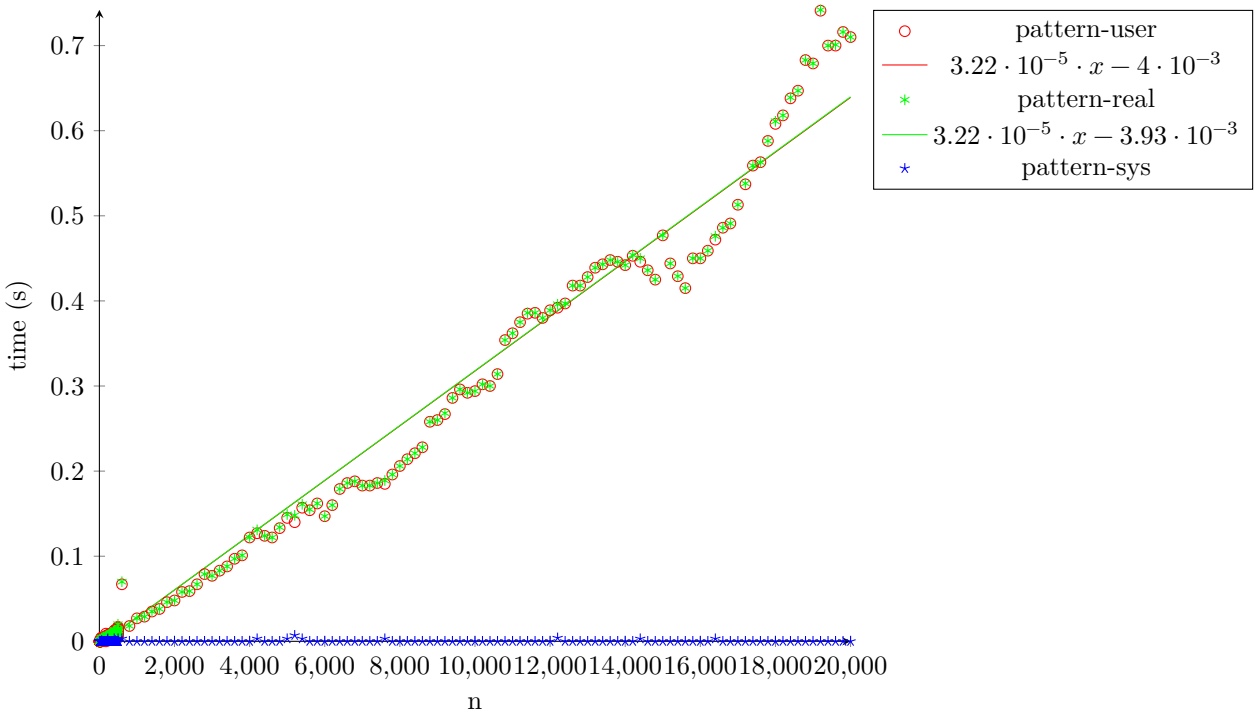


Figure 1: timing-pattern

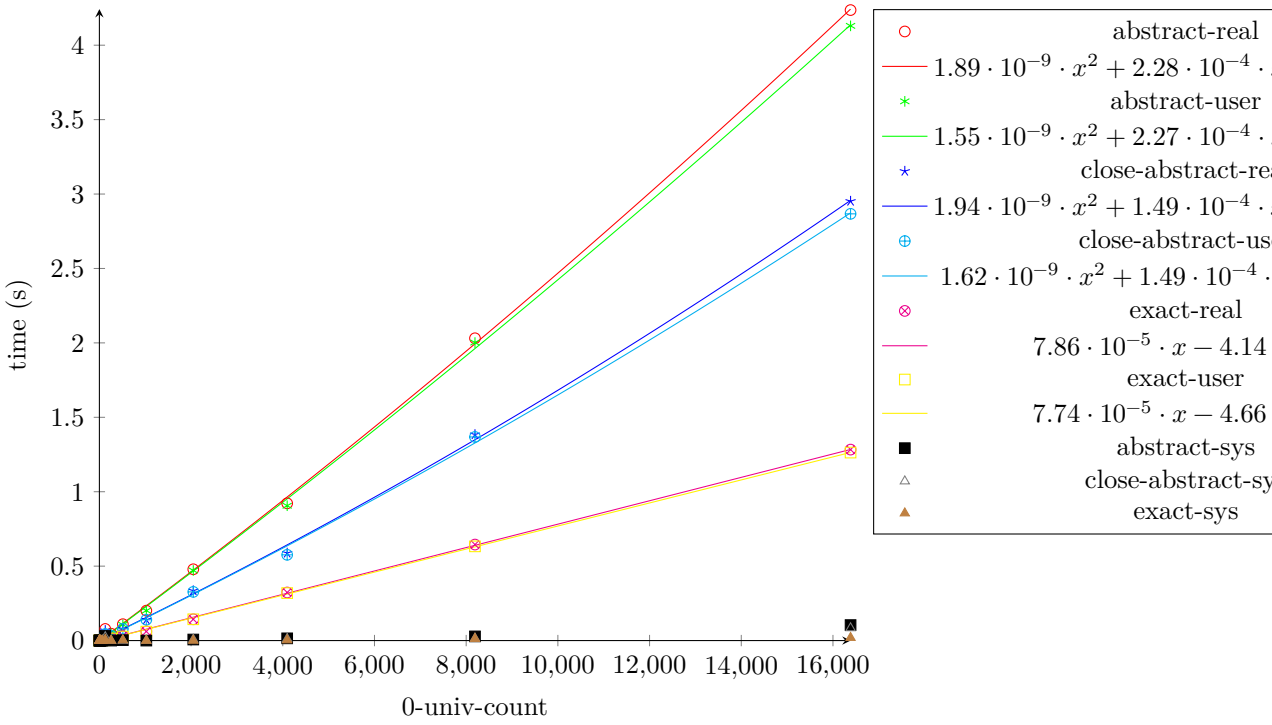


Figure 2: timing-n-polymorphic-universes param-1-n 0

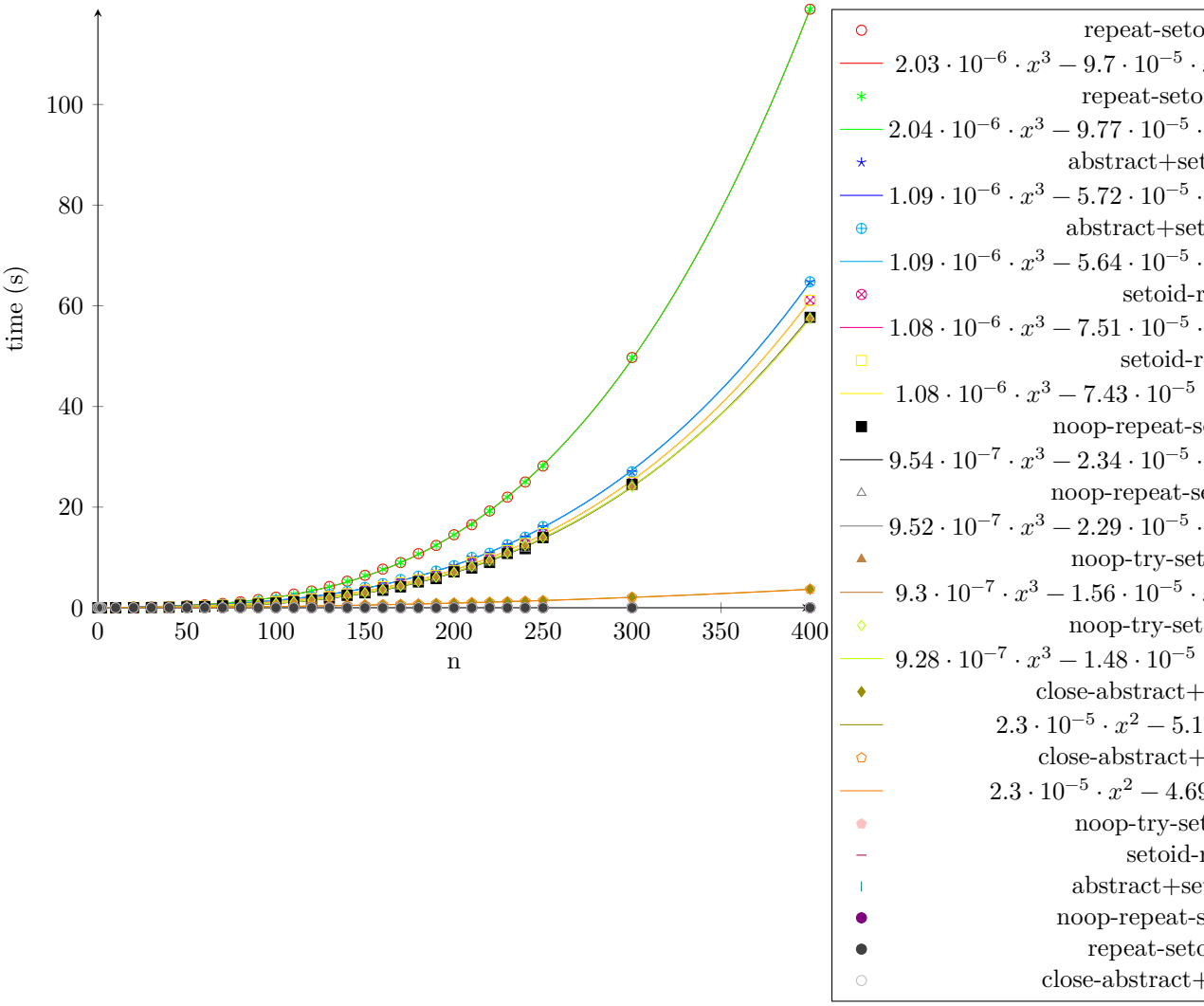


Figure 3: timing-repeat-setoid-rewrite-under-binders

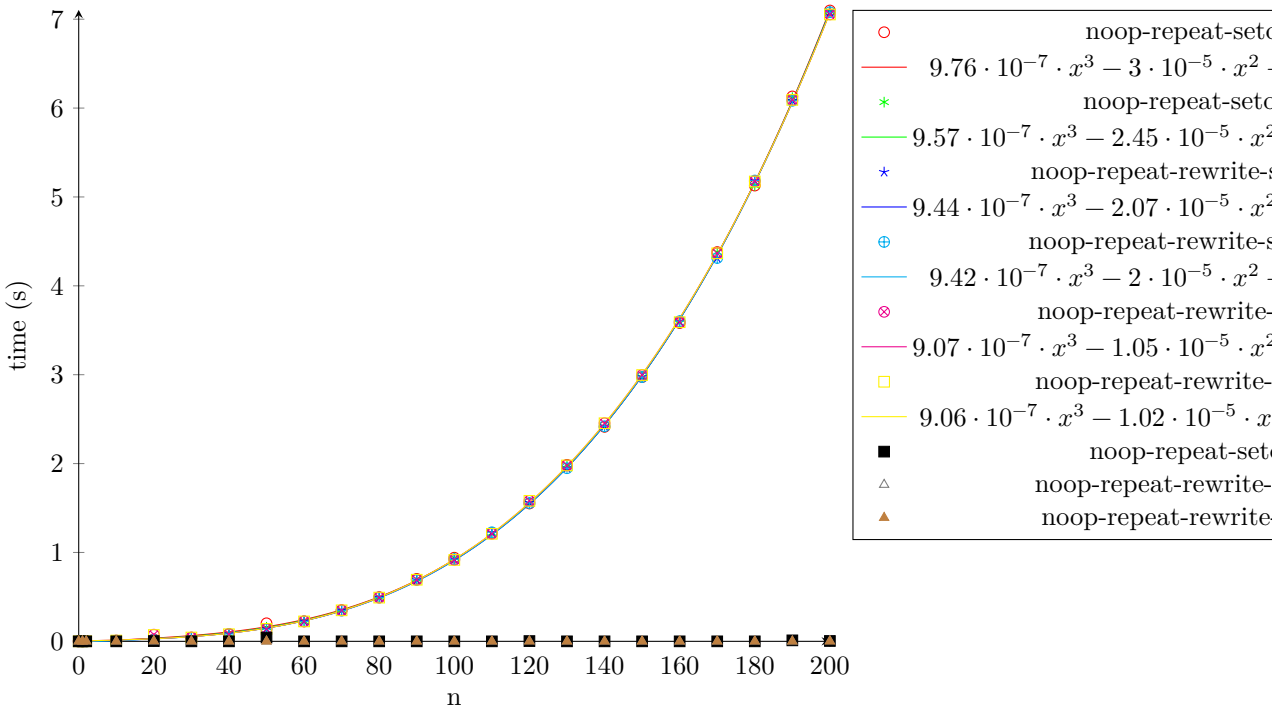


Figure 4: timing-repeat-setoid-rewrite-under-binders-noop

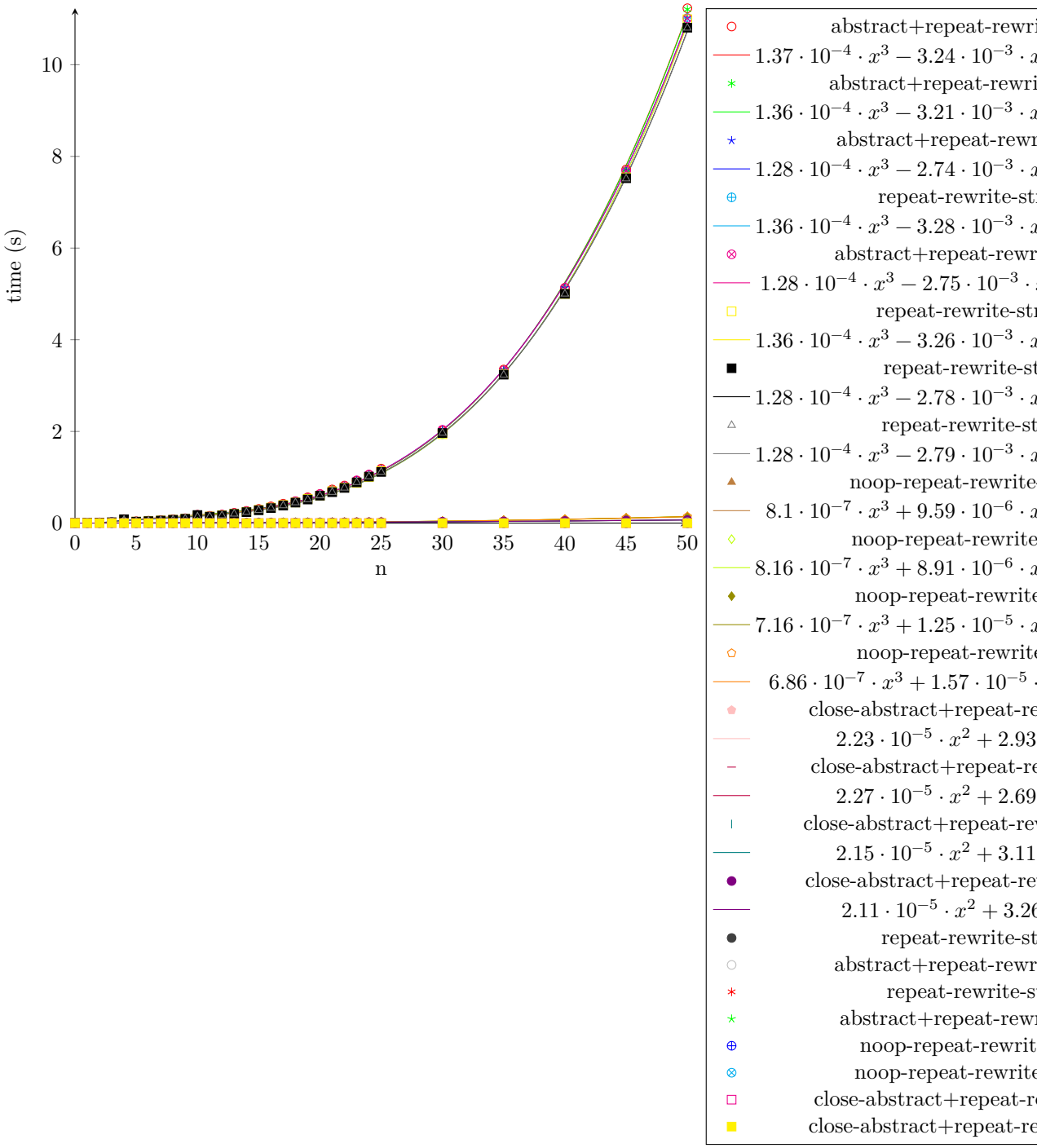


