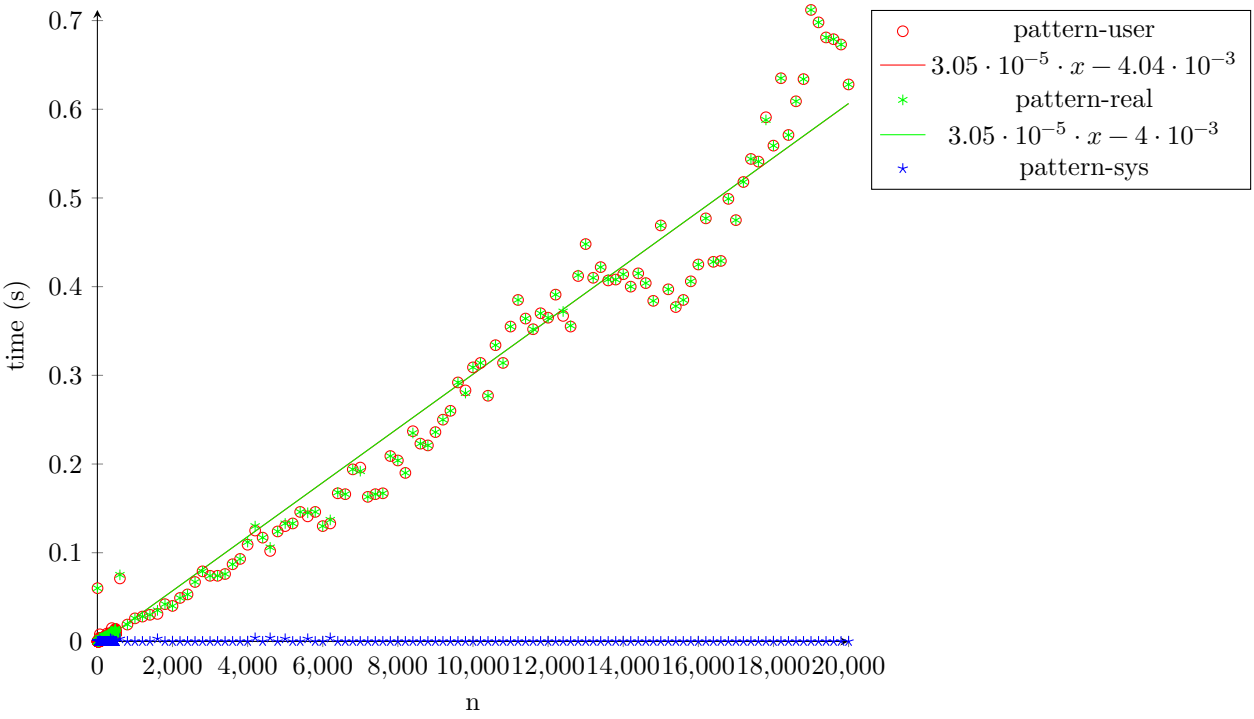


Figure 1: timing-pattern

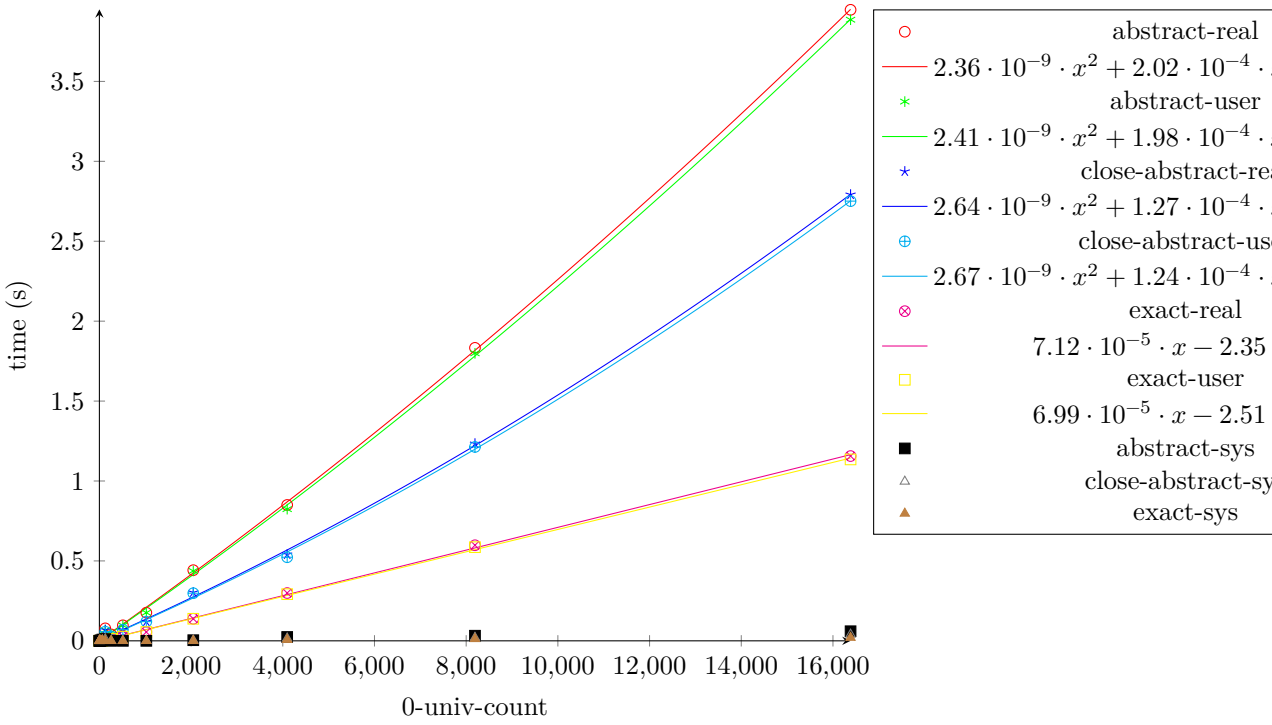


Figure 2: timing-n-polymorphic-universes param-1-n 0

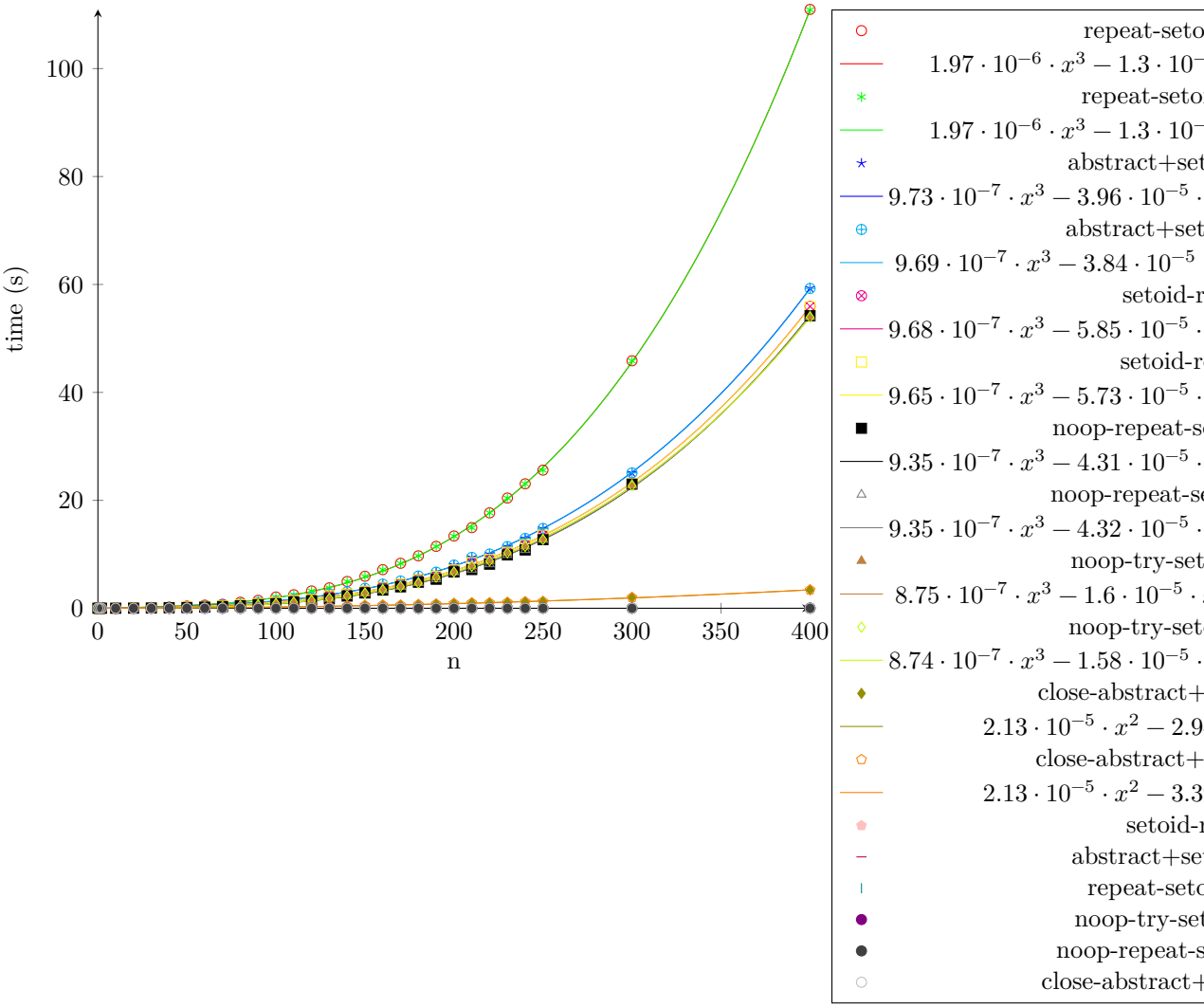


Figure 3: timing-repeat-setoid-rewrite-under-binders

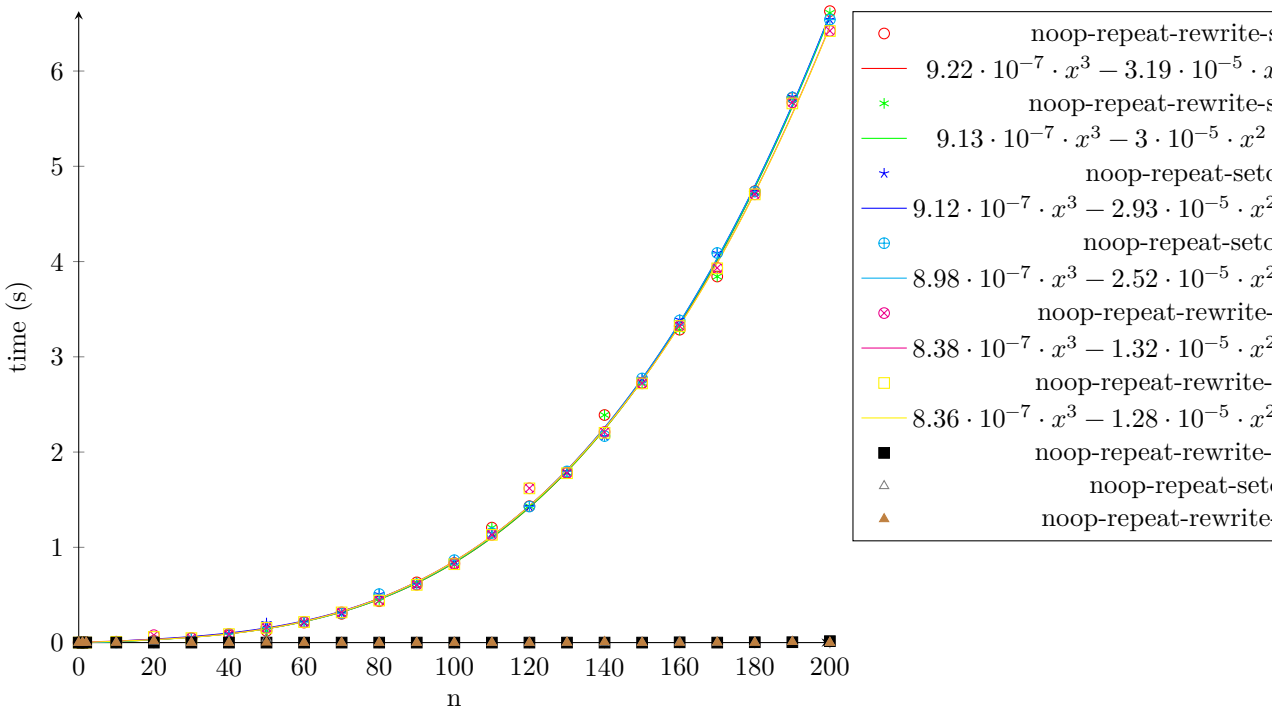


Figure 4: timing-repeat-setoid-rewrite-under-binders-noop

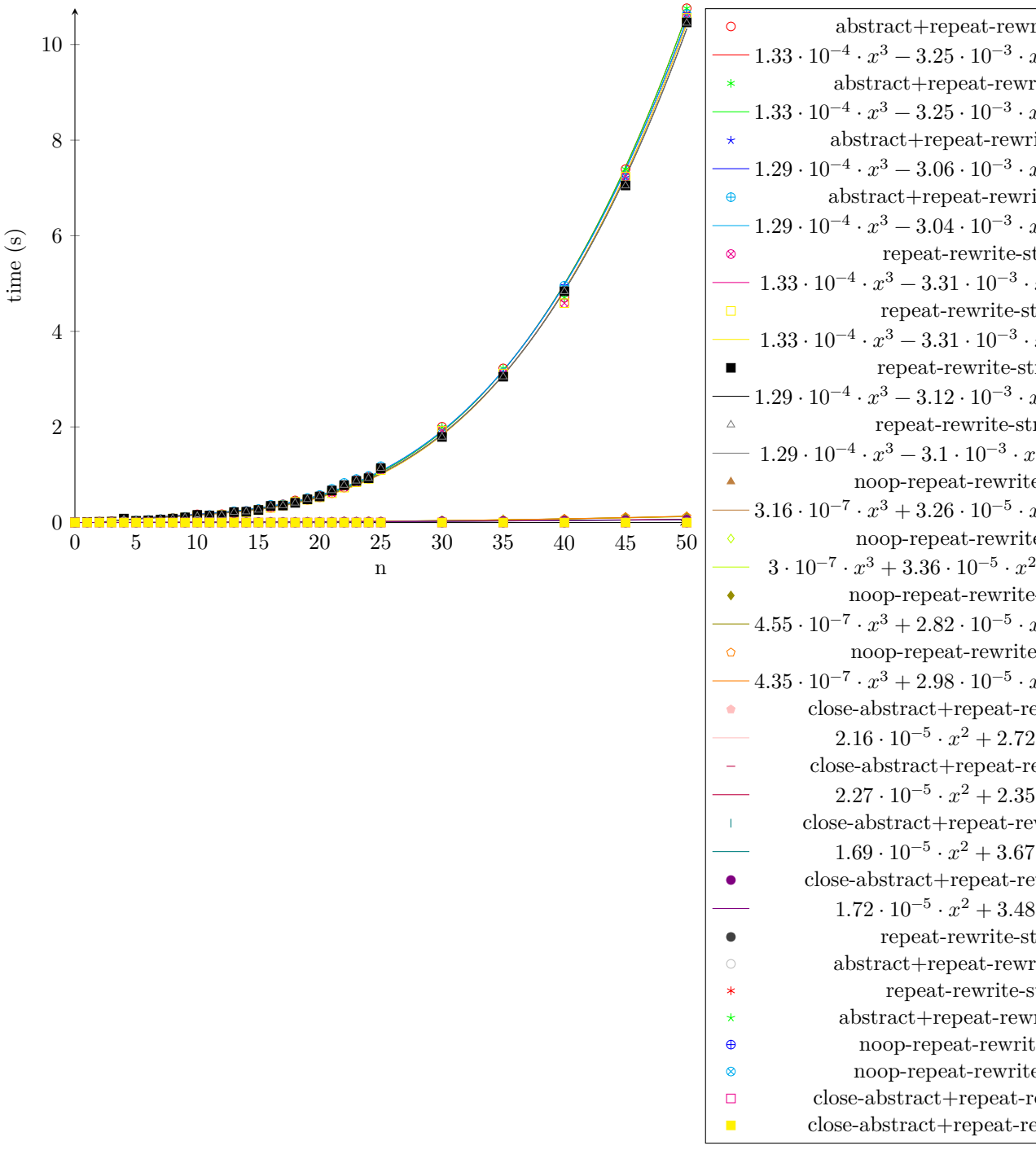


