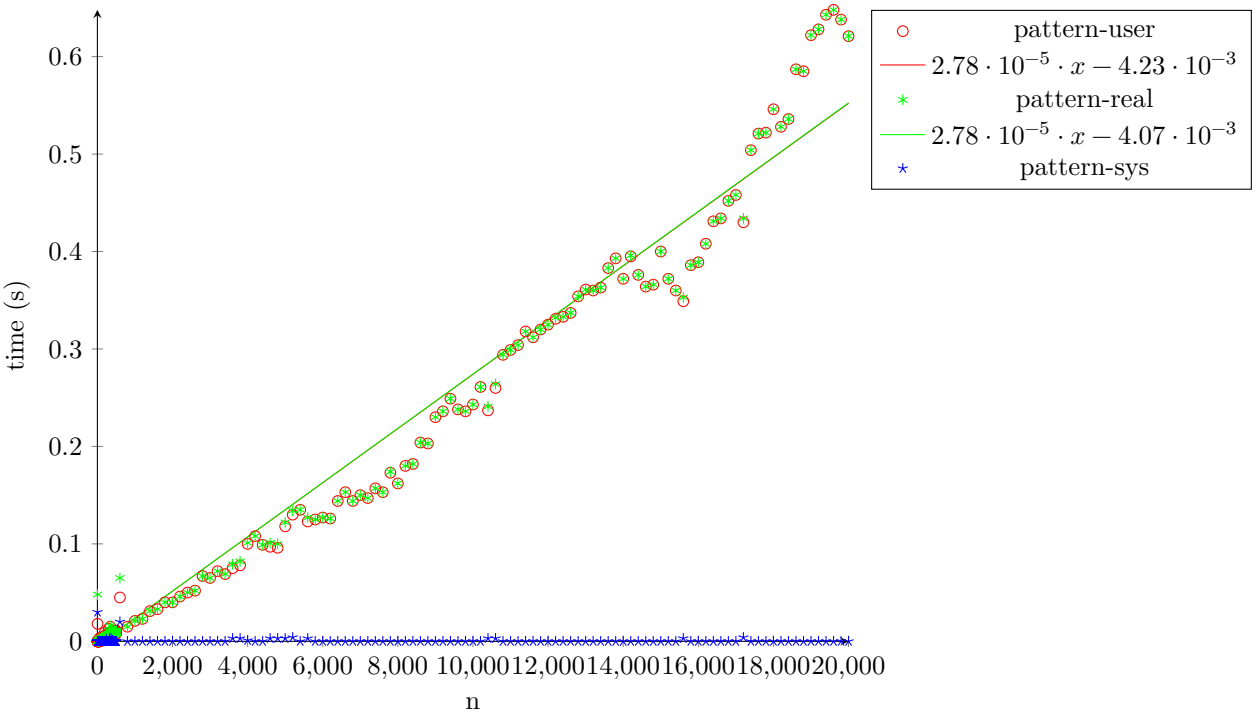


Figure 1: timing-pattern

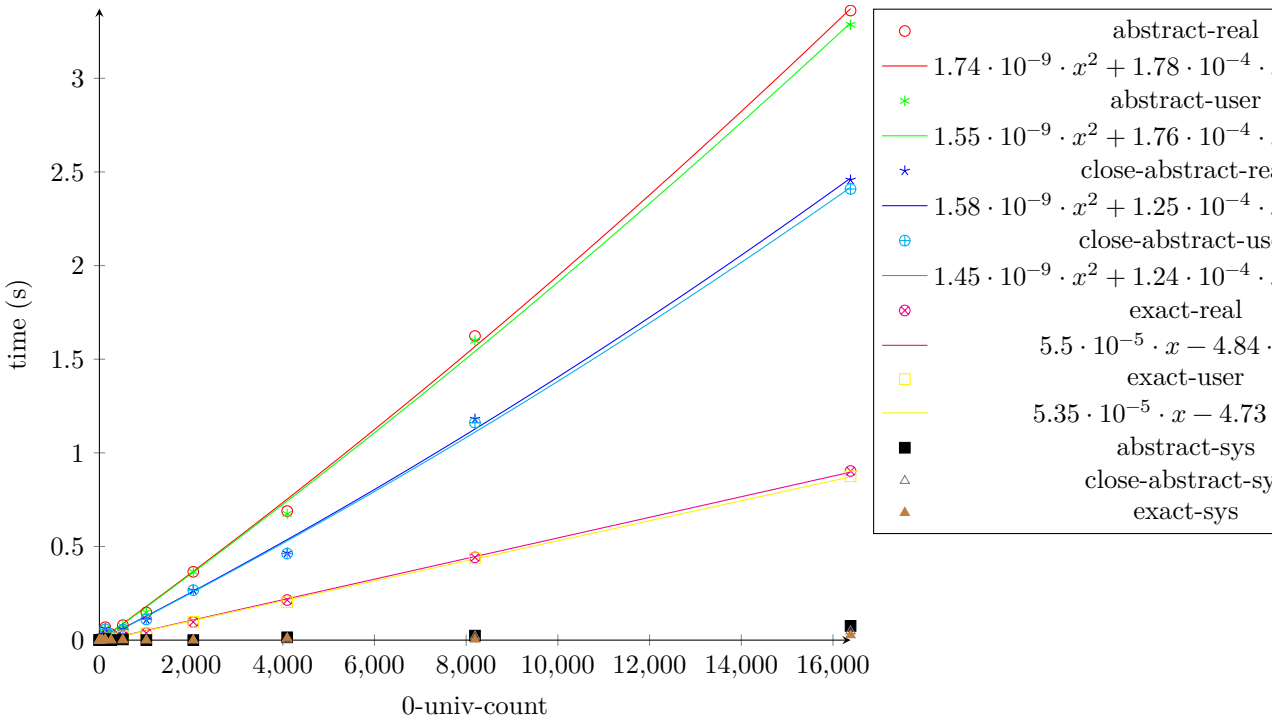


Figure 2: timing-n-polymorphic-universes param-1-n 0

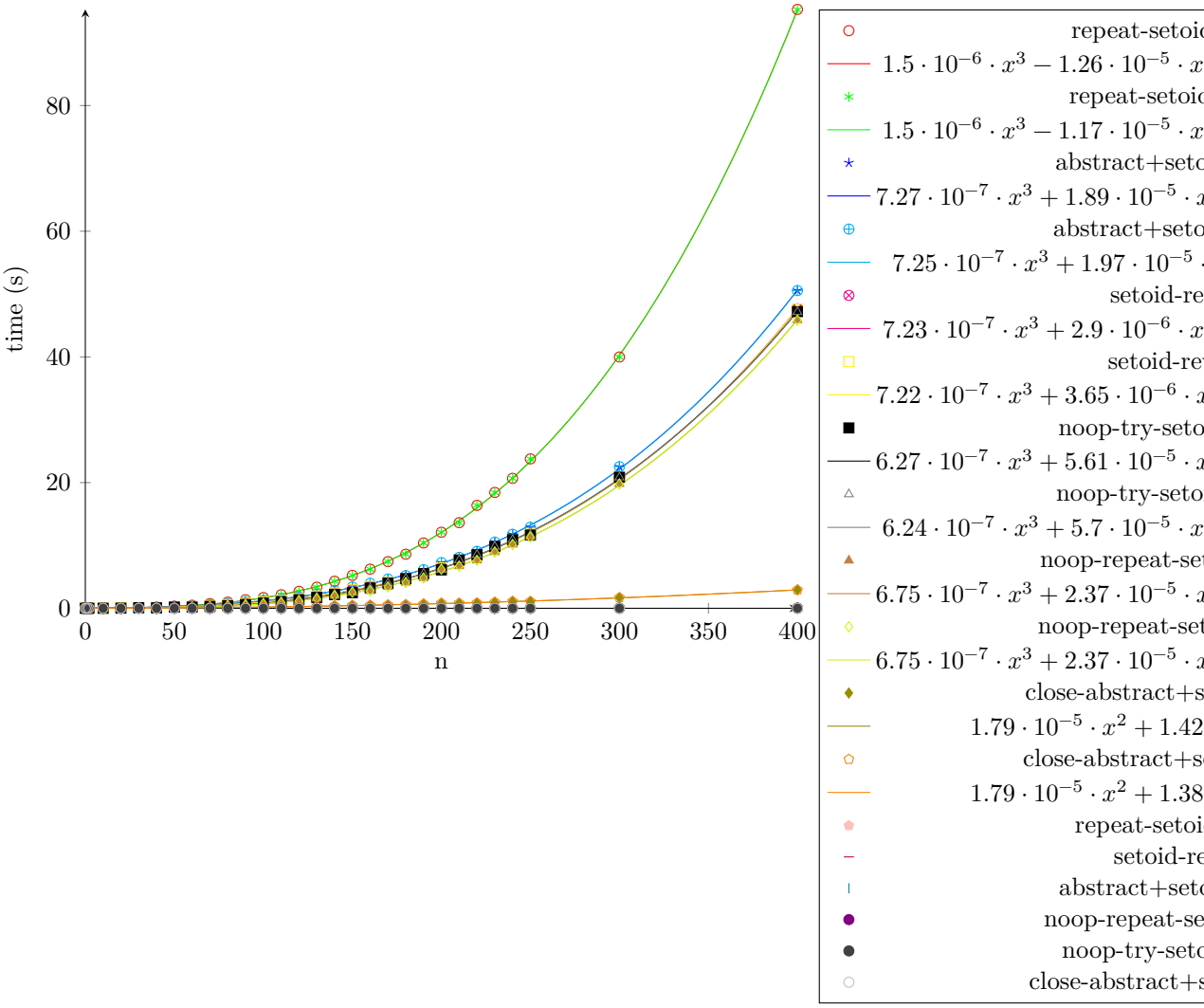


Figure 3: timing-repeat-setoid-rewrite-under-binders

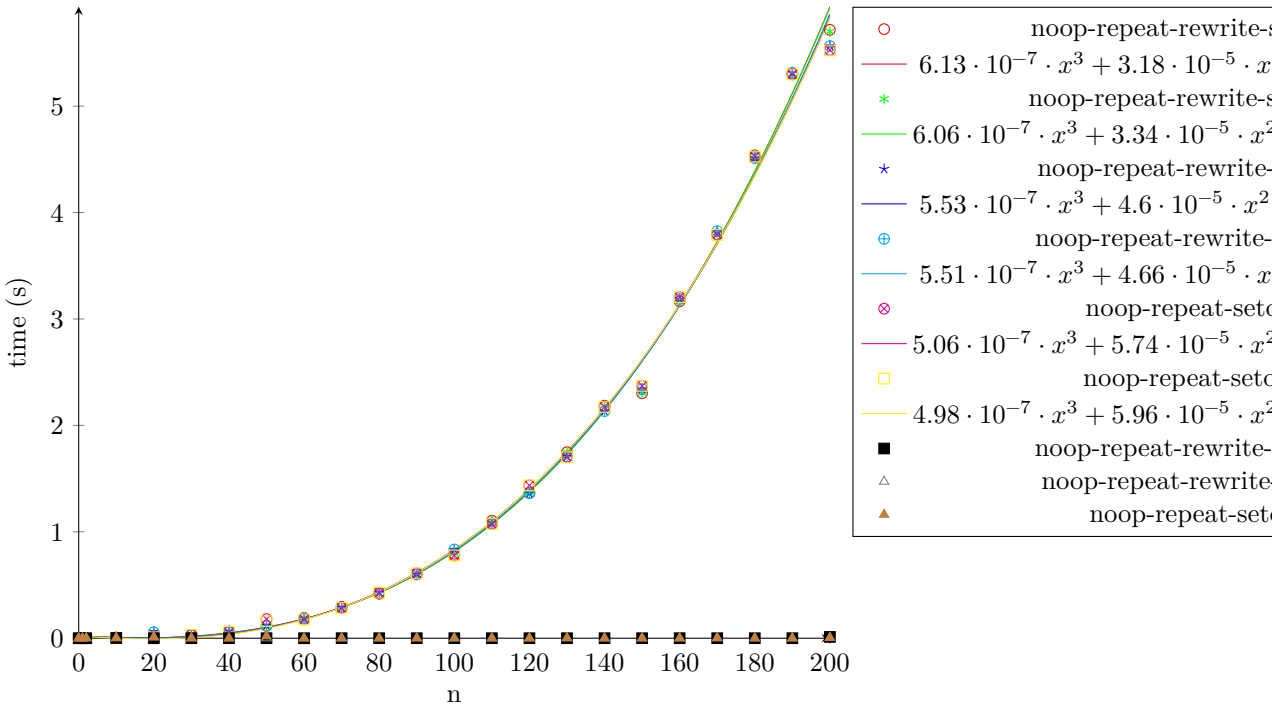


Figure 4: timing-repeat-setoid-rewrite-under-binders-noop

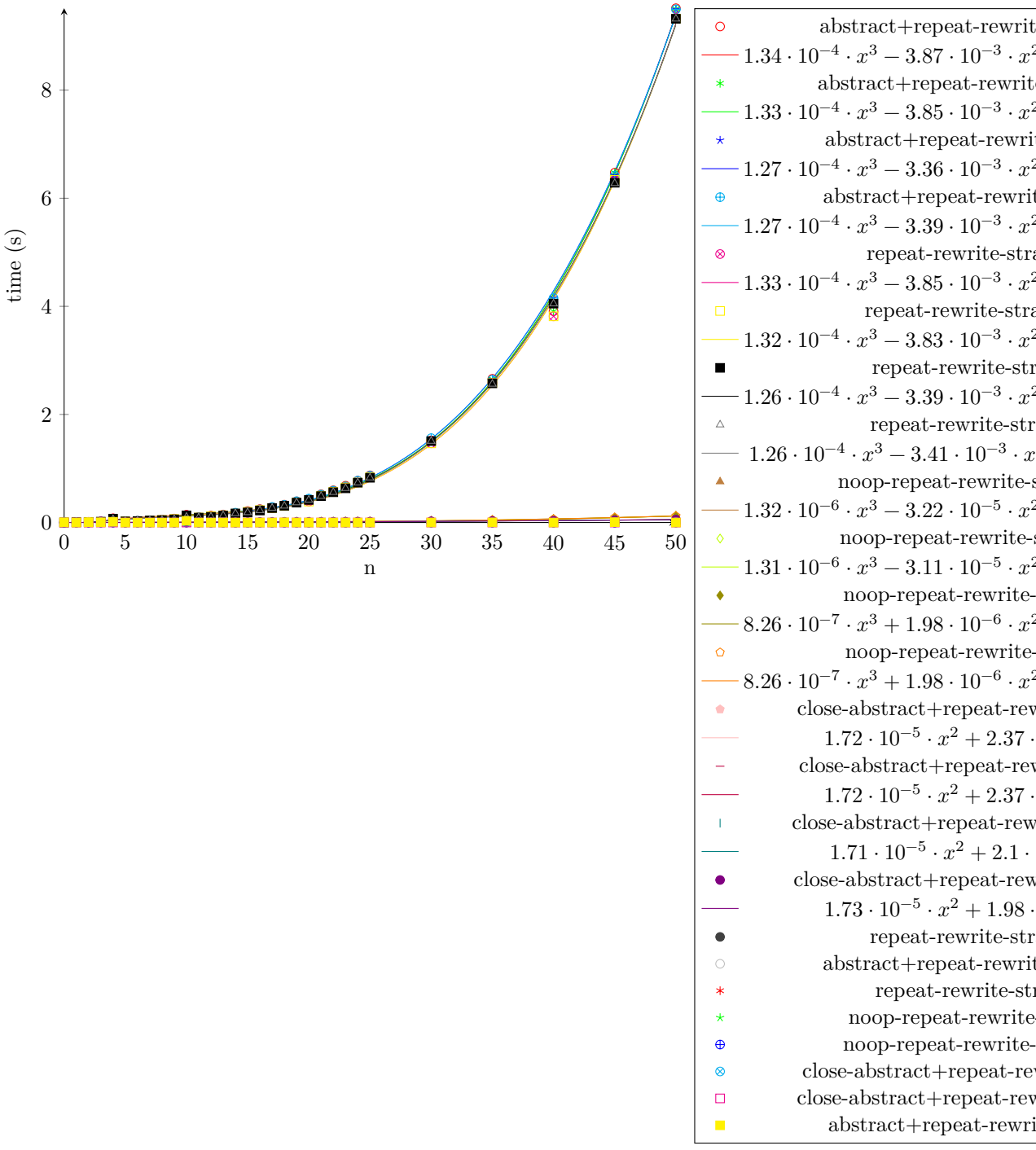