Figure 5: timing-rewrite-strat-under-binders

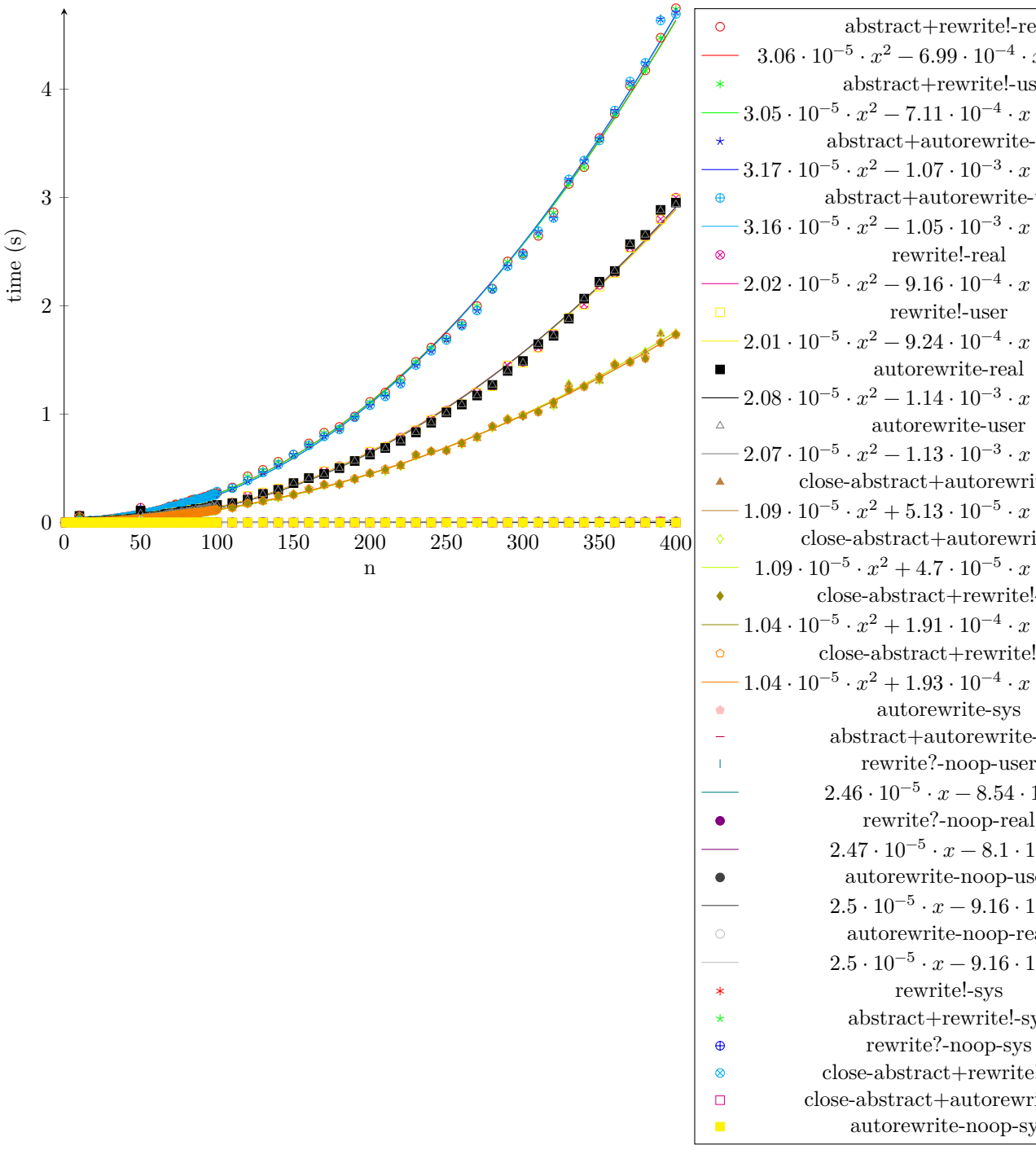


Figure 6: timing-rewrite-repeated-app-autorewrite

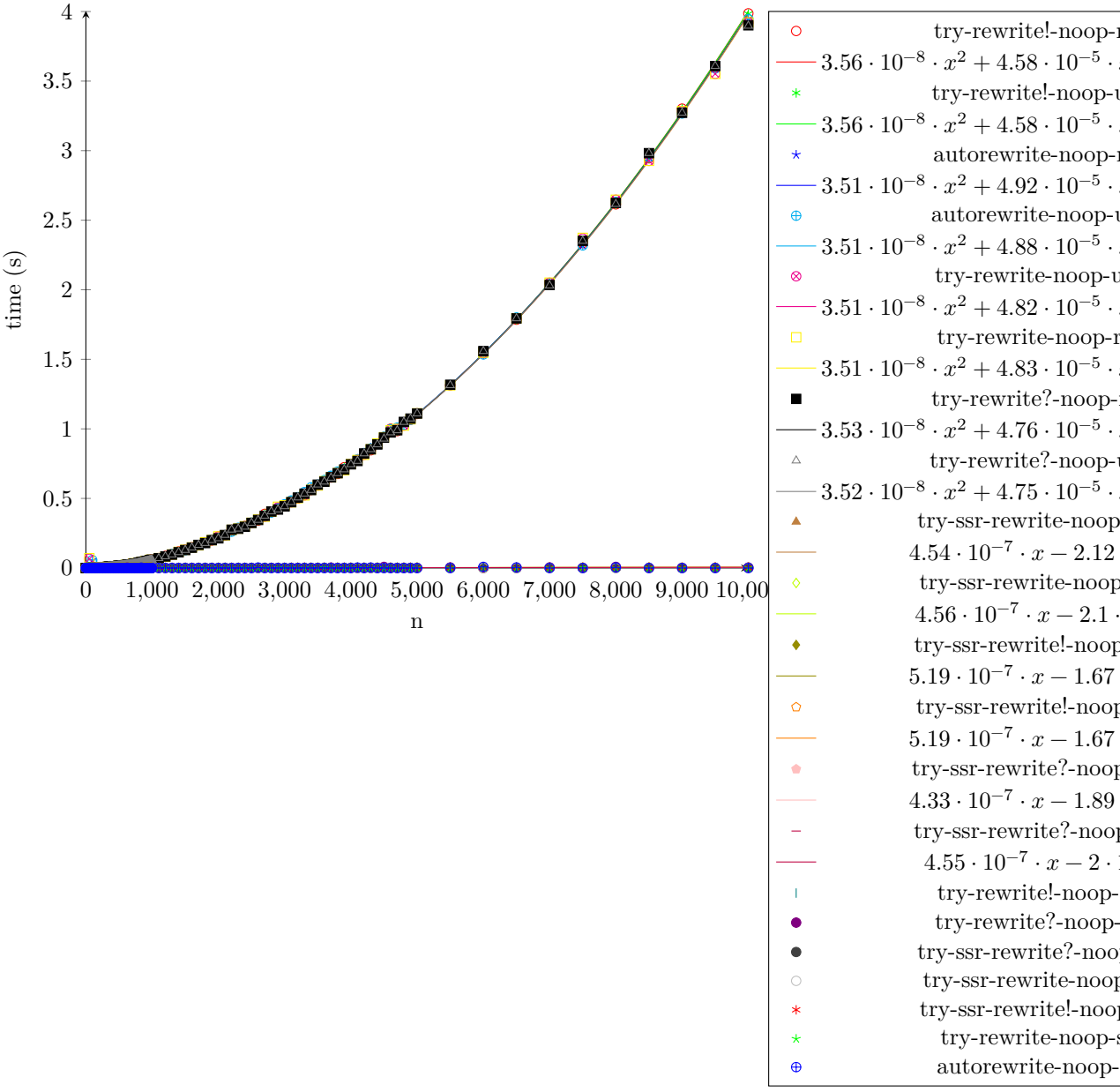


Figure 7: timing-rewrite-repeated-app-autorewrite-noop

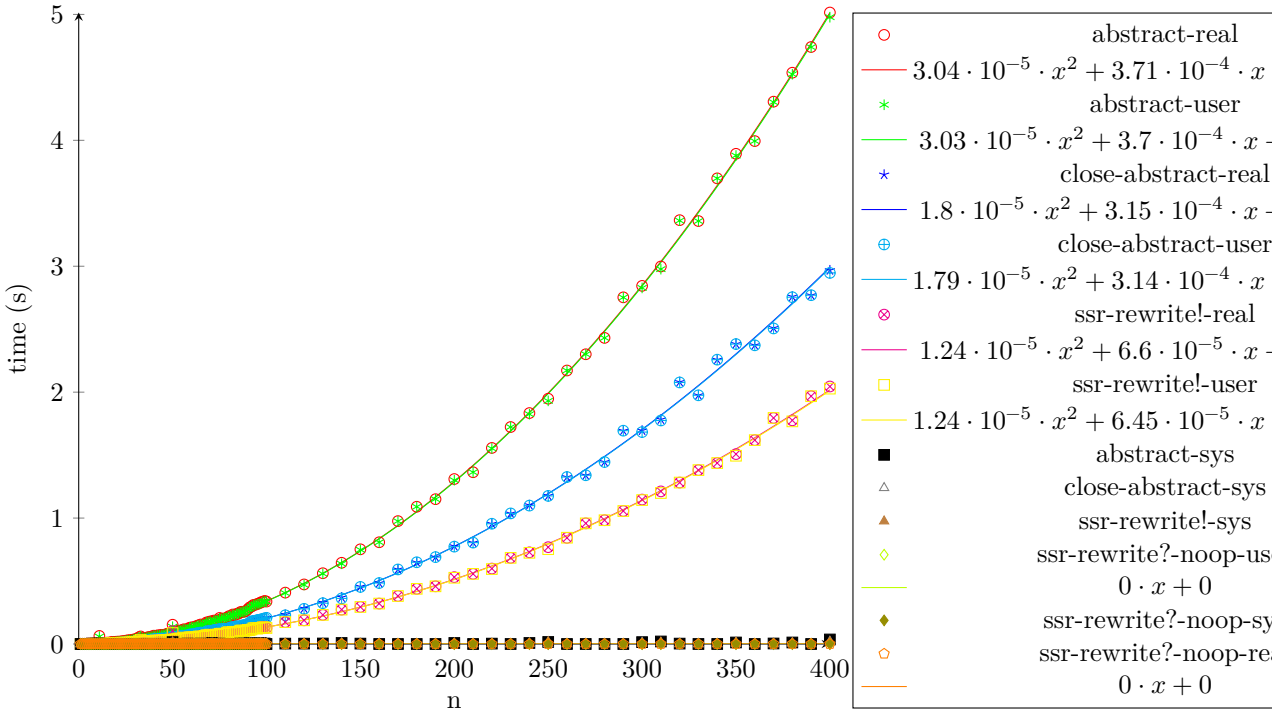


Figure 8: timing-rewrite-repeated-app-ssrrewrite

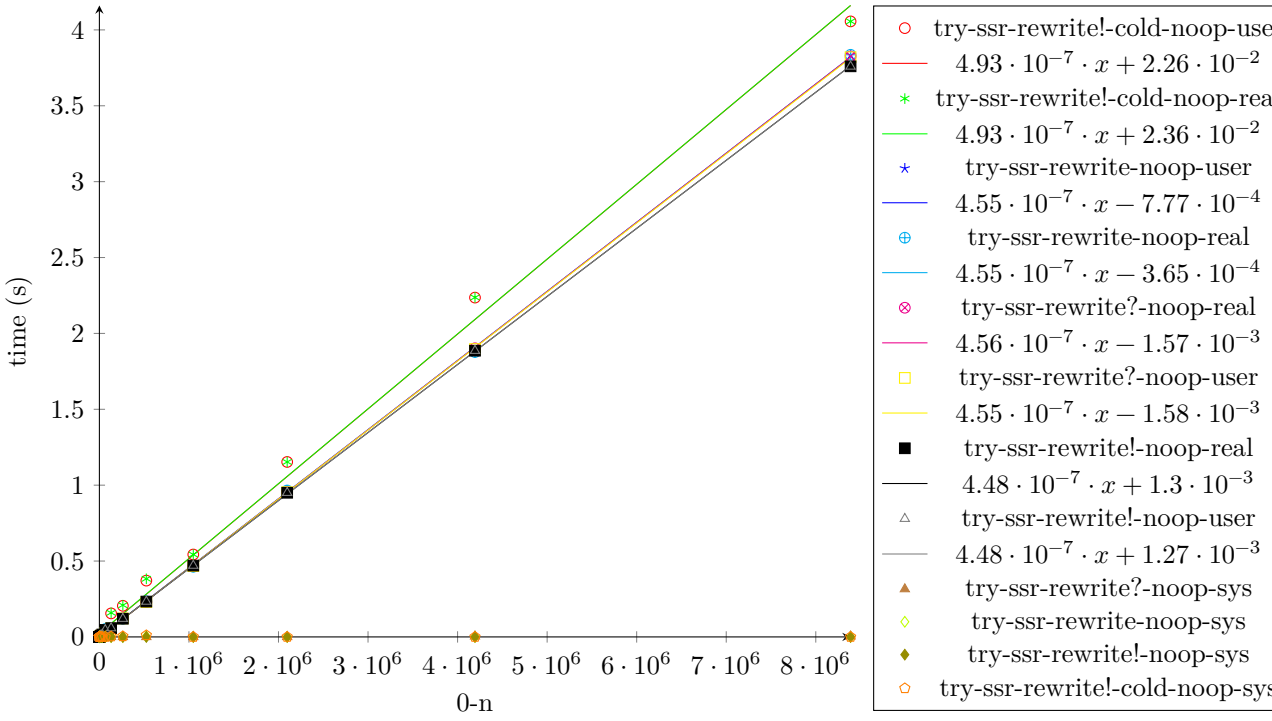