Figure 5: timing-rewrite-strat-under-binders

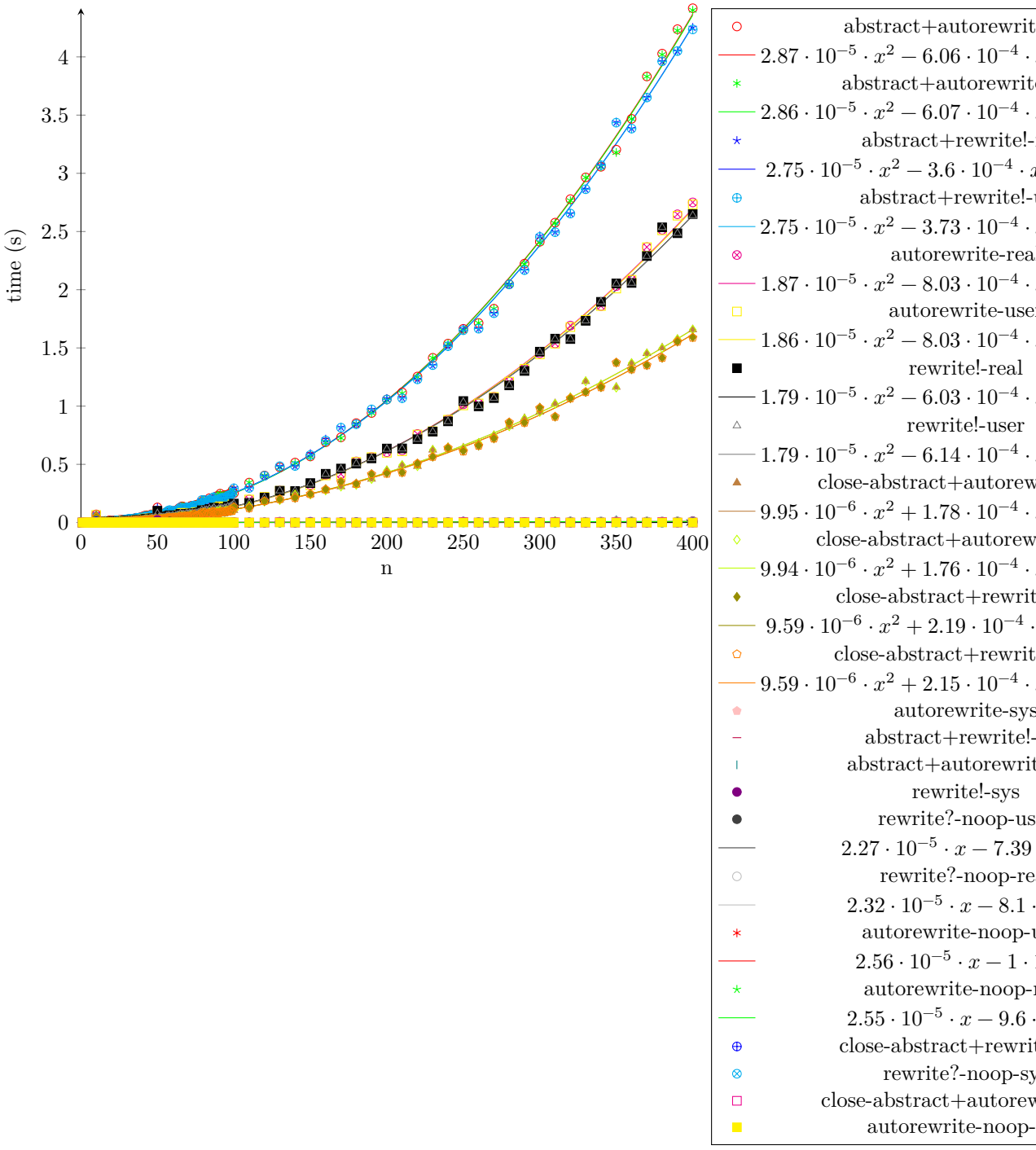


Figure 6: timing-rewrite-repeated-app-autorewrite

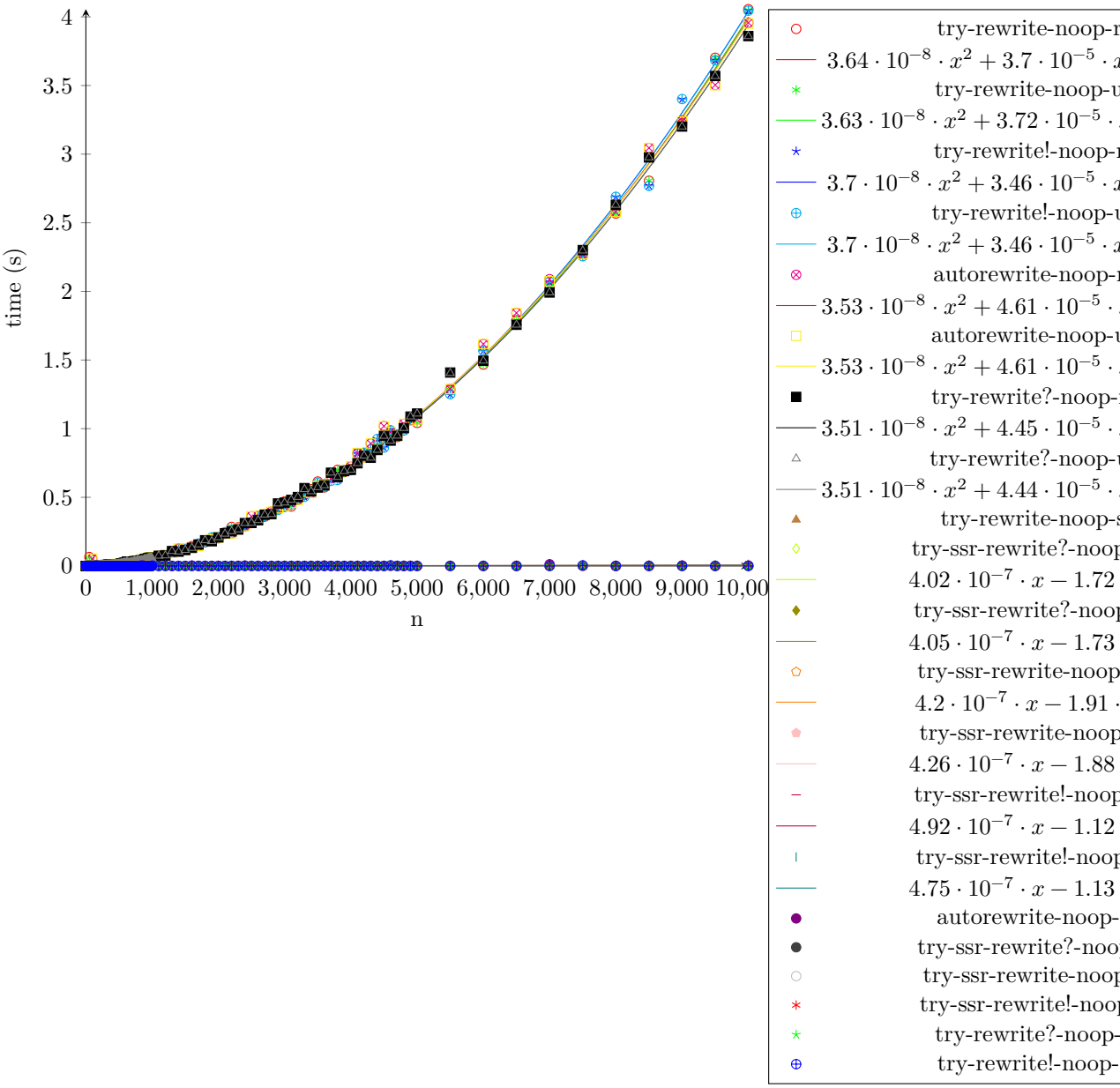


Figure 7: timing-rewrite-repeated-app-autorewrite-noop

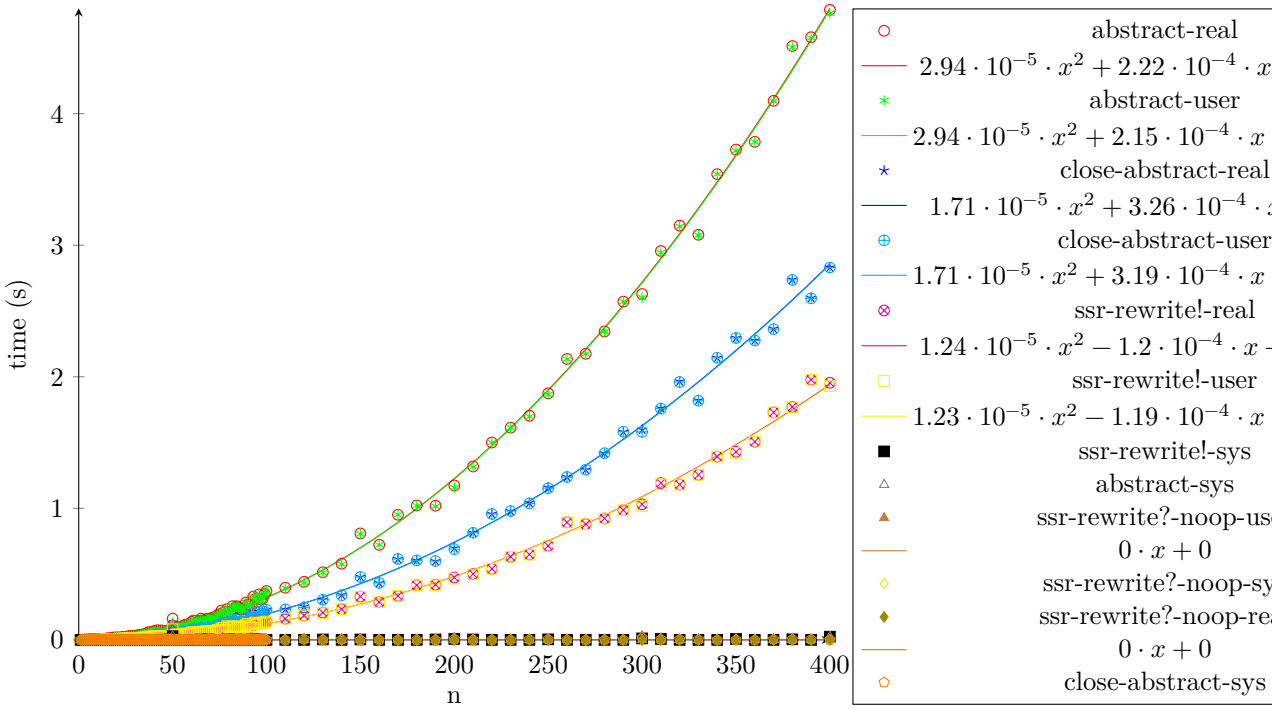


Figure 8: timing-rewrite-repeated-app-ssrrewrite

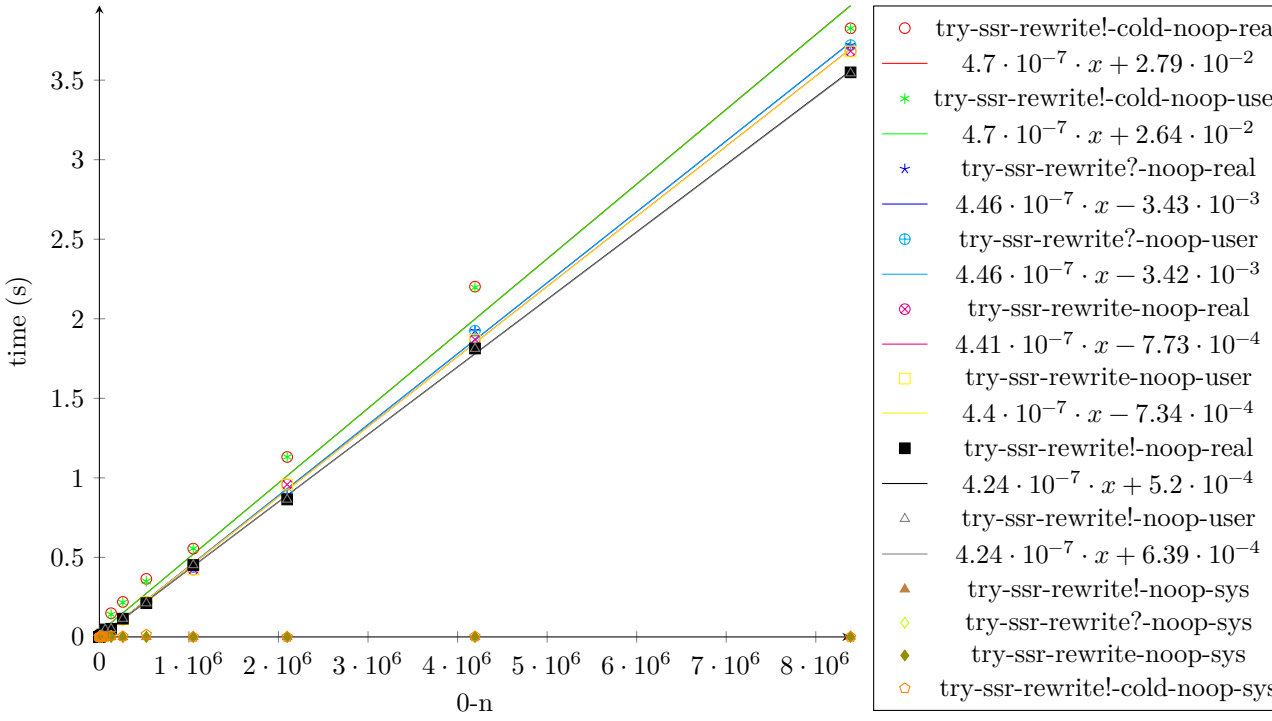


Figure 9: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn 1

