


Figure 5: timing-rewrite-strat-under-binders

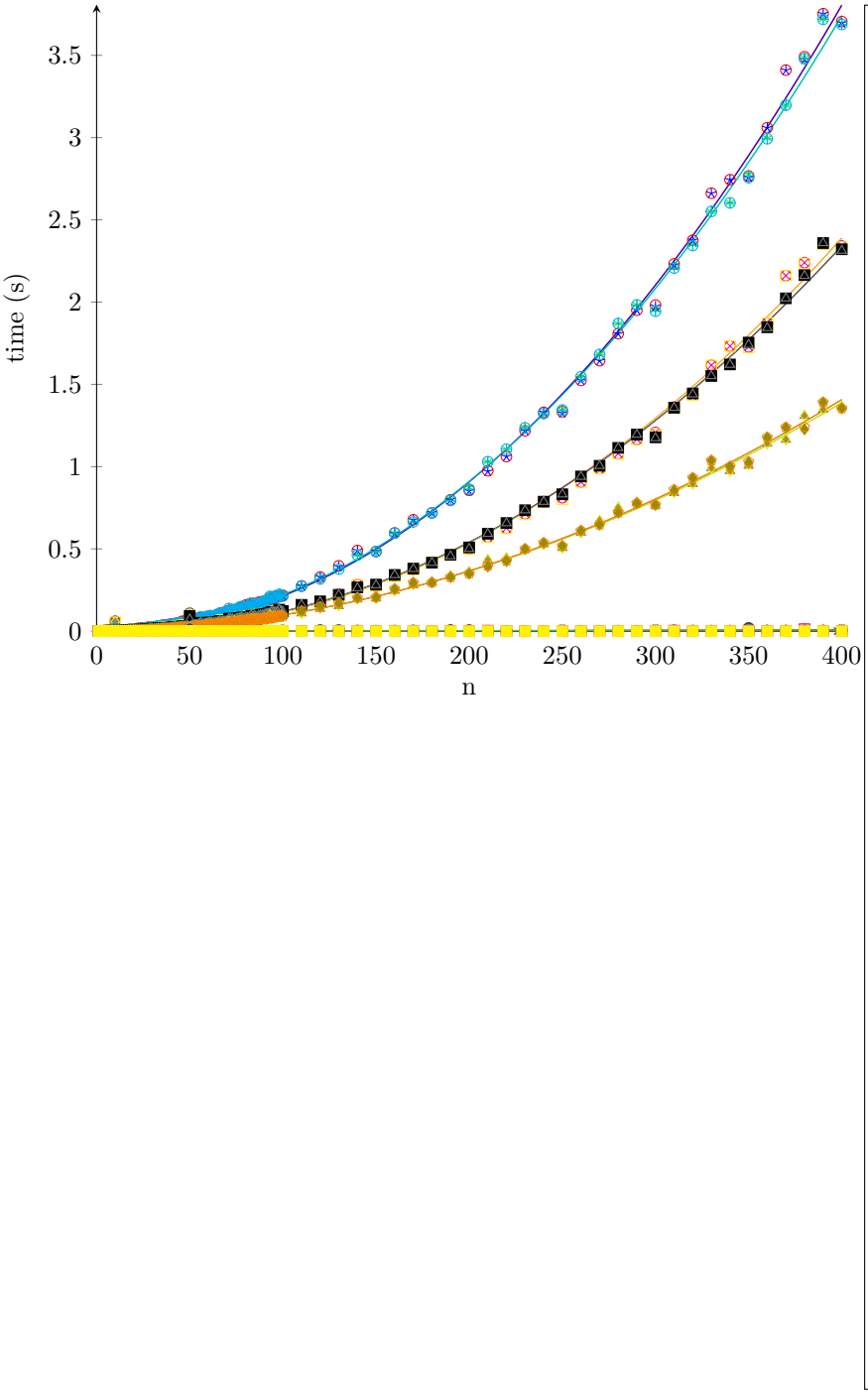


Figure 6: timing-rewrite-repeated-app-autorewrite