Figure 9: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn 1

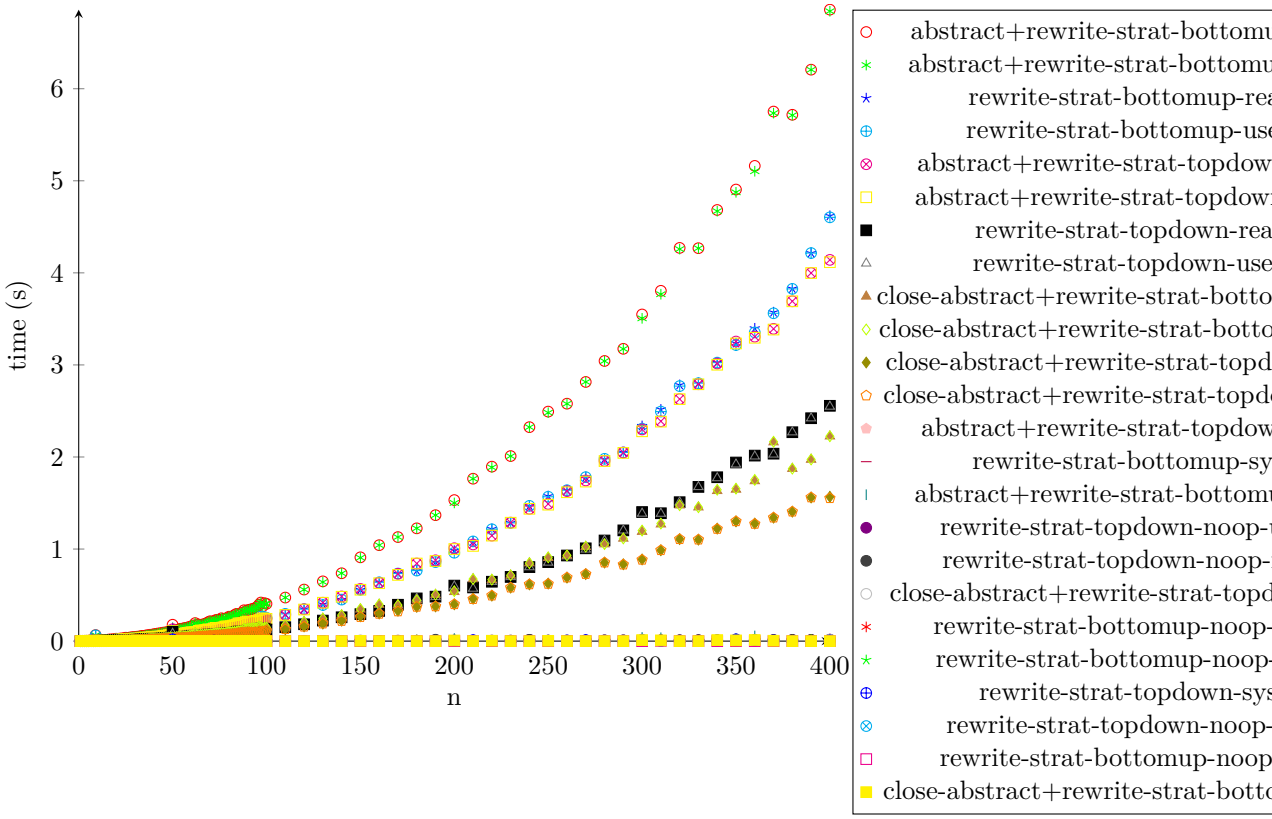


Figure 10: timing-rewrite-repeated-app-rewrite-strat

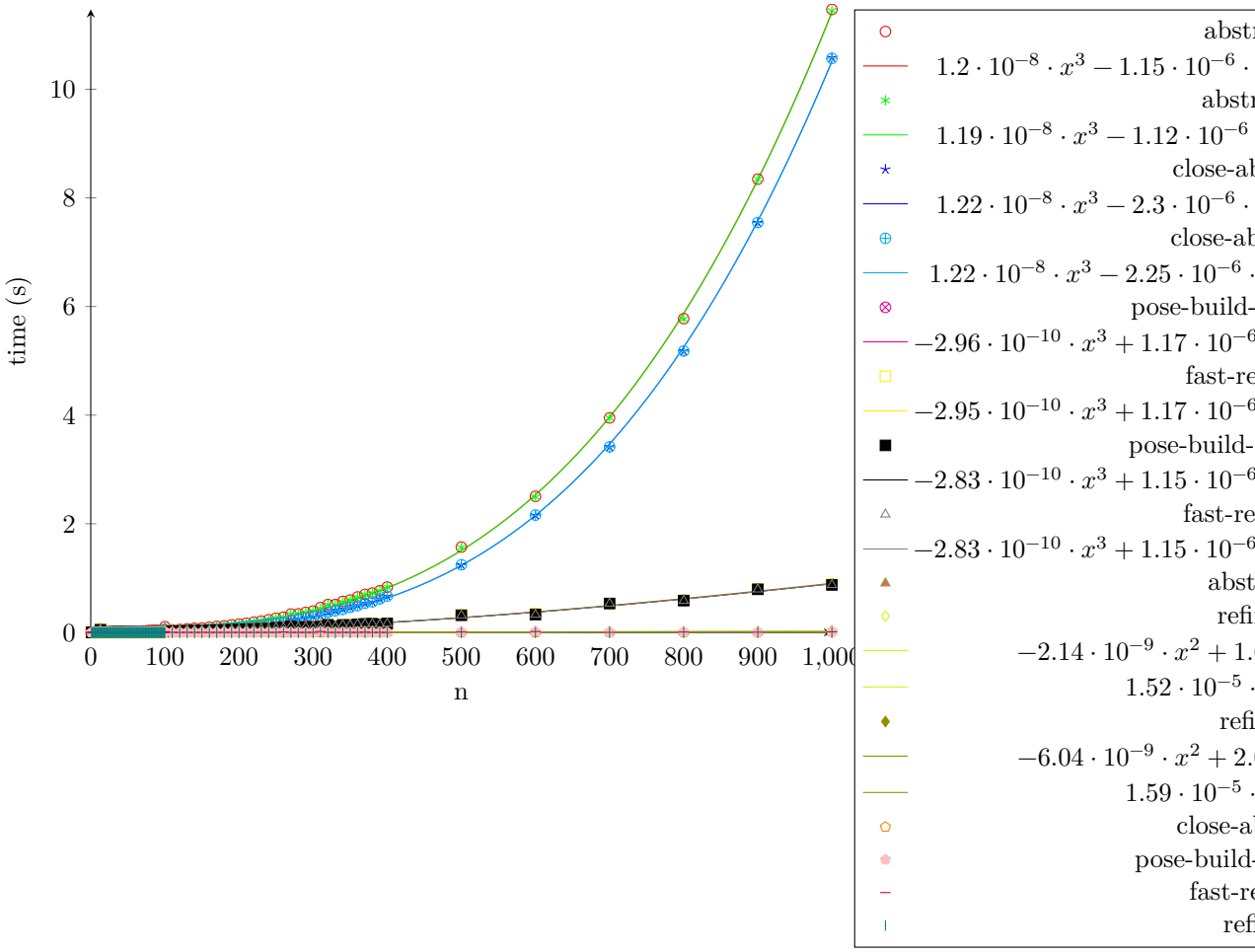


Figure 11: timing-rewrite-repeated-app-fast-rewrite

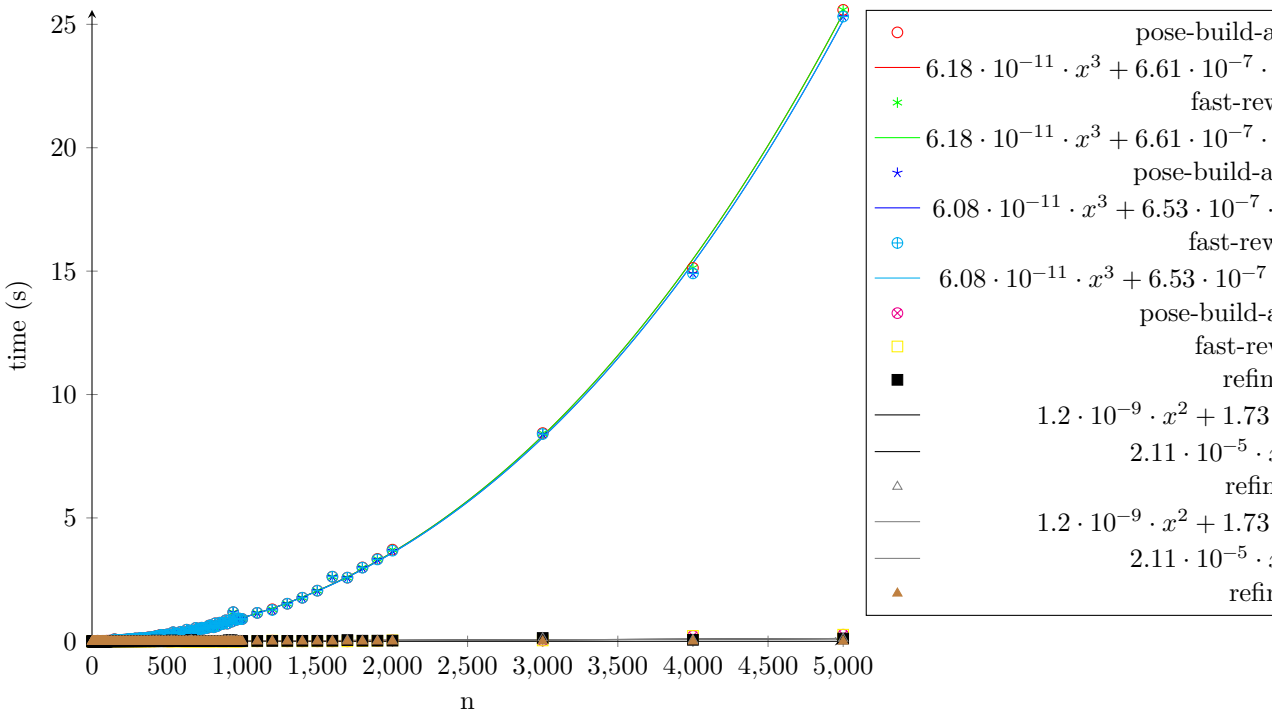


Figure 12: timing-rewrite-repeated-app-fast-rewrite-no-abstract

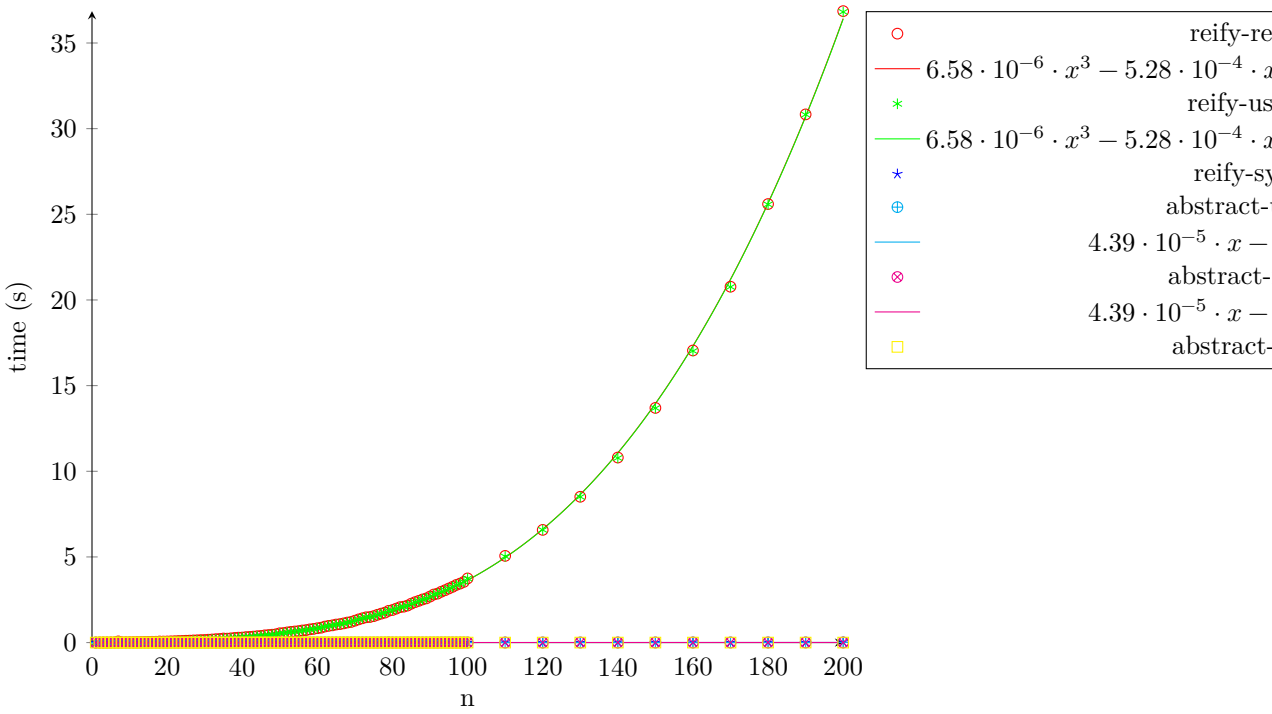