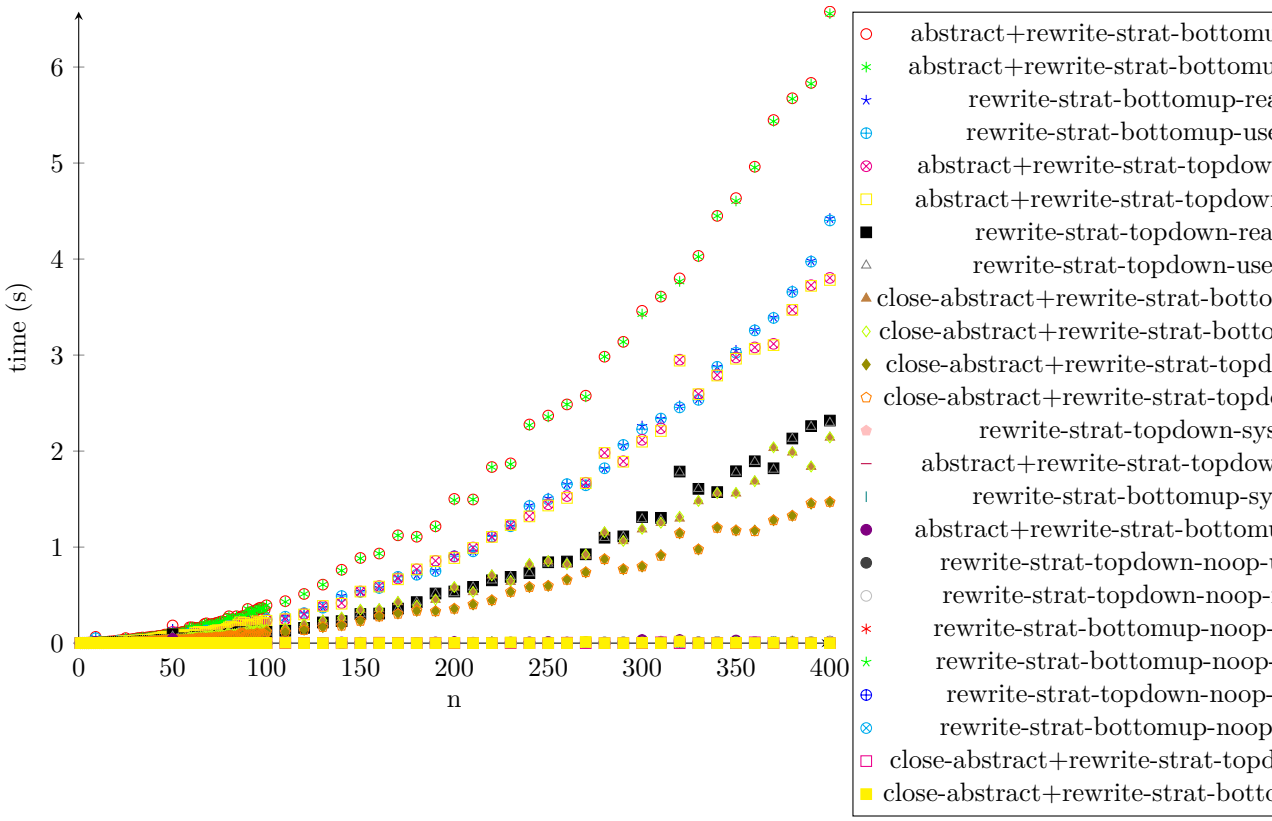


Figure 10: timing-rewrite-repeated-app-rewrite-strat

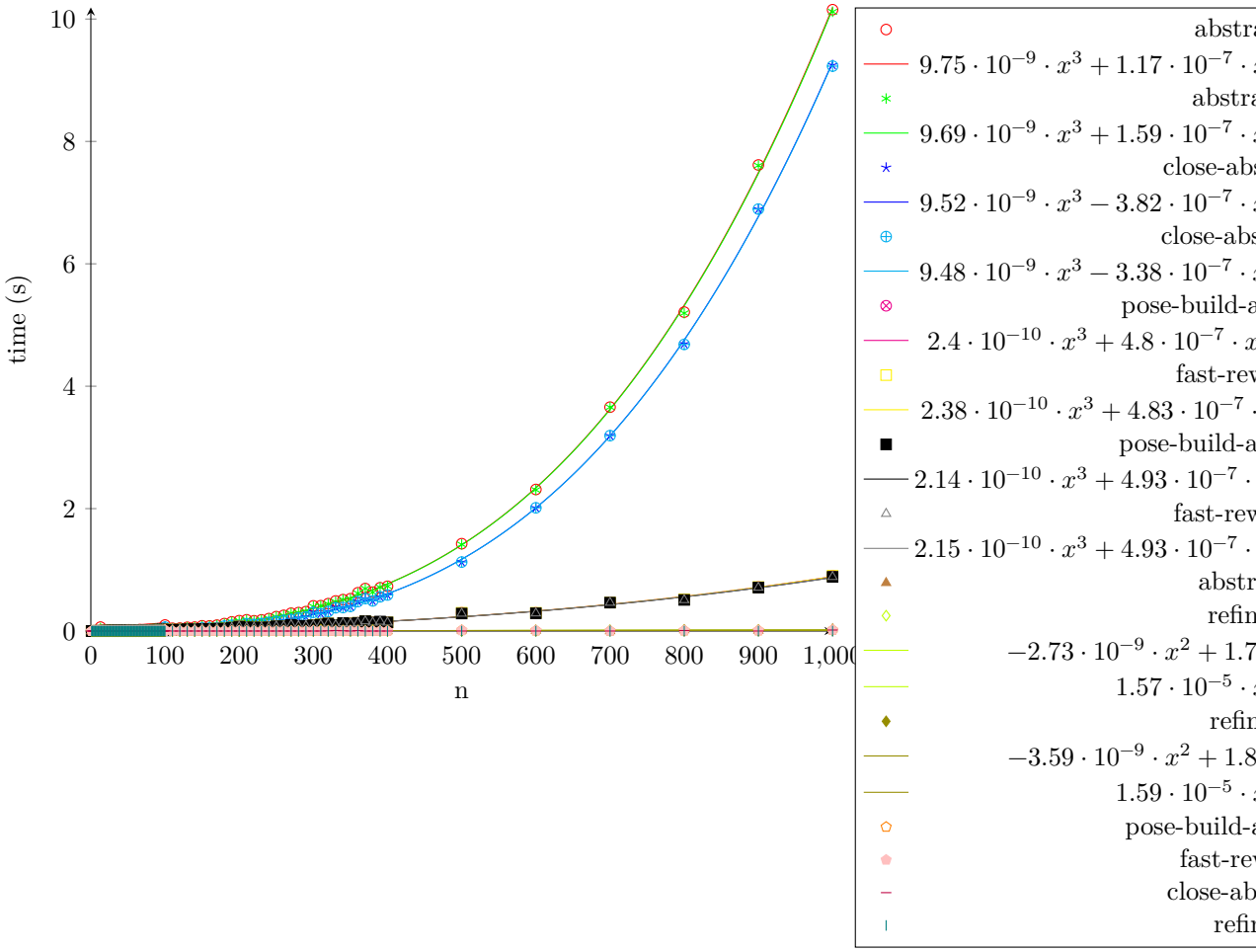


Figure 11: timing-rewrite-repeated-app-fast-rewrite

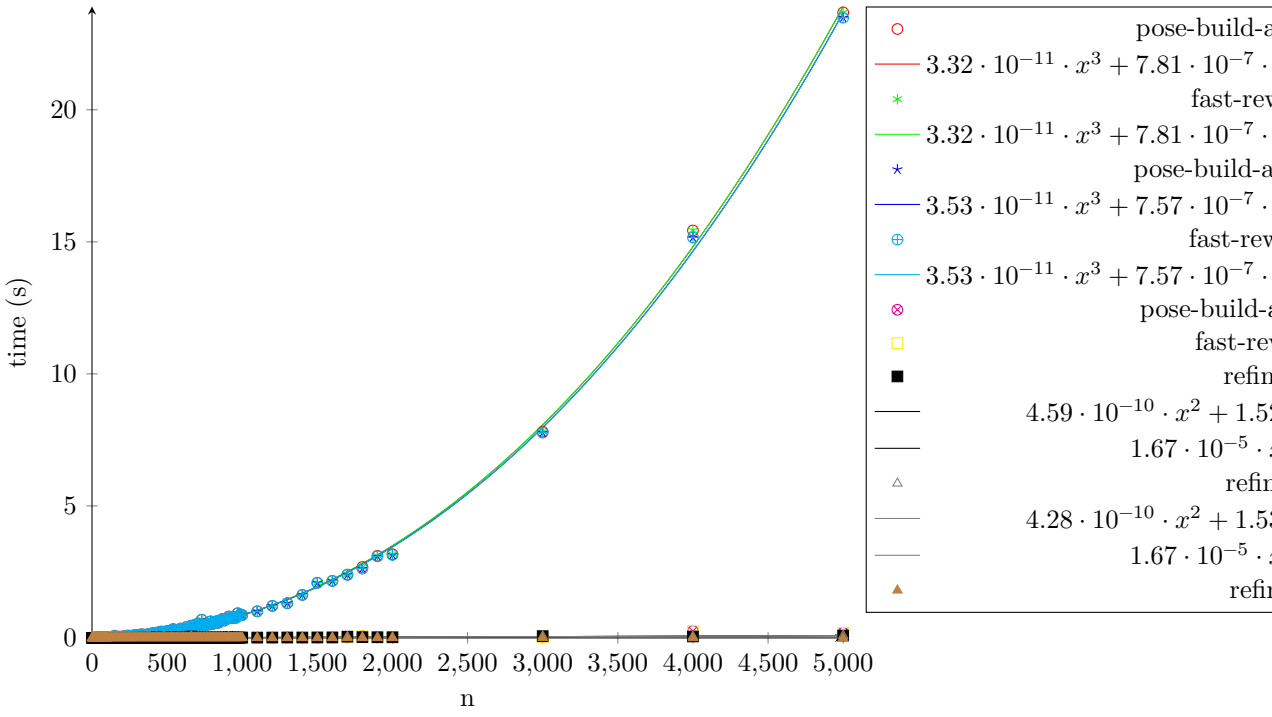


Figure 12: timing-rewrite-repeated-app-fast-rewrite-no-abstract

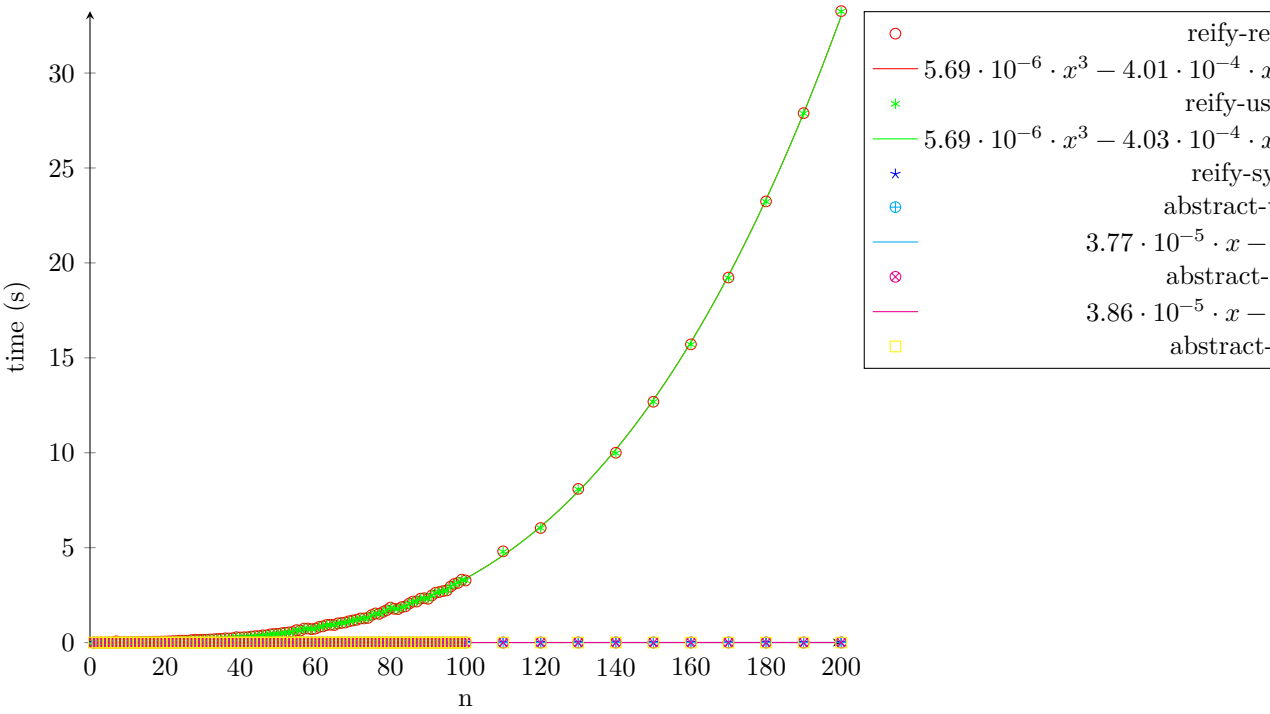


Figure 13: timing-typeclass-reification-let-in-HOAS