Figure 5: timing-rewrite-strat-under-binders

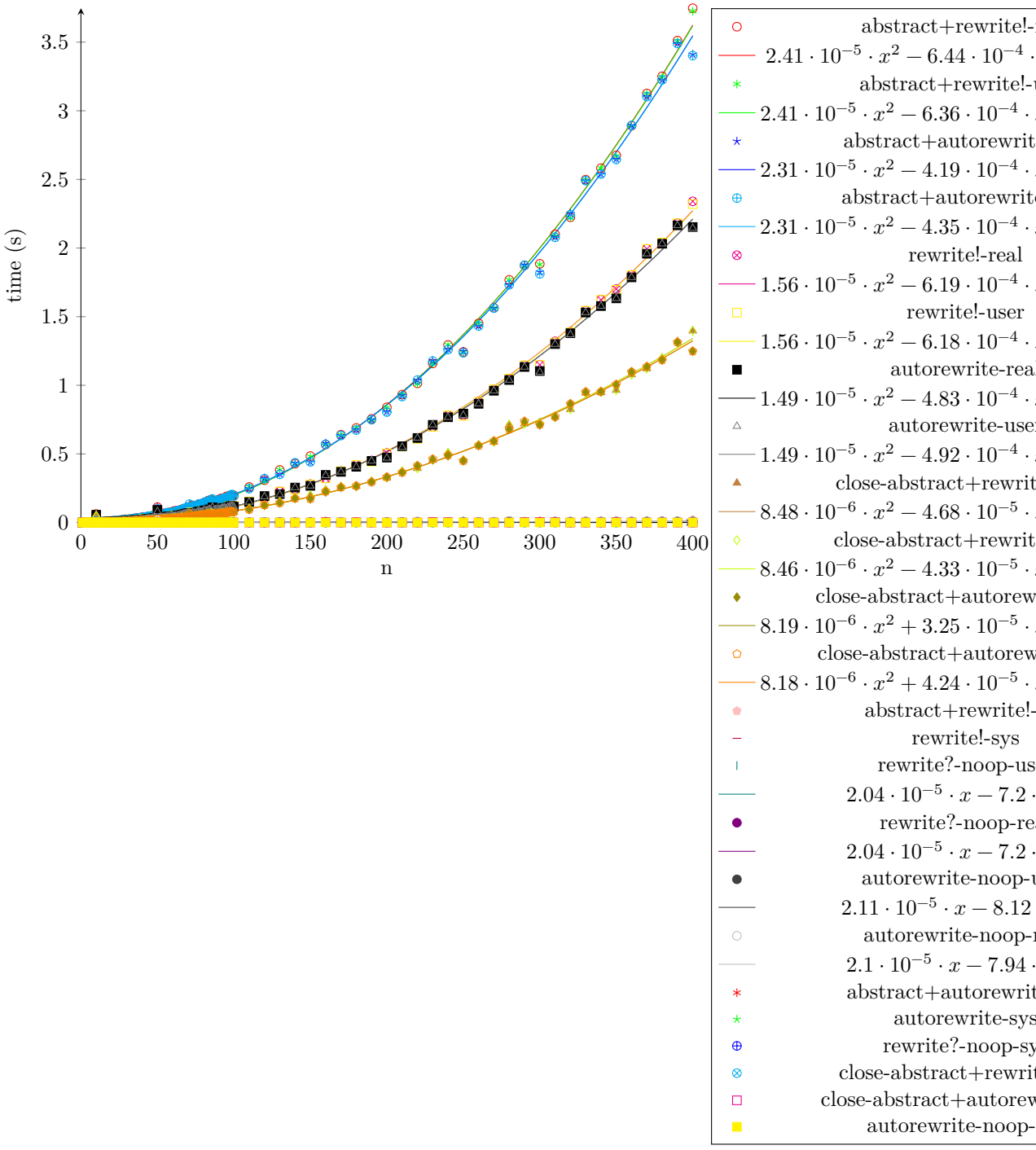


Figure 6: timing-rewrite-repeated-app-autorewrite

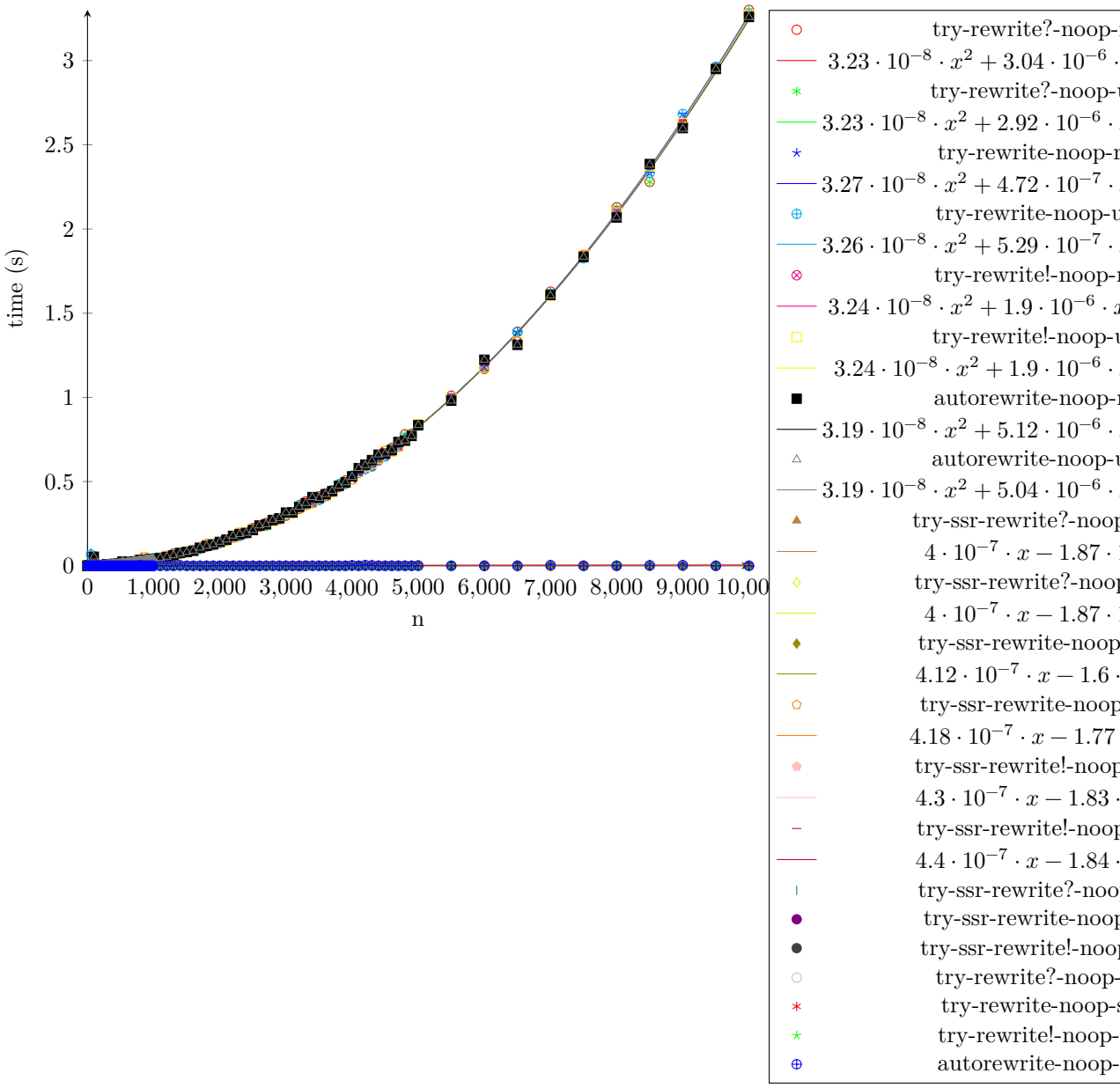


Figure 7: timing-rewrite-repeated-app-autorewrite-noop

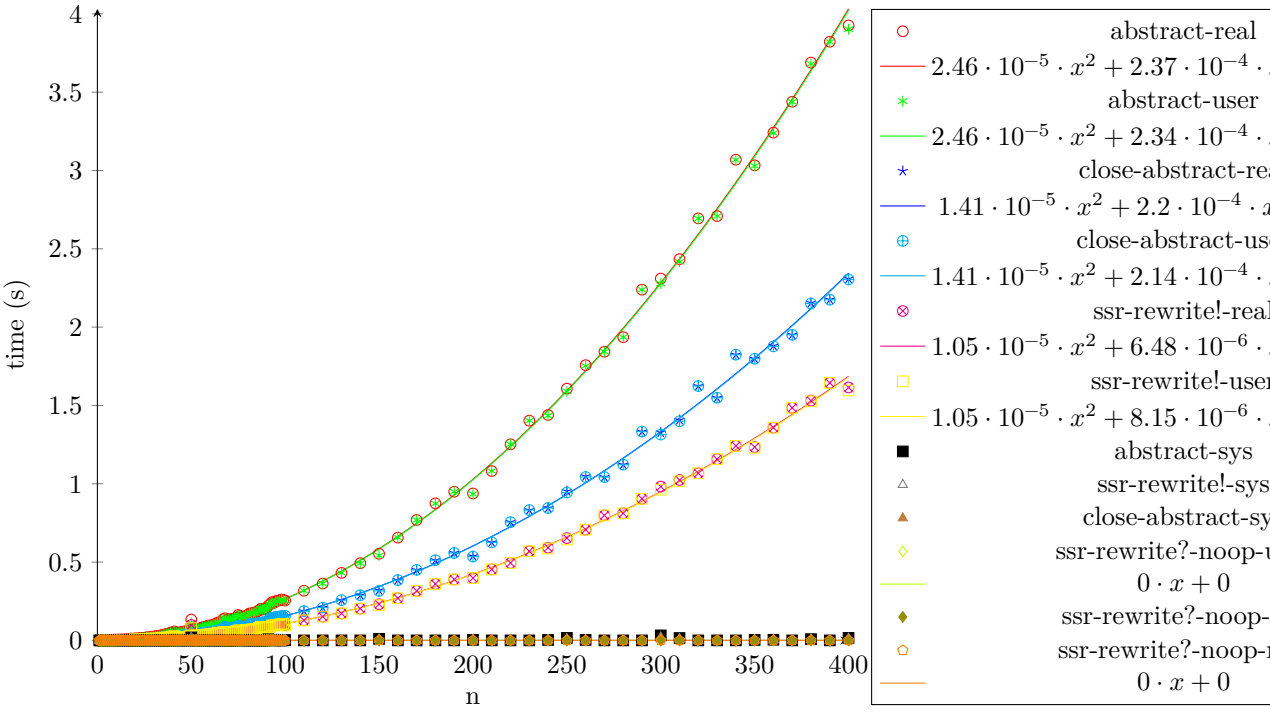


Figure 8: timing-rewrite-repeated-app-ssrrewrite

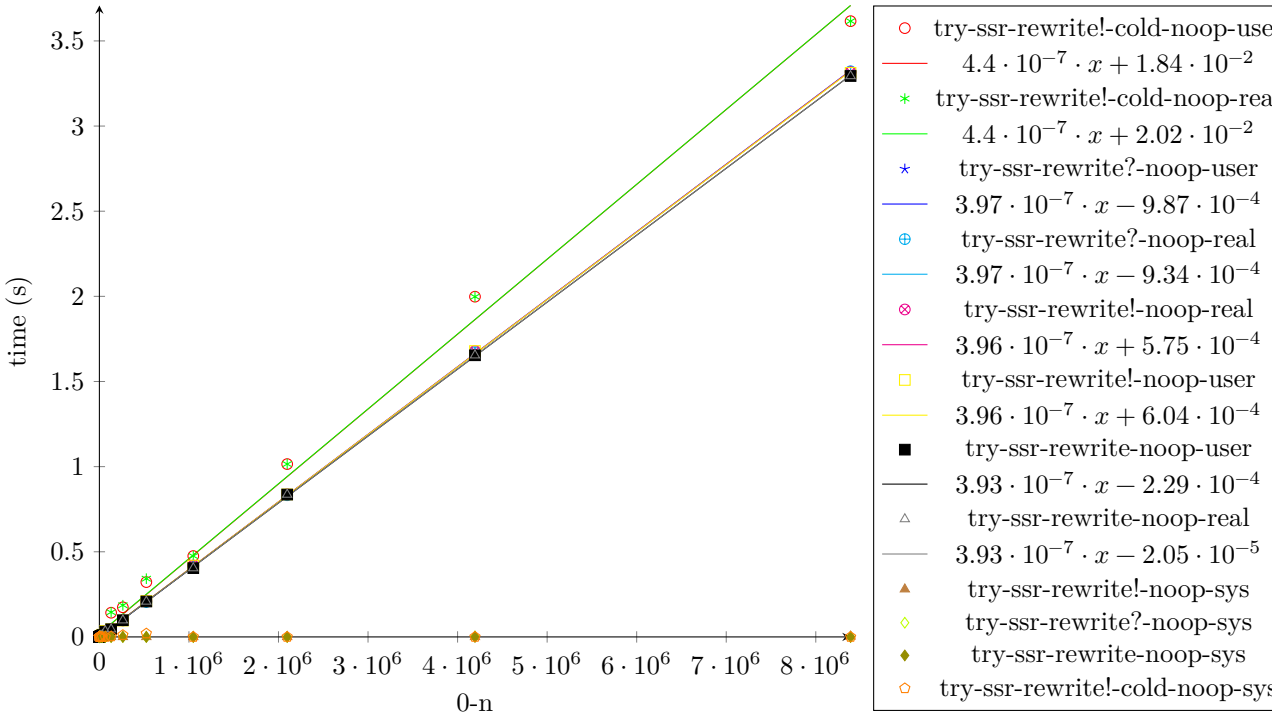


Figure 9: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn 1