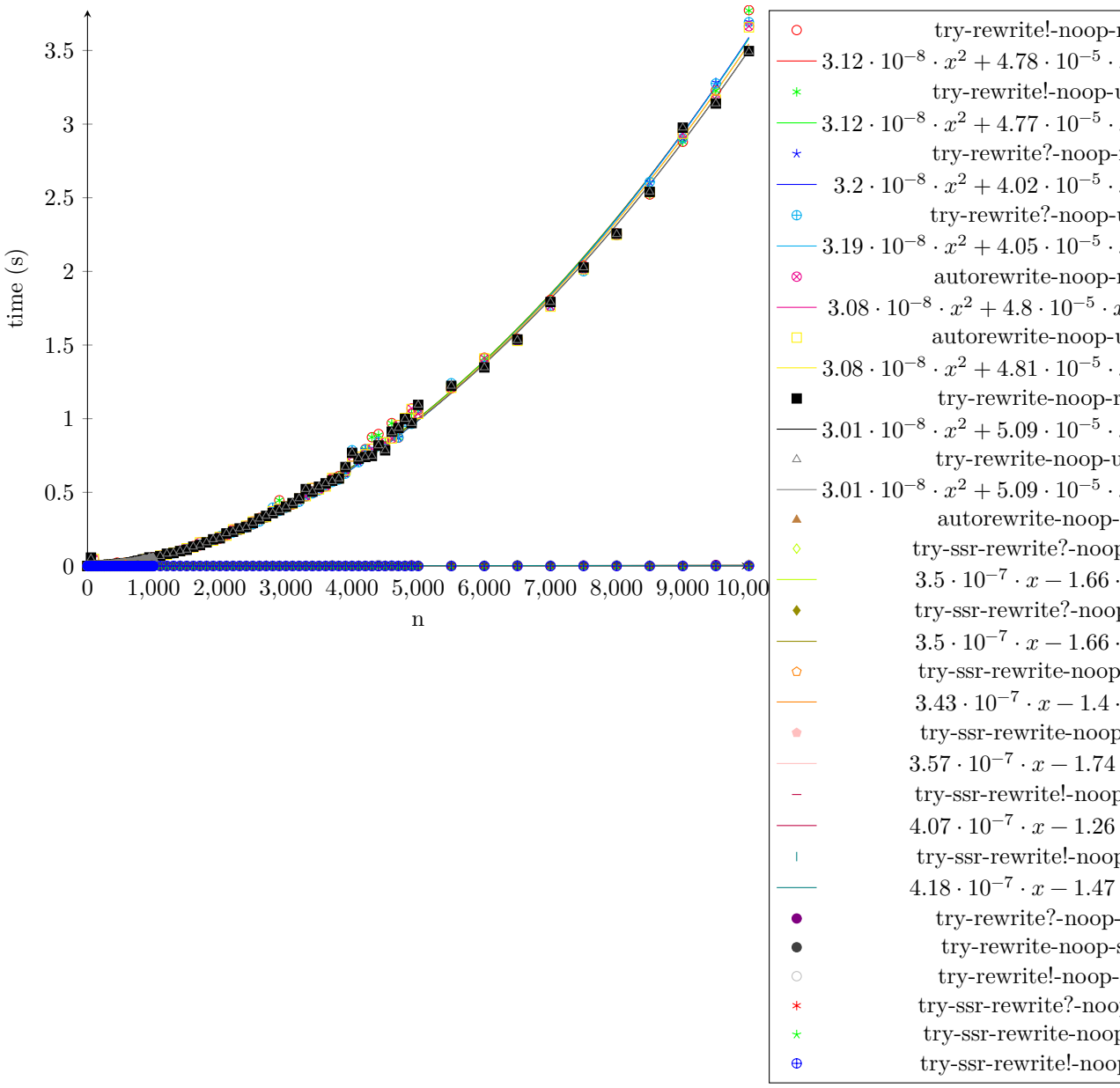


Figure 7: timing-rewrite-repeated-app-autorewrite-noop

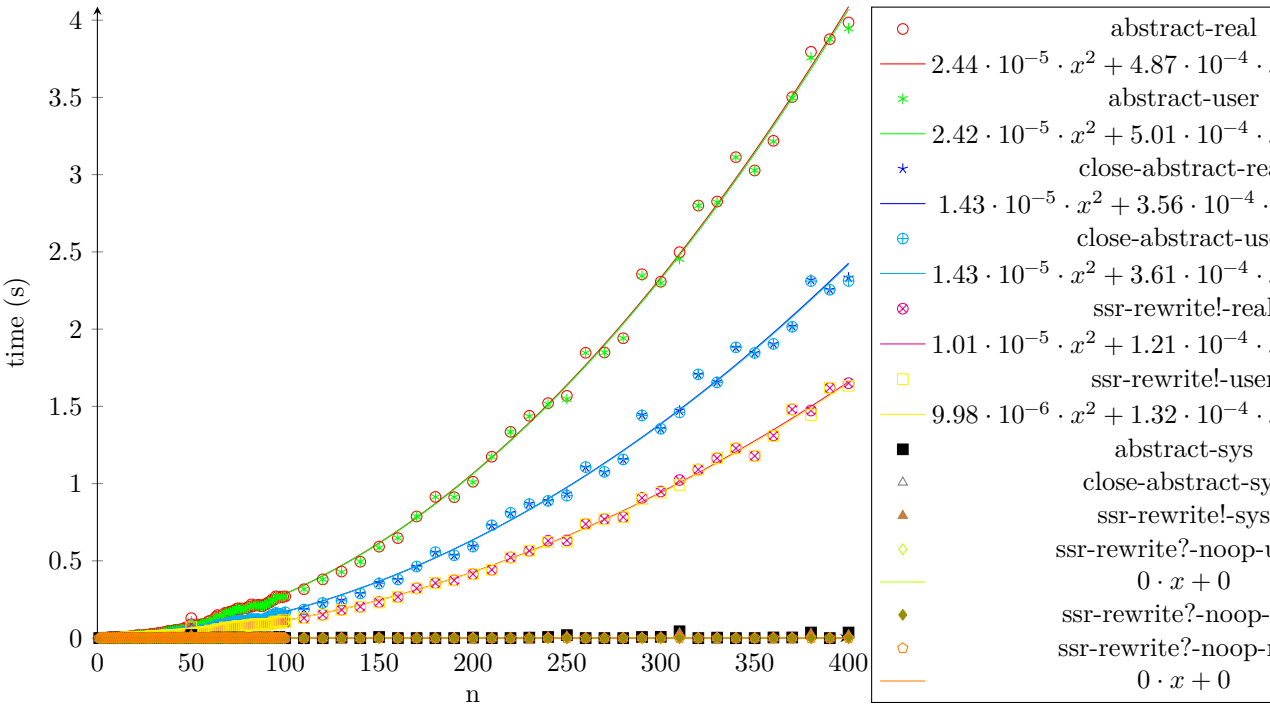