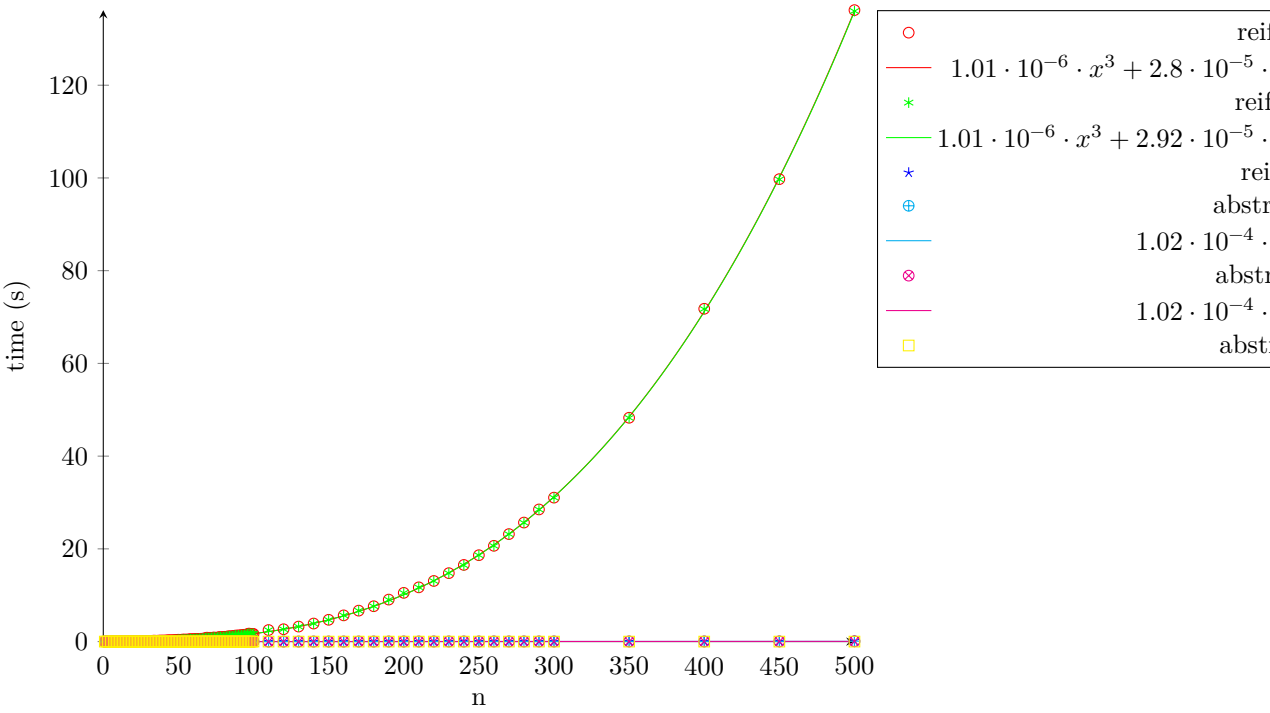
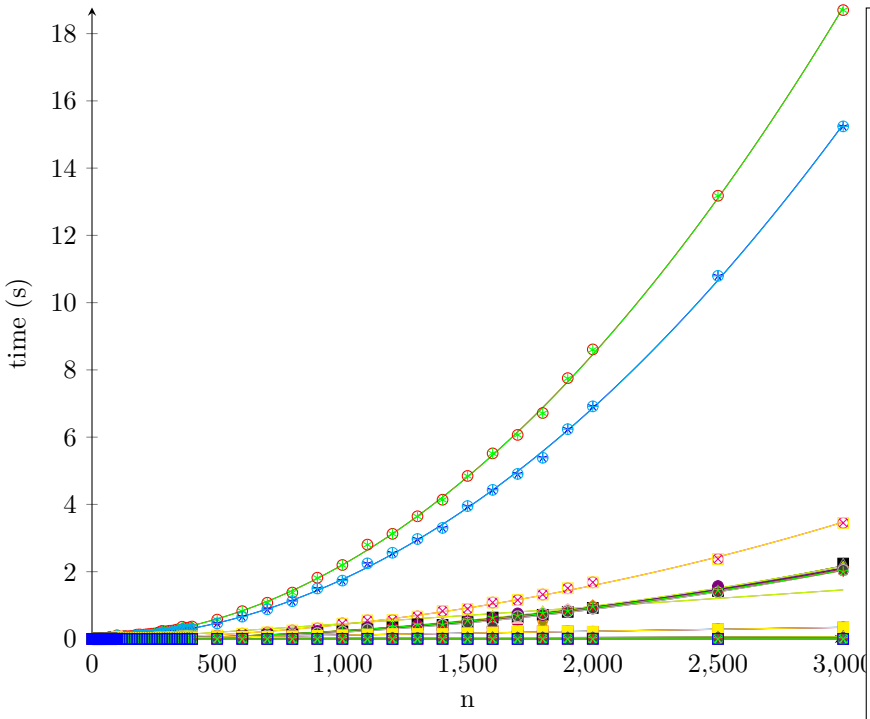


Figure 14: timing-typeclass-reification-let-in-PHOAS


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
$2.03 \cdot 10^{-6} \cdot x^2 + 1.64 \cdot 10^{-4} \cdot x$
abstract-user
$2.03 \cdot 10^{-6} \cdot x^2 + 1.59 \cdot 10^{-4} \cdot$
fast-rewrite-real
$1.67 \cdot 10^{-6} \cdot x^2 + 9.14 \cdot 10^{-5} \cdot x$