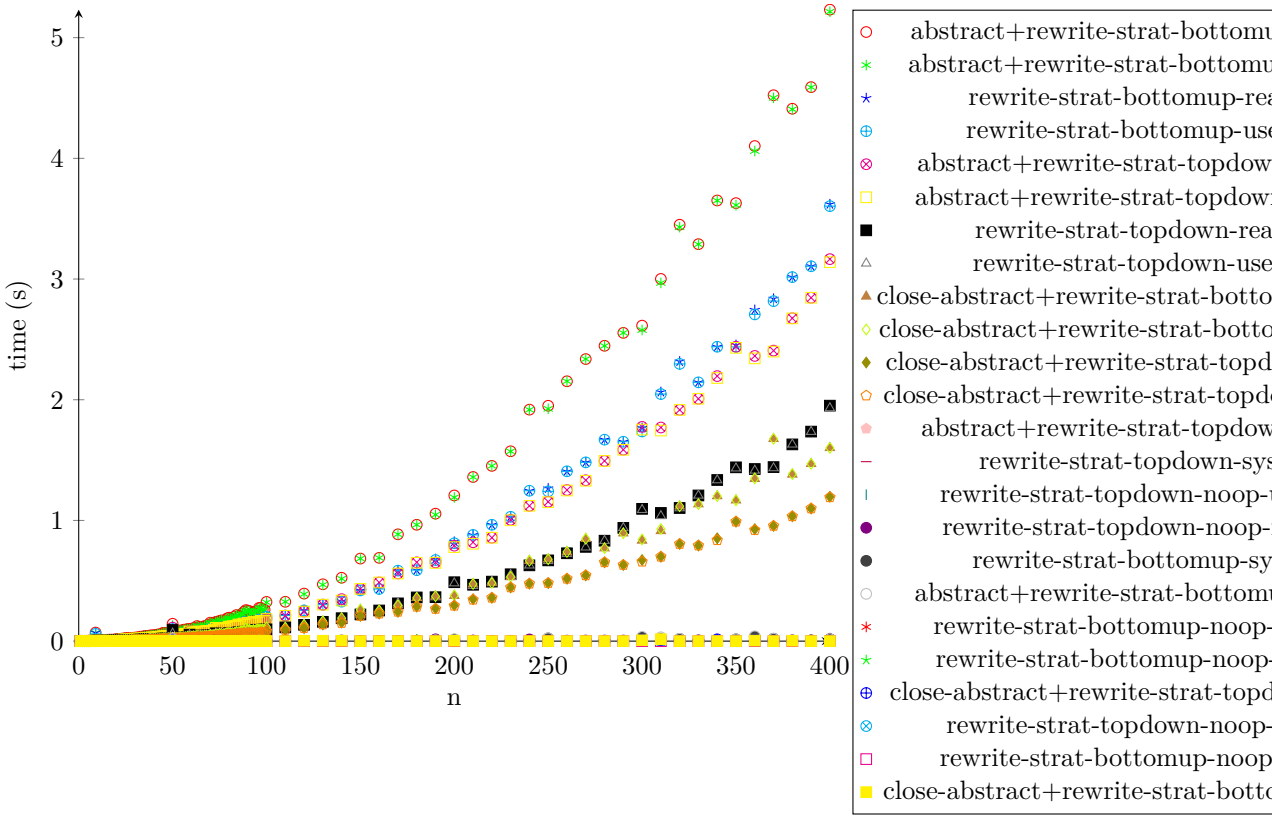


Figure 10: timing-rewrite-repeated-app-rewrite-strat

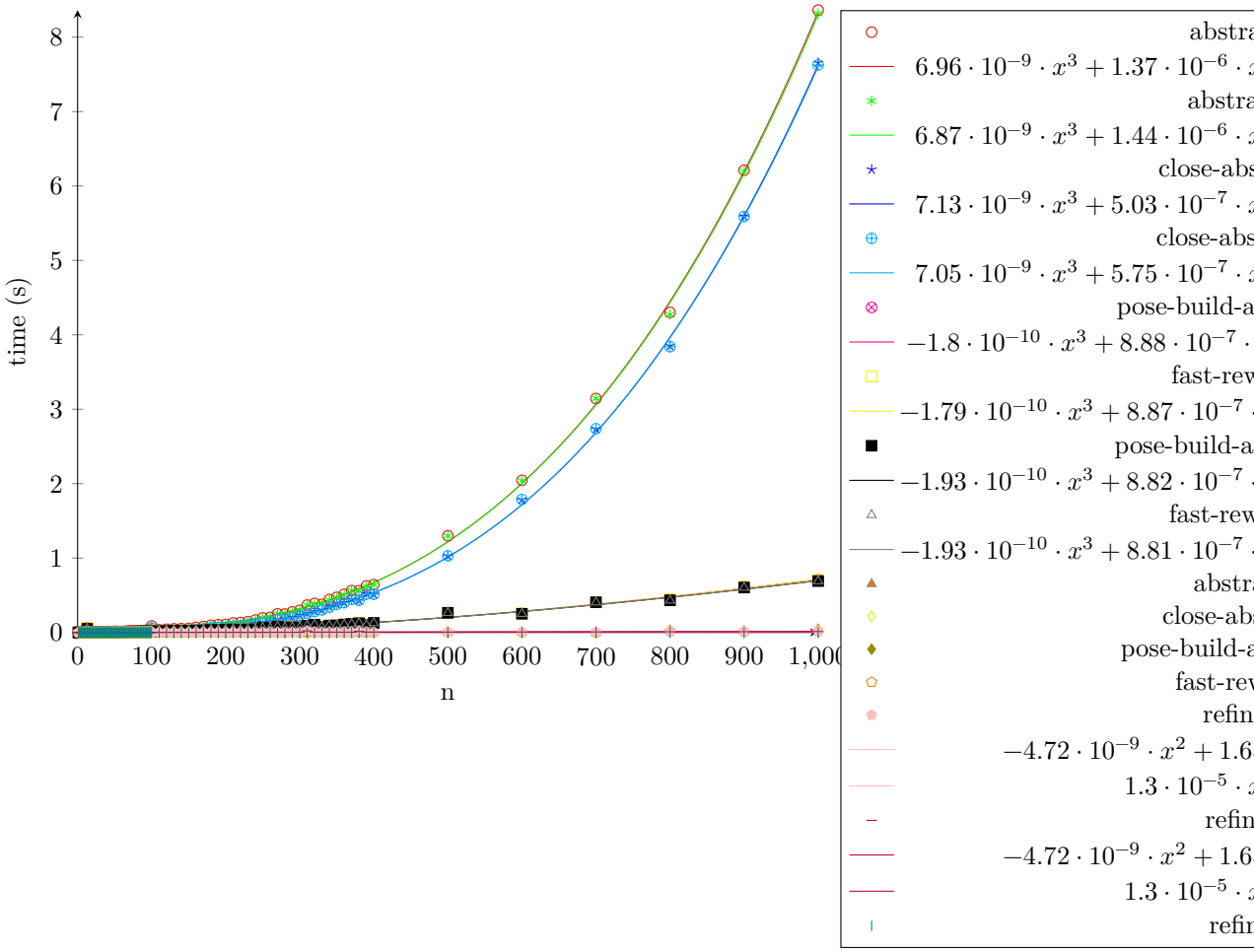


Figure 11: timing-rewrite-repeated-app-fast-rewrite

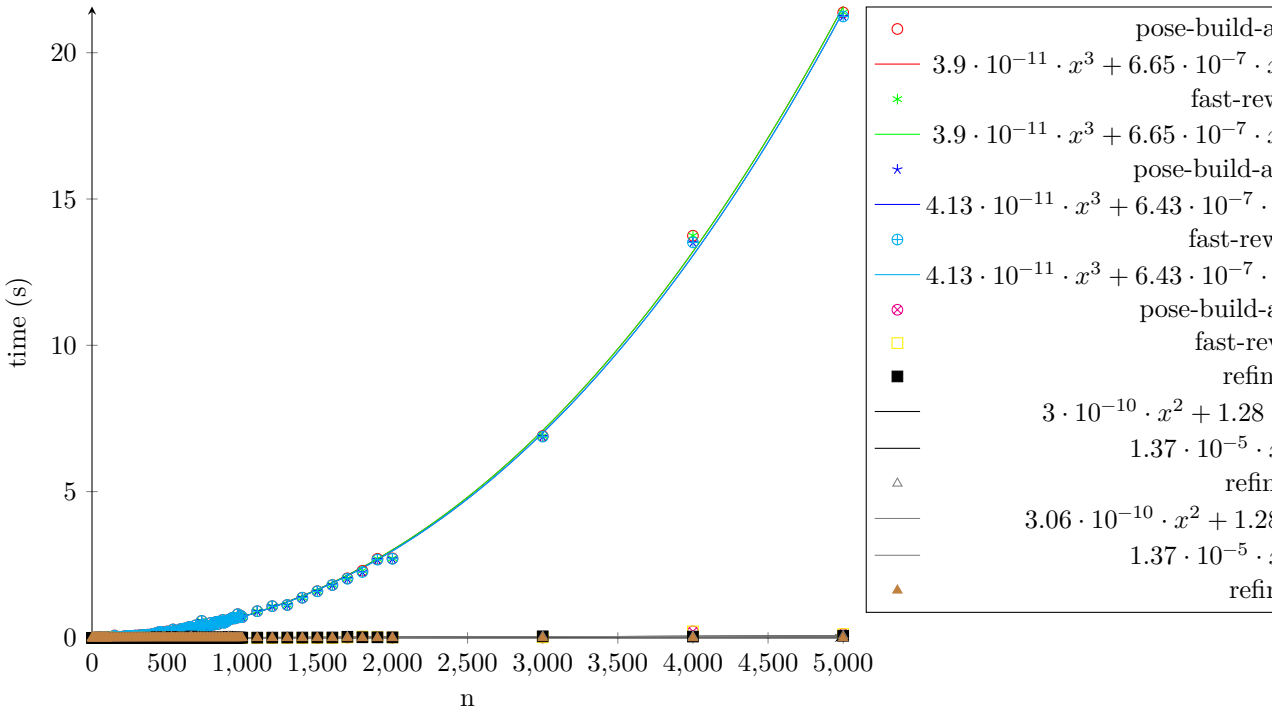


Figure 12: timing-rewrite-repeated-app-fast-rewrite-no-abstract

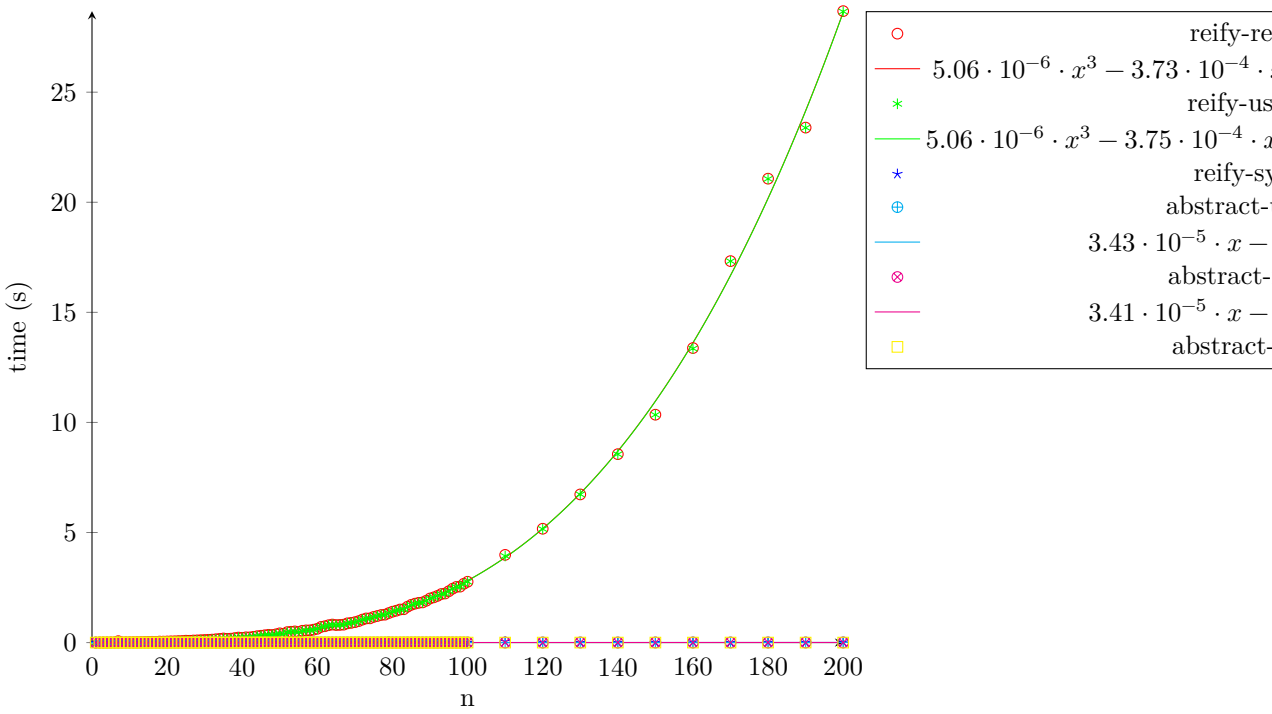


Figure 13: timing-typeclass-reification-let-in-HOAS