Figure 13: timing-typeclass-reification-let-in-HOAS

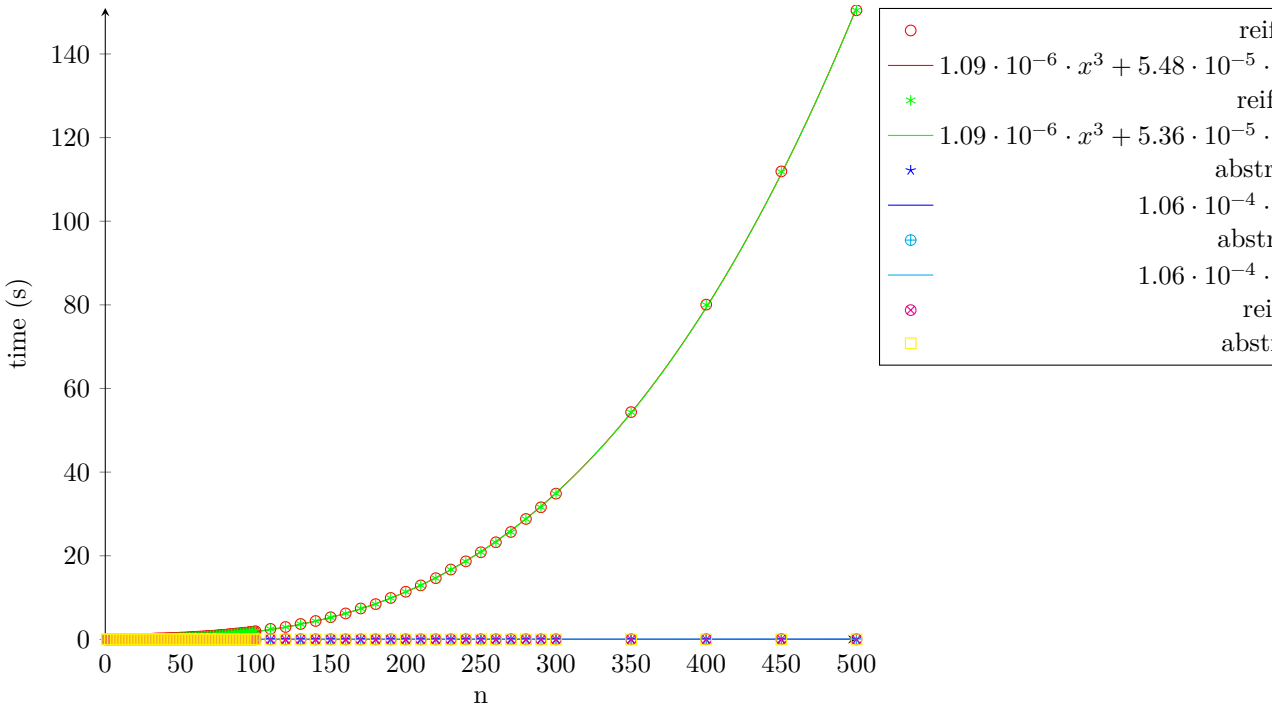
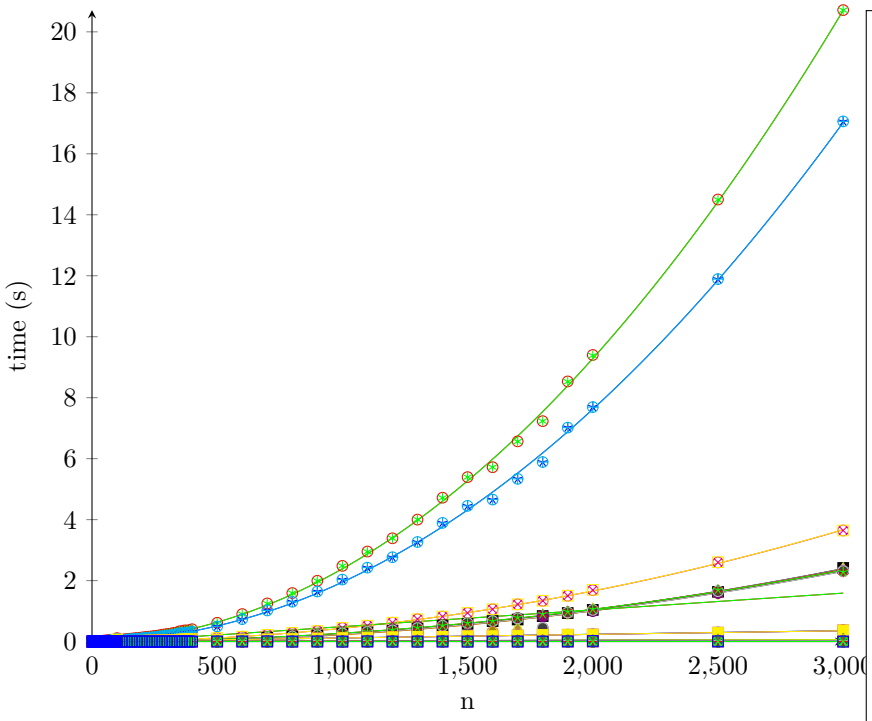


Figure 14: timing-typeclass-reification-let-in-PHOAS



abstract-real
$2.26 \cdot 10^{-6} \cdot x^2 + 1.15 \cdot 10^{-4} \cdot x$
abstract-user
$2.26 \cdot 10^{-6} \cdot x^2 + 1.11 \cdot 10^{-4} \cdot x$
fast-rewrite-real
$1.87 \cdot 10^{-6} \cdot x^2 + 7.01 \cdot 10^{-5} \cdot x$
fast-rewrite-user