fast-rewrite-user
$1.67 \cdot 10^{-6} \cdot x^2 + 8.75 \cdot 10^{-5} \cdot x$
close-abstract-rea
$3.63 \cdot 10^{-7} \cdot x^2 + 7.1 \cdot 10^{-5} \cdot x$
close-abstract-use
$3.63 \cdot 10^{-7} \cdot x^2 + 7.03 \cdot 10^{-5} \cdot x$
check-admit-cast-u
$2.55 \cdot 10^{-7} \cdot x^2 - 4.32 \cdot 10^{-5} \cdot x$
check-admit-cast-re
$2.55 \cdot 10^{-7} \cdot x^2 - 4.26 \cdot 10^{-5} \cdot x$
refine-user
$2.36 \cdot 10^{-7} \cdot x^2 + 1.39 \cdot 10^{-5} \cdot x$
$5.04 \cdot 10^{-4} \cdot x - 5.44 \cdot$
refine-real
$2.36 \cdot 10^{-7} \cdot x^2 + 1.42 \cdot 10^{-5} \cdot x$
$5.04 \cdot 10^{-4} \cdot x - 5.45 \cdot$
check-pf-cast-use
$2.39 \cdot 10^{-7} \cdot x^2 - 1.93 \cdot 10^{-5} \cdot x$
check-pf-cast-rea
$2.39 \cdot 10^{-7} \cdot x^2 - 1.9 \cdot 10^{-5} \cdot x$
type-admit-cast-us