Figure 8: timing-rewrite-repeated-app-ssrrewrite

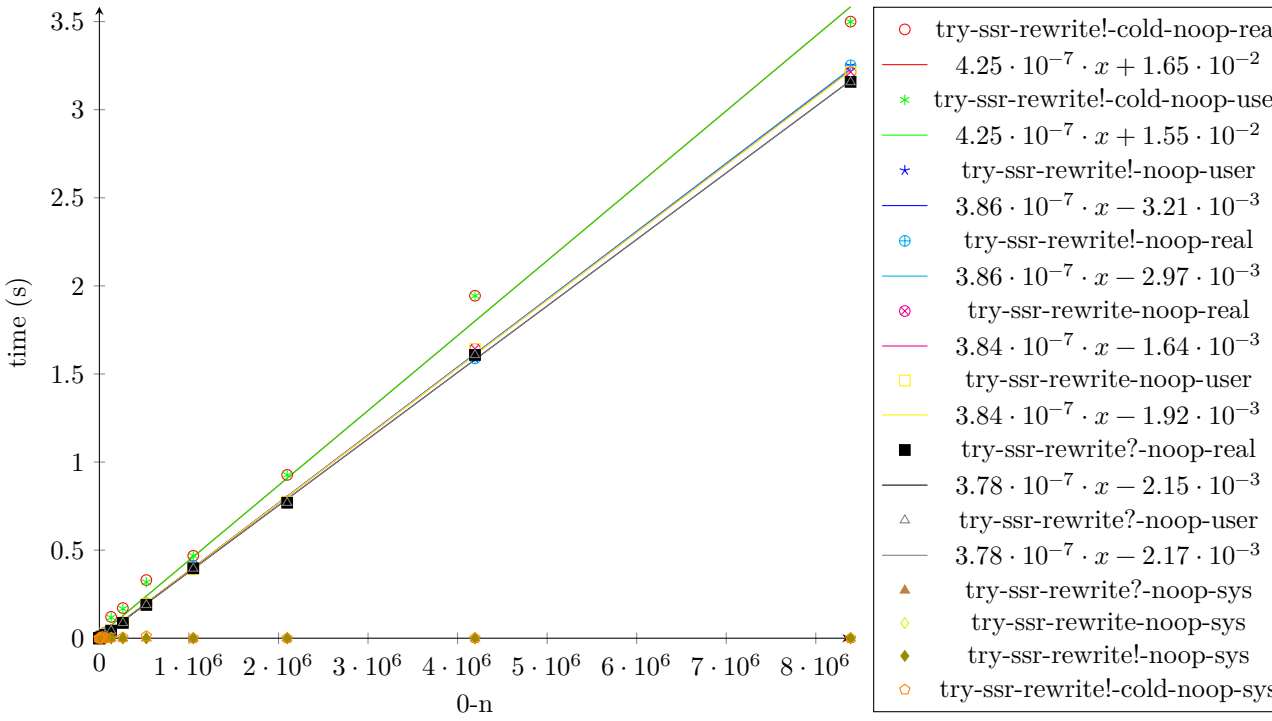