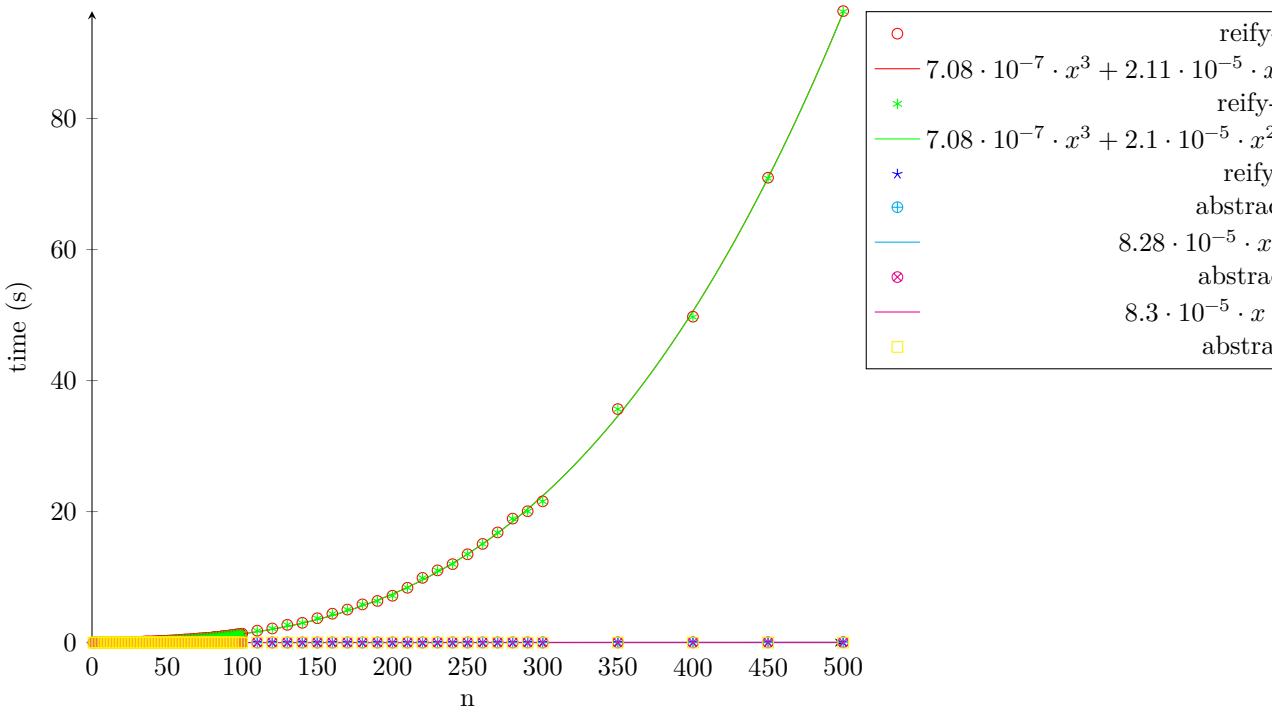
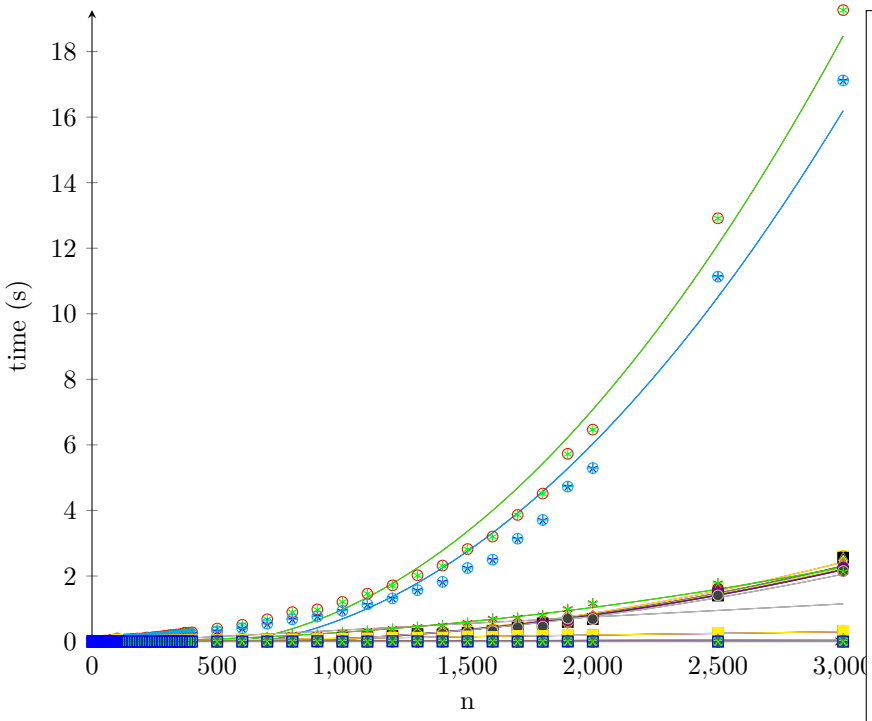


Figure 14: timing-typeclass-reification-let-in-PHOAS


time (s)
n
0
2
4
6
8
10
12
14
16
18
0
500
1,000
1,500
2,000
2,500
3,000

abstract-real
$2.65 \cdot 10^{-6} \cdot x^2 - 1.84 \cdot 10^{-3}$
abstract-user
$2.65 \cdot 10^{-6} \cdot x^2 - 1.85 \cdot 10^{-3}$
fast-rewrite-real
$2.41 \cdot 10^{-6} \cdot x^2 - 1.89 \cdot 10^{-3}$