$2.4 \cdot 10^{-7} \cdot x^2 - 2.66 \cdot 10^{-5} \cdot x$
type-admit-cast-re
$2.4 \cdot 10^{-7} \cdot x^2 - 2.62 \cdot 10^{-5} \cdot x$
type-pf-cast-user
$2.32 \cdot 10^{-7} \cdot x^2 + 7.01 \cdot 10^{-6} \cdot$
type-pf-cast-real
$2.32 \cdot 10^{-7} \cdot x^2 + 7.4 \cdot 10^{-6} \cdot x$
type-admit-real
$2.42 \cdot 10^{-7} \cdot x^2 - 4.81 \cdot 10^{-5} \cdot x$
type-admit-user
$2.42 \cdot 10^{-7} \cdot x^2 - 4.83 \cdot 10^{-5} \cdot x$
check-admit-user
$2.2 \cdot 10^{-7} \cdot x^2 + 2.33 \cdot 10^{-5} \cdot x$
check-admit-real
$2.2 \cdot 10^{-7} \cdot x^2 + 2.37 \cdot 10^{-5} \cdot x$
build-eval-thunk-us
$1.15 \cdot 10^{-4} \cdot x - 1.02 \cdot$
build-eval-thunk-re
$1.16 \cdot 10^{-4} \cdot x - 8.62 \cdot$
build-thunk-user
$1.14 \cdot 10^{-4} \cdot x - 1.05 \cdot$
build-thunk-real
$1.15 \cdot 10^{-4} \cdot x - 8.8 \cdot$
check-I-user