Figure 9: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn 1

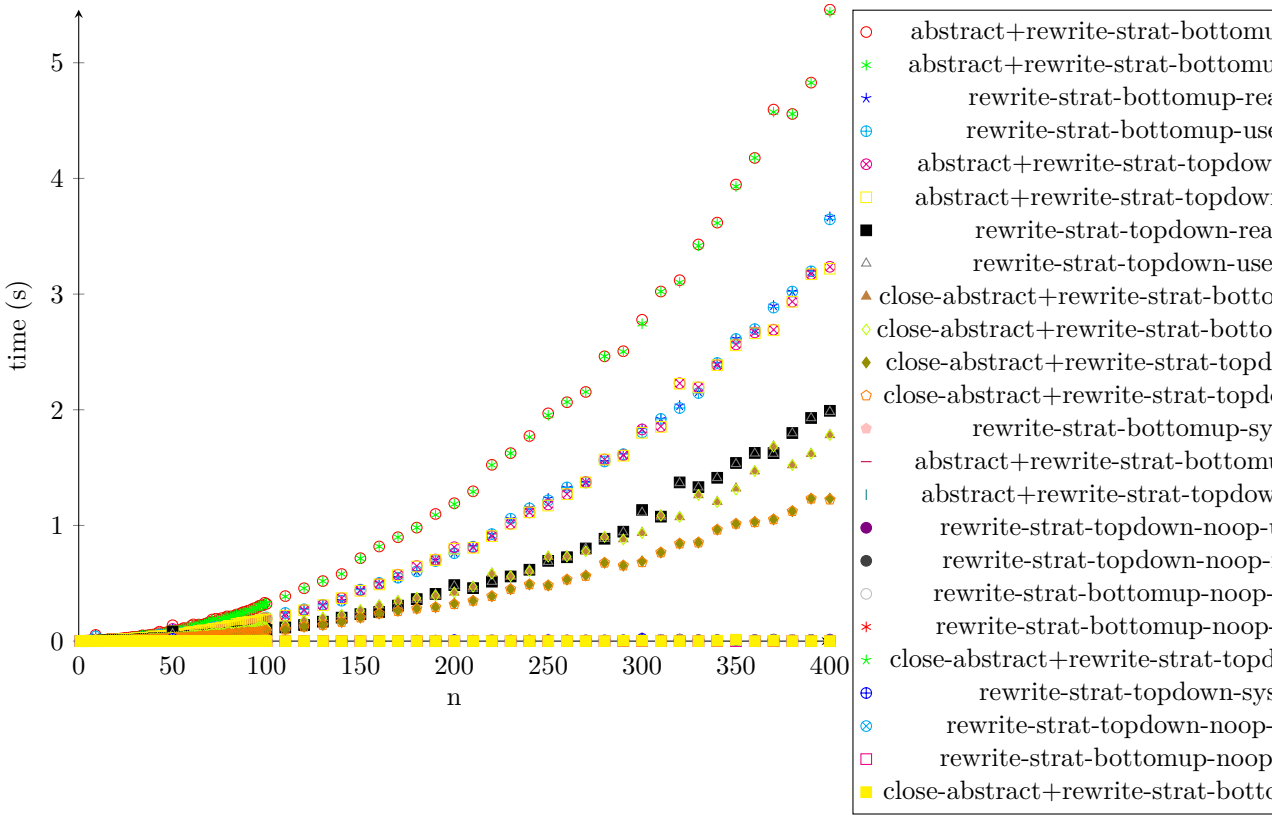


Figure 10: timing-rewrite-repeated-app-rewrite-strat

