

pattern-user

pattern-sys

 $1.77 \cdot 10^{-5} \cdot x + 2.74 \cdot 1$

Figure 1: timing-pattern

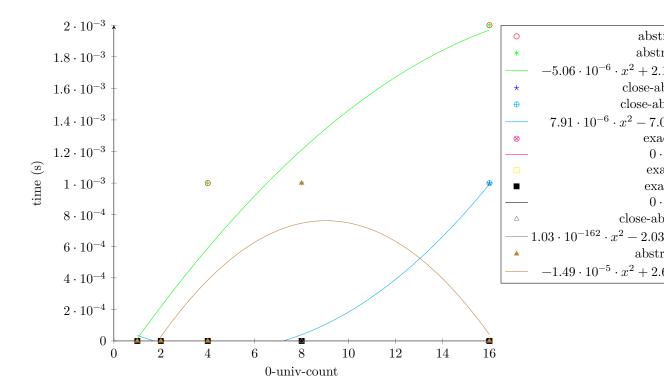


Figure 2: timing-n-polymorphic-universes param-1-n $\,0\,$

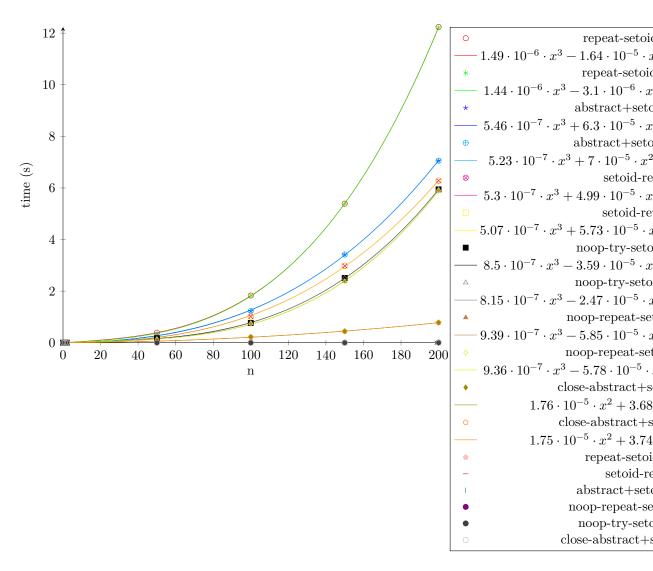


Figure 3: timing-repeat-setoid-rewrite-under-binders

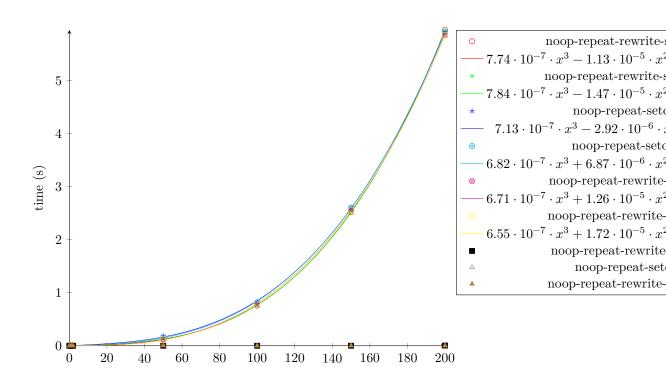