$1.87 \cdot 10^{-6} \cdot x^2 + 6.67 \cdot 10^{-5} \cdot x$
close-abstract-use
$3.93 \cdot 10^{-7} \cdot x^2 + 4.28 \cdot 10^{-5} \cdot x$
close-abstract-rea
$3.94 \cdot 10^{-7} \cdot x^2 + 4.37 \cdot 10^{-5} \cdot x$
check-admit-user
$2.75 \cdot 10^{-7} \cdot x^2 - 2.77 \cdot 10^{-5} \cdot x$
check-admit-real
$2.75 \cdot 10^{-7} \cdot x^2 - 2.76 \cdot 10^{-5} \cdot x$
type-admit-cast-us
$2.7 \cdot 10^{-7} \cdot x^2 - 3.33 \cdot 10^{-5} \cdot x$
type-admit-cast-re
$2.7 \cdot 10^{-7} \cdot x^2 - 3.26 \cdot 10^{-5} \cdot x$
type-admit-real
$2.83 \cdot 10^{-7} \cdot x^2 - 6.26 \cdot 10^{-5} \cdot x$
type-admit-user
$2.83 \cdot 10^{-7} \cdot x^2 - 6.28 \cdot 10^{-5} \cdot x$
check-admit-cast-u
$2.64 \cdot 10^{-7} \cdot x^2 - 4.23 \cdot 10^{-6} \cdot x$
check-admit-cast-re