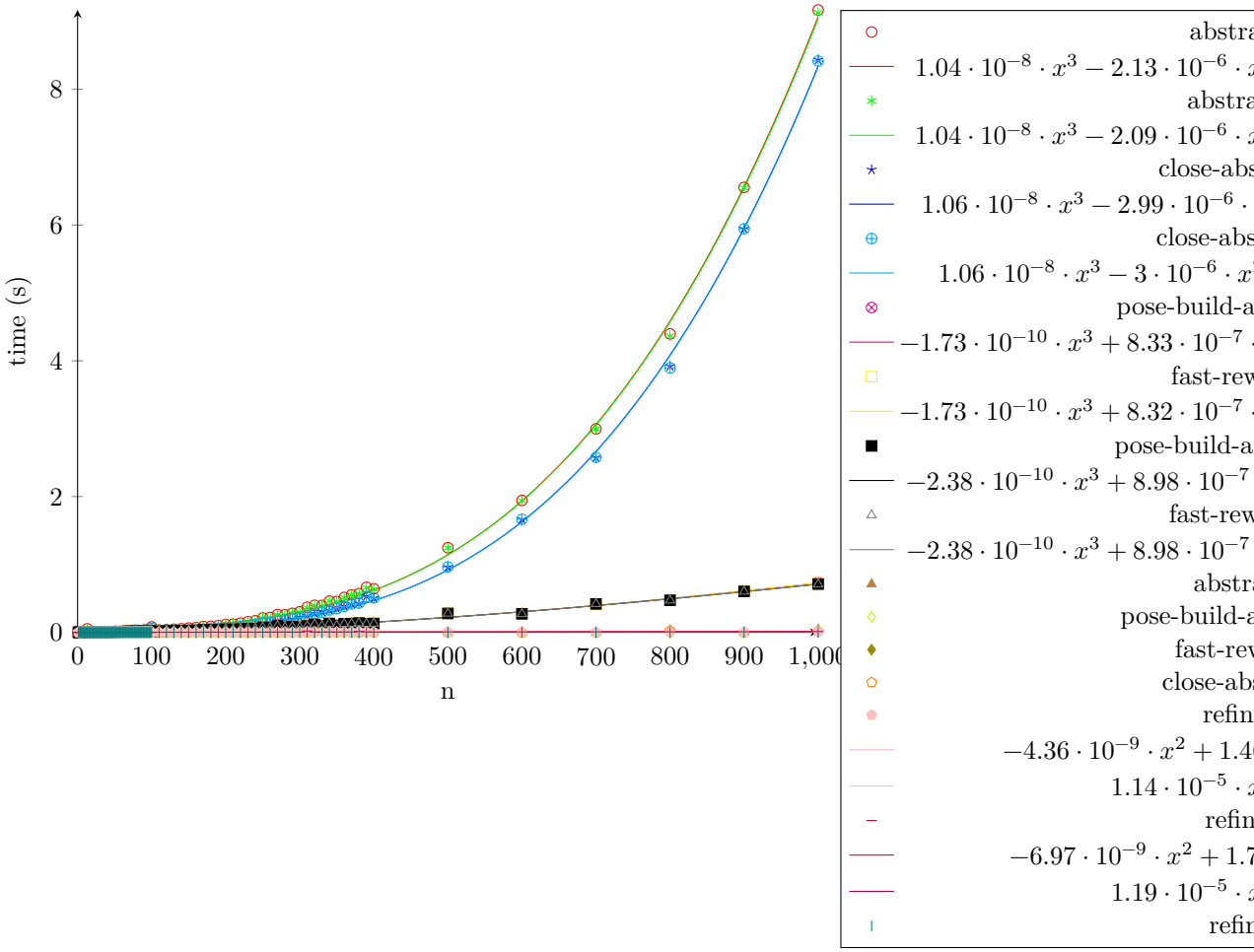


Figure 11: timing-rewrite-repeated-app-fast-rewrite

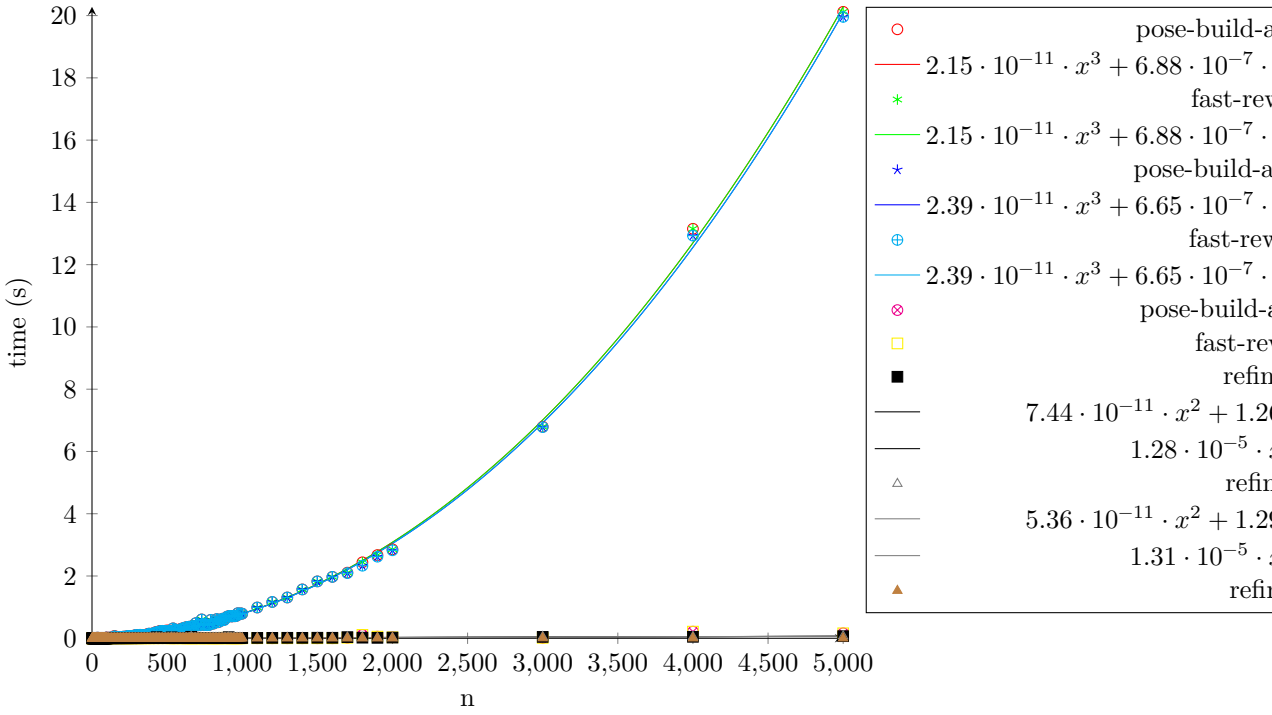