Figure 4: timing-repeat-setoid-rewrite-under-binders-noop

n

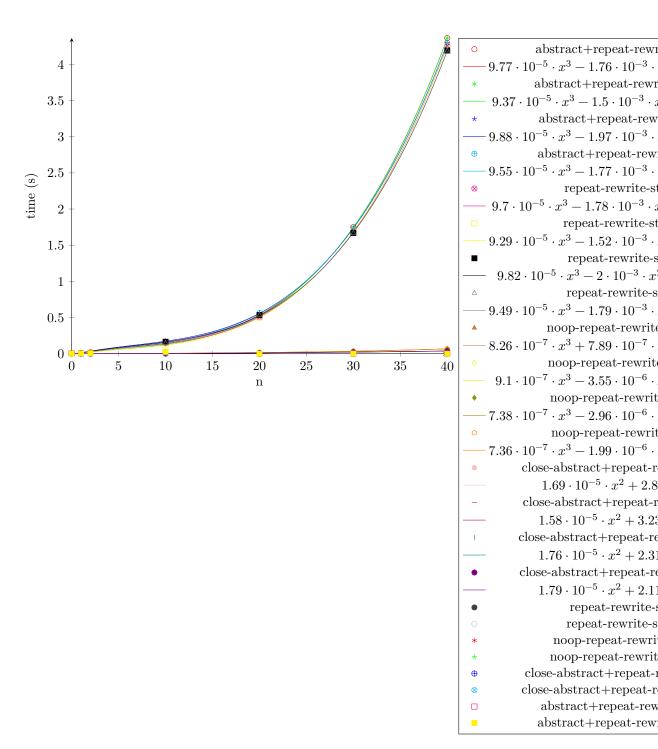


Figure 5: timing-rewrite-strat-under-binders

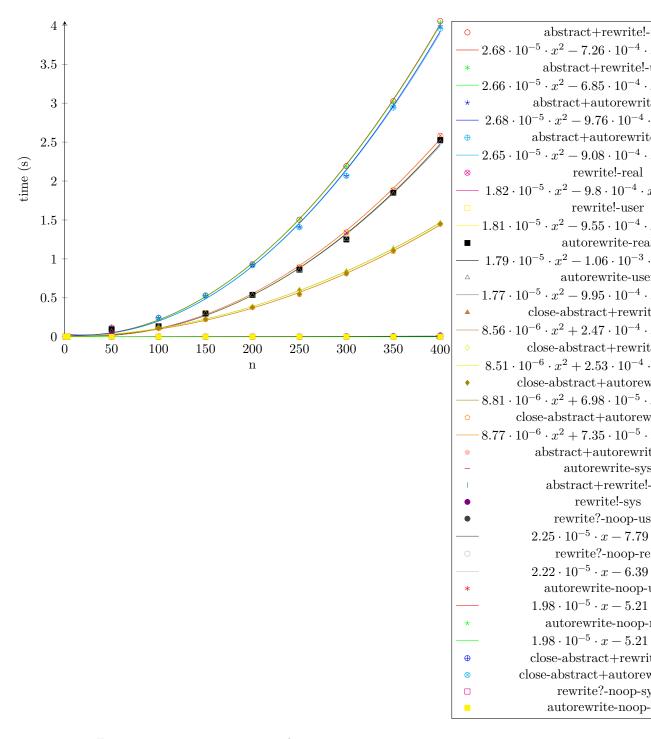


Figure 6: timing-rewrite-repeated-app-autorewrite

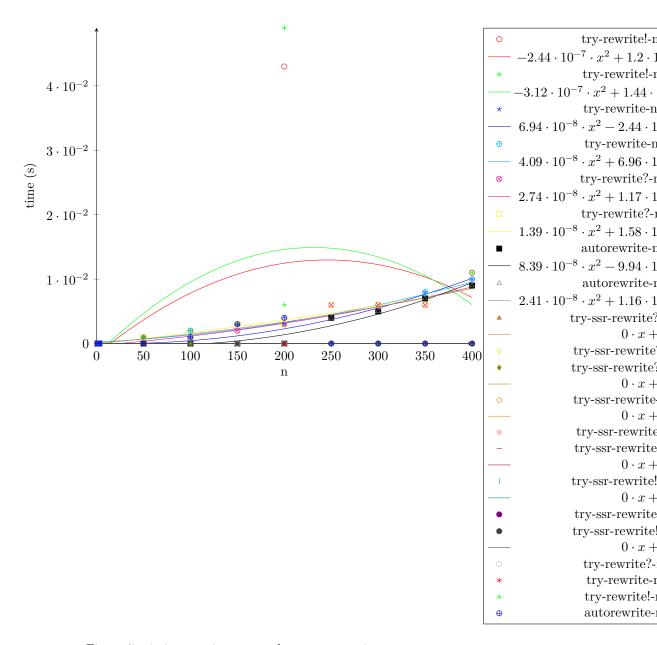


Figure 7: timing-rewrite-repeated-app-autorewrite-noop

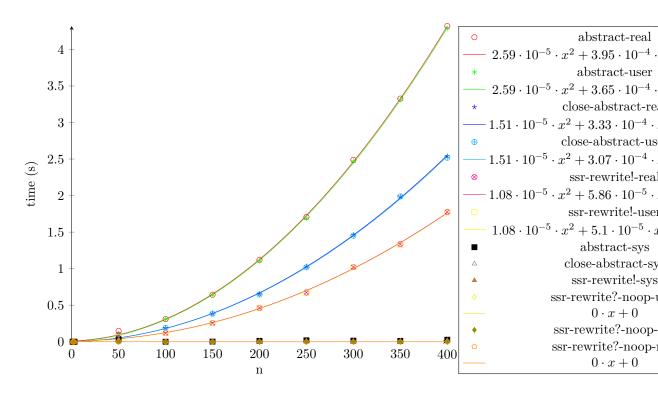