$2.64 \cdot 10^{-7} \cdot x^2 - 4.42 \cdot 10^{-6} \cdot x$
type-pf-cast-user
$2.54 \cdot 10^{-7} \cdot x^2 + 9.9 \cdot 10^{-6} \cdot x$
type-pf-cast-real
$2.54 \cdot 10^{-7} \cdot x^2 + 1.01 \cdot 10^{-5} \cdot x$
check-pf-cast-rea
$2.62 \cdot 10^{-7} \cdot x^2 - 1.92 \cdot 10^{-5} \cdot x$
check-pf-cast-use
$2.62 \cdot 10^{-7} \cdot x^2 - 1.92 \cdot 10^{-5} \cdot x$
refine-user
$2.53 \cdot 10^{-7} \cdot x^2 + 2.42 \cdot 10^{-5} \cdot x$
$5.49 \cdot 10^{-4} \cdot x - 5.91 \cdot$
refine-real
$2.52 \cdot 10^{-7} \cdot x^2 + 2.56 \cdot 10^{-5} \cdot x$
$5.5 \cdot 10^{-4} \cdot x - 5.9 \cdot 1$
build-eval-thunk-us
$1.19 \cdot 10^{-4} \cdot x - 8.5 \cdot$
build-eval-thunk-re
$1.2 \cdot 10^{-4} \cdot x - 6.71 \cdot$
build-thunk-user
$1.19 \cdot 10^{-4} \cdot x - 9.26 \cdot$
build-thunk-real
$1.19 \cdot 10^{-4} \cdot x - 7.75 \cdot$