Figure 12: timing-rewrite-repeated-app-fast-rewrite-no-abstract

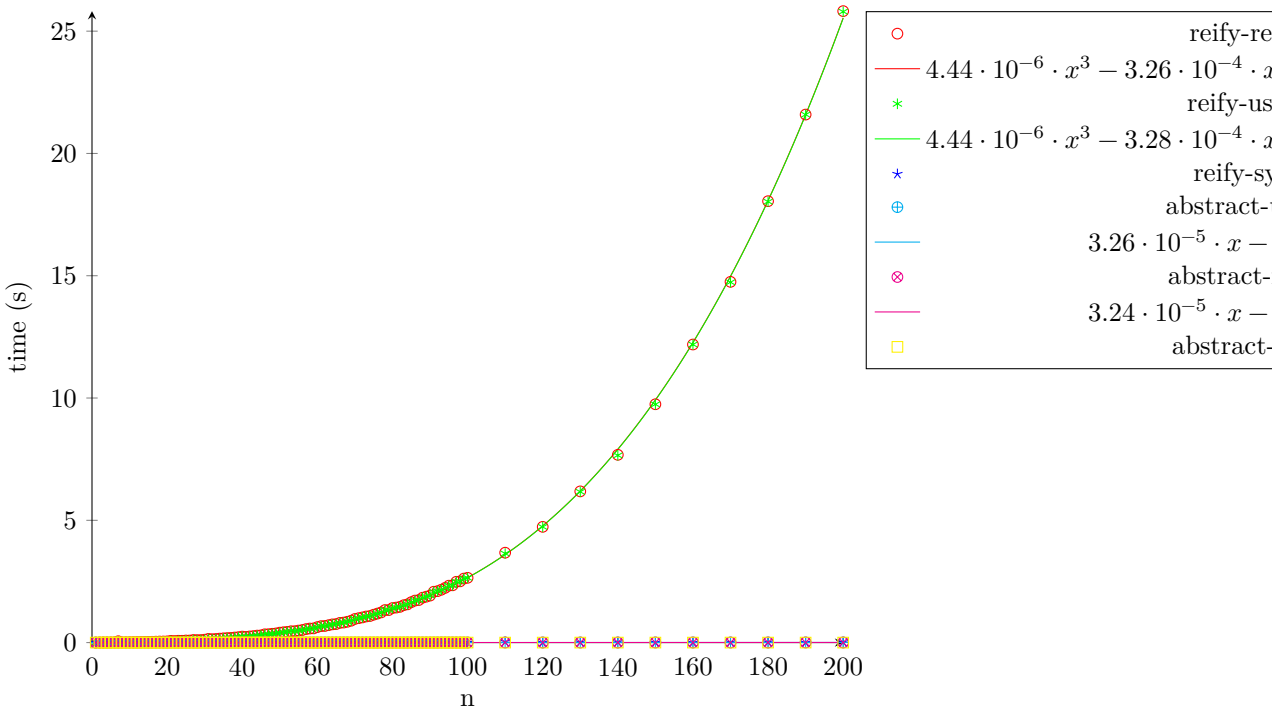