Figure 8: timing-rewrite-repeated-app-ssrrewrite

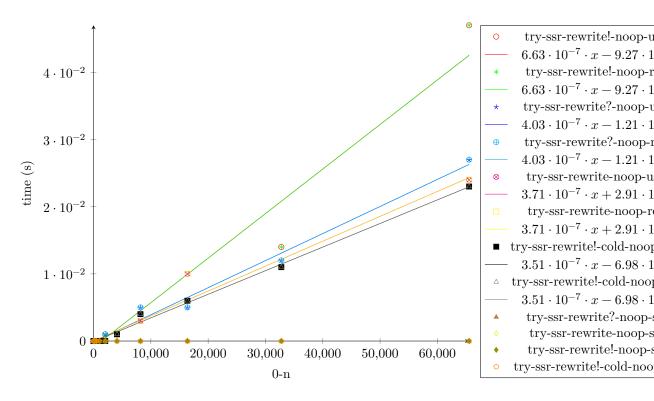


Figure 9: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn $\,1\,$

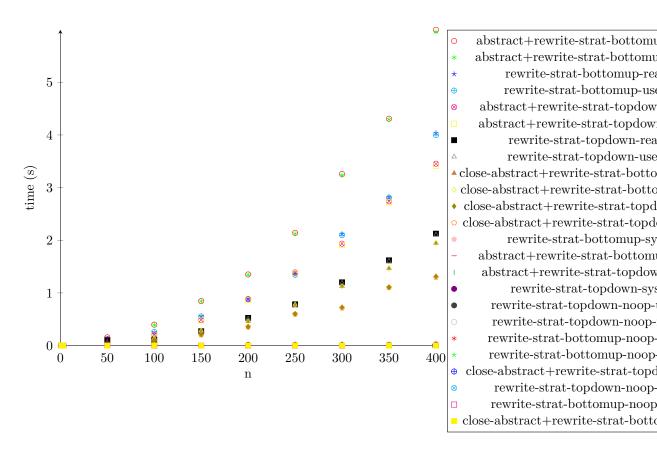


Figure 10: timing-rewrite-repeated-app-rewrite-strat

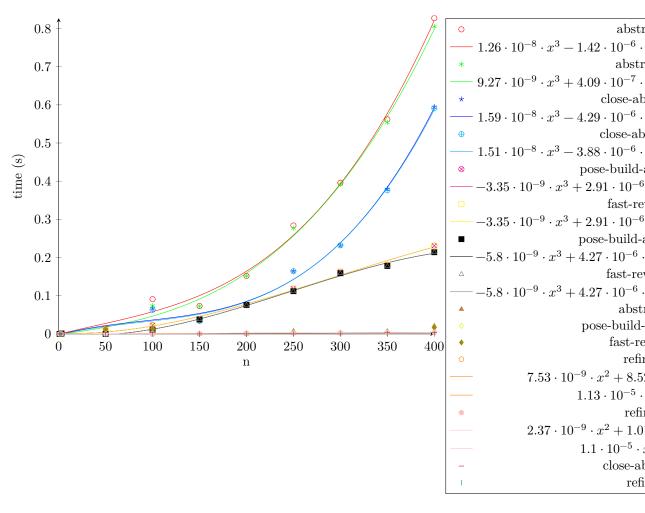
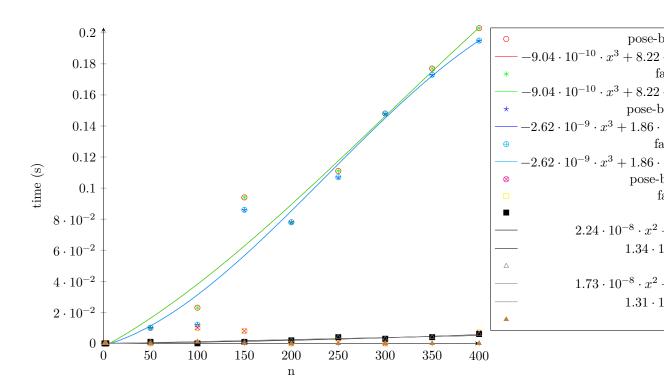
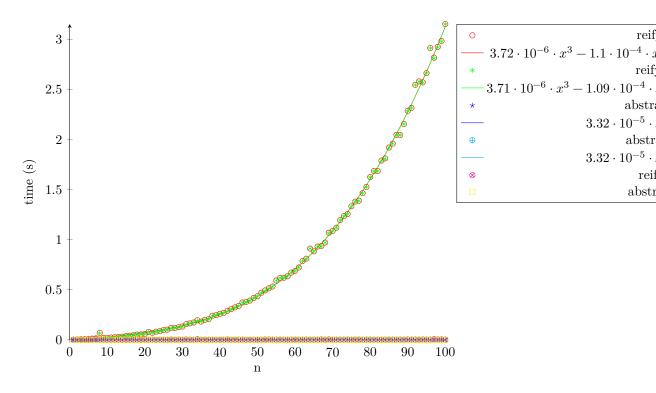