fast-rewrite-user
$2.41 \cdot 10^{-6} \cdot x^2 - 1.9 \cdot 10^{-3}$
check-admit-user
$3.8 \cdot 10^{-7} \cdot x^2 - 3.4 \cdot 10^{-4} \cdot x$
check-admit-real
$3.8 \cdot 10^{-7} \cdot x^2 - 3.4 \cdot 10^{-4} \cdot x$
type-pf-cast-real
$3.61 \cdot 10^{-7} \cdot x^2 - 3.21 \cdot 10^{-4} \cdot x$
type-pf-cast-user
$3.61 \cdot 10^{-7} \cdot x^2 - 3.21 \cdot 10^{-4} \cdot x$
check-pf-cast-real
$3.51 \cdot 10^{-7} \cdot x^2 - 3.1 \cdot 10^{-4} \cdot x$
check-pf-cast-user
$3.51 \cdot 10^{-7} \cdot x^2 - 3.1 \cdot 10^{-4} \cdot x$
type-admit-cast-user
$3.34 \cdot 10^{-7} \cdot x^2 - 2.77 \cdot 10^{-4} \cdot x$
type-admit-cast-real
$3.34 \cdot 10^{-7} \cdot x^2 - 2.76 \cdot 10^{-4} \cdot x$
type-admit-user
$3.33 \cdot 10^{-7} \cdot x^2 - 2.78 \cdot 10^{-4} \cdot$
type-admit-real
$3.33 \cdot 10^{-7} \cdot x^2 - 2.77 \cdot 10^{-4} \cdot x$