Figure 13: timing-typeclass-reification-let-in-HOAS

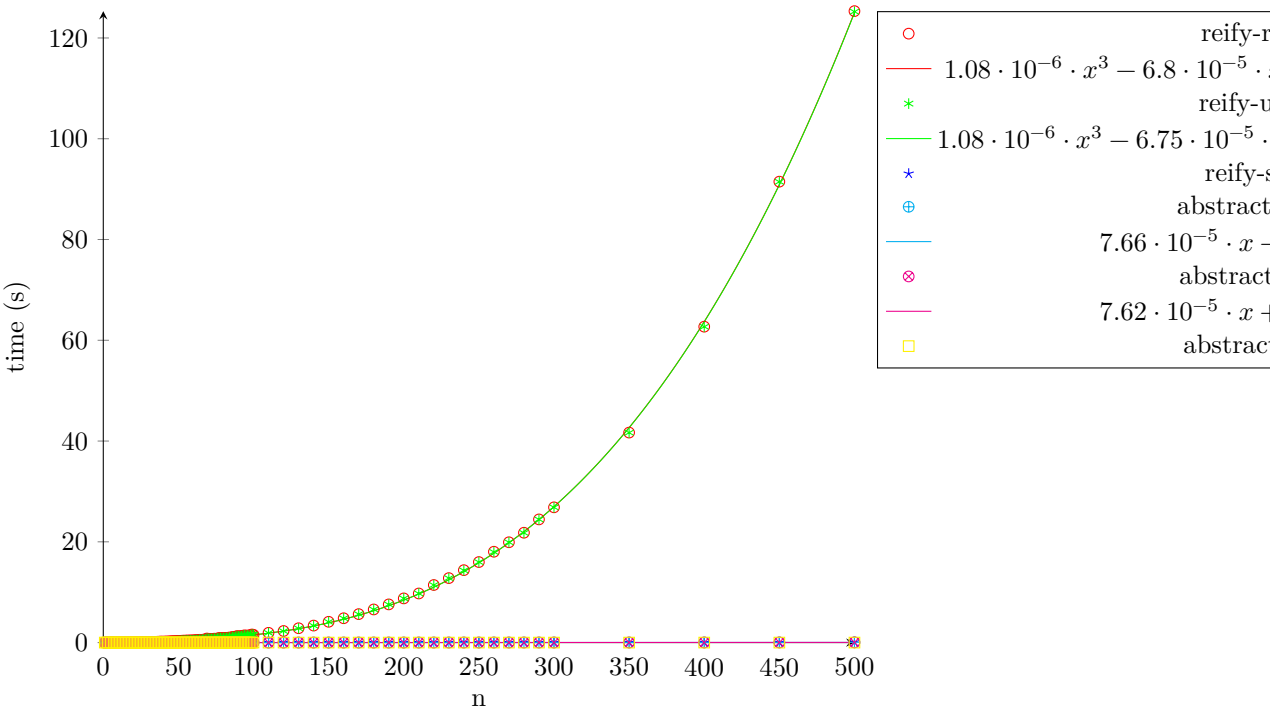
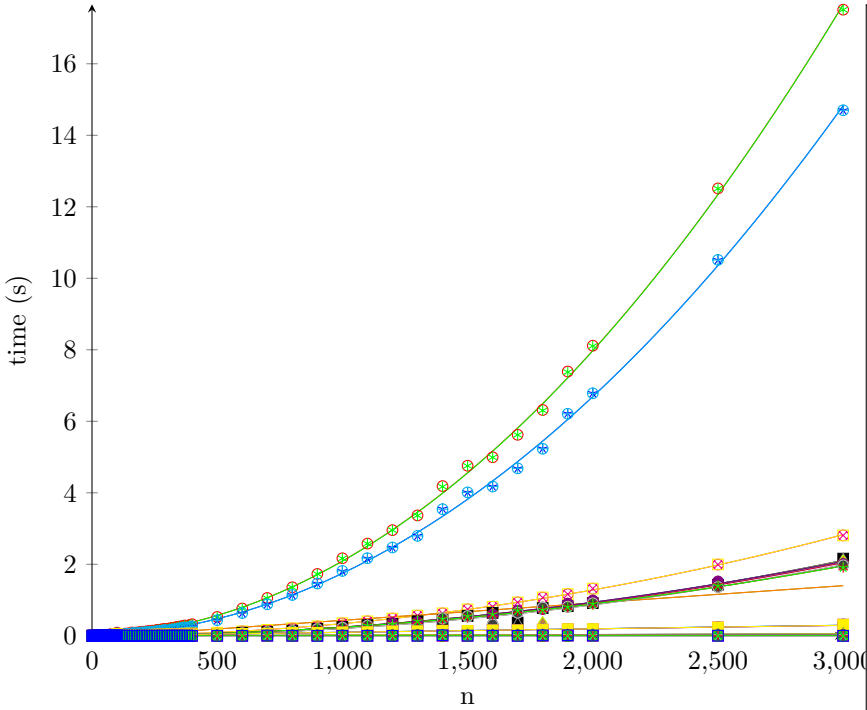