Figure 11: timing-rewrite-repeated-app-fast-rewrite



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



 ${\bf Figure~13:~timing-type class-reification-let-in-HOAS}$

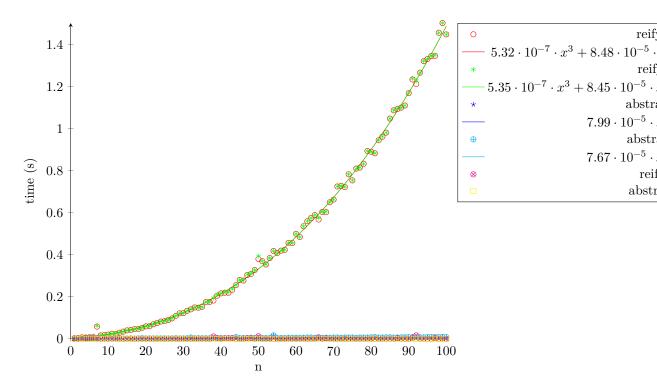
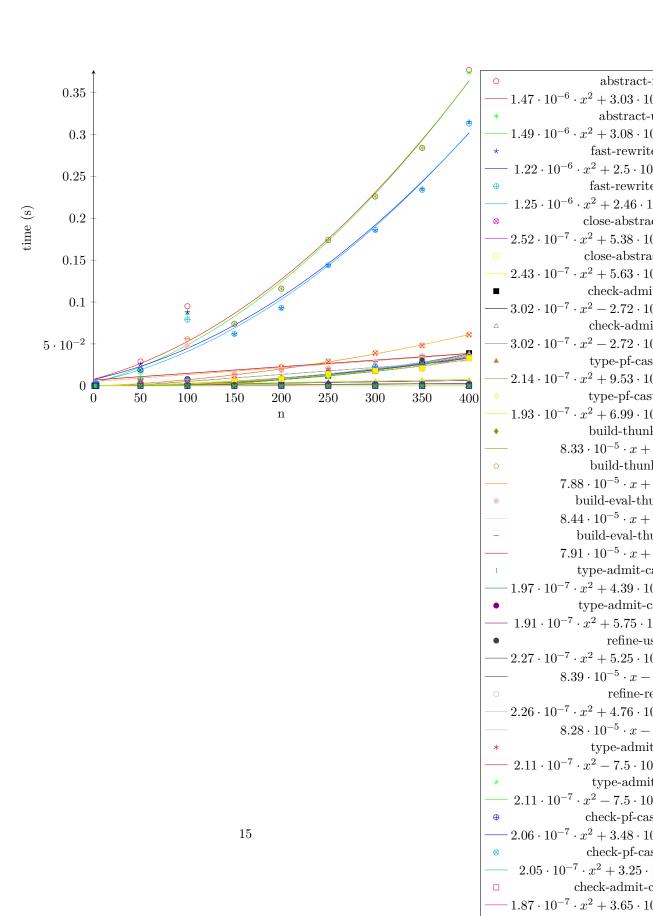


Figure 14: timing-typeclass-reification-let-in-PHOAS



abstract-

abstract-

fast-rewrite

fast-rewrite

close-abstrac

close-abstra

check-admi

check-admi

type-pf-cas

type-pf-cas

build-thunk $8.33 \cdot 10^{-5} \cdot x +$ build-thunl $7.88 \cdot 10^{-5} \cdot x +$ build-eval-thu $8.44 \cdot 10^{-5} \cdot x +$ build-eval-thu $7.91 \cdot 10^{-5} \cdot x +$ type-admit-ca

type-admit-c

 $8.39 \cdot 10^{-5} \cdot x -$

 $8.28 \cdot 10^{-5} \cdot x$ type-admit

refine-us

refine-re

type-admit

check-pf-cas

check-pf-cas

check-admit-c

check-admit-o

 $1.8 \cdot 10^{-7} \cdot x^2 + 4.76 \cdot 10$