check-admit-cast-user
$3.32 \cdot 10^{-7} \cdot x^2 - 2.72 \cdot 10^{-4} \cdot x$
check-admit-cast-real
$3.32 \cdot 10^{-7} \cdot x^2 - 2.72 \cdot 10^{-4} \cdot x$
refine-real
$3.04 \cdot 10^{-7} \cdot x^2 - 2.31 \cdot 10^{-4} \cdot x$
$4 \cdot 10^{-4} \cdot x - 4.86 \cdot 1$
refine-user
$3.04 \cdot 10^{-7} \cdot x^2 - 2.31 \cdot 10^{-4} \cdot x$
$3.99 \cdot 10^{-4} \cdot x - 4.87 \cdot$
close-abstract-user
$2.37 \cdot 10^{-7} \cdot x^2 + 4.83 \cdot 10^{-5} \cdot x$
close-abstract-real
$2.37 \cdot 10^{-7} \cdot x^2 + 4.86 \cdot 10^{-5} \cdot x$
build-eval-thunk-user
$1 \cdot 10^{-4} \cdot x - 1.86 \cdot 1$
build-eval-thunk-real
$1.01 \cdot 10^{-4} \cdot x - 1.75 \cdot$
build-thunk-user
$9.98 \cdot 10^{-5} \cdot x - 1.96 \cdot$
build-thunk-real
$1.01 \cdot 10^{-4} \cdot x - 1.86 \cdot$
check-I-user