Figure 14: timing-typeclass-reification-let-in-PHOAS


time (s)
n
0
2
4
6
8
10
12
14
16
0
500
1,000
1,500
2,000
2,500
3,000

abstract-real
$1.9 \cdot 10^{-6} \cdot x^2 + 1.93 \cdot 10^{-4} \cdot x$
abstract-user
$1.9 \cdot 10^{-6} \cdot x^2 + 1.86 \cdot 10^{-4} \cdot x$
fast-rewrite-real
$1.6 \cdot 10^{-6} \cdot x^2 + 1.52 \cdot 10^{-4} \cdot x$
fast-rewrite-user
$1.6 \cdot 10^{-6} \cdot x^2 + 1.46 \cdot 10^{-4} \cdot x$
close-abstract-use
$3.02 \cdot 10^{-7} \cdot x^2 + 3.86 \cdot 10^{-5} \cdot x$
close-abstract-rea
$3.01 \cdot 10^{-7} \cdot x^2 + 3.99 \cdot 10^{-5} \cdot x$
type-admit-cast-re
$2.45 \cdot 10^{-7} \cdot x^2 - 3.21 \cdot 10^{-5} \cdot x$
type-admit-cast-us
$2.45 \cdot 10^{-7} \cdot x^2 - 3.29 \cdot 10^{-5} \cdot$
check-pf-cast-use
$2.42 \cdot 10^{-7} \cdot x^2 - 2.96 \cdot 10^{-5} \cdot x$
check-pf-cast-rea
$2.42 \cdot 10^{-7} \cdot x^2 - 2.94 \cdot 10^{-5} \cdot x$
refine-user
$2.22 \cdot 10^{-7} \cdot x^2 + 2.47 \cdot 10^{-5} \cdot x$
$4.85 \cdot 10^{-4} \cdot x - 5.25 \cdot$
refine-real
$2.21 \cdot 10^{-7} \cdot x^2 + 2.53 \cdot 10^{-5} \cdot$
$4.85 \cdot 10^{-4} \cdot x - 5.25 \cdot$
check-admit-cast-u
$2.24 \cdot 10^{-7} \cdot x^2 + 8.88 \cdot 10^{-6} \cdot x$
check-admit-cast-re
$2.24 \cdot 10^{-7} \cdot x^2 + 8.97 \cdot 10^{-6} \cdot x$
type-pf-cast-user
$2.25 \cdot 10^{-7} \cdot x^2 + 2.12 \cdot 10^{-5} \cdot x$
type-pf-cast-real
$2.25 \cdot 10^{-7} \cdot x^2 + 2.14 \cdot 10^{-5} \cdot x$
type-admit-user
$2.3 \cdot 10^{-7} \cdot x^2 - 2.69 \cdot 10^{-5} \cdot x$
type-admit-real
$2.29 \cdot 10^{-7} \cdot x^2 - 2.66 \cdot 10^{-5} \cdot x$
check-admit-real
$2.05 \cdot 10^{-7} \cdot x^2 + 3.69 \cdot 10^{-5} \cdot x$
check-admit-user
$2.05 \cdot 10^{-7} \cdot x^2 + 3.69 \cdot 10^{-5} \cdot x$
build-eval-thunk-us
$9.82 \cdot 10^{-5} \cdot x - 7.8 \cdot$
build-eval-thunk-re
$9.88 \cdot 10^{-5} \cdot x - 6.59 \cdot$
build-thunk-user
$9.73 \cdot 10^{-5} \cdot x - 8.01 \cdot$
build-thunk-real
$9.79 \cdot 10^{-5} \cdot x - 6.63 \cdot$
check-I-user