

Figure 1: timing-pattern

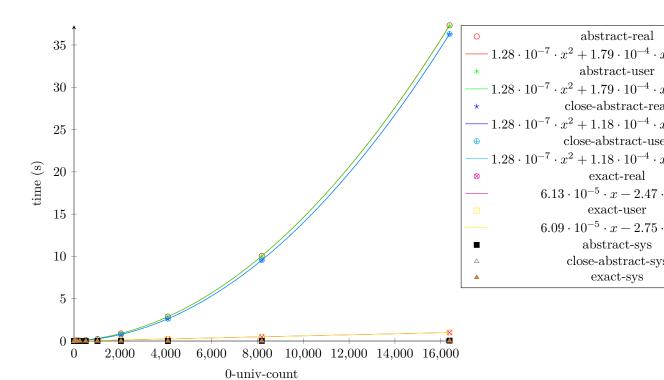


Figure 2: timing-n-polymorphic-universes param-1-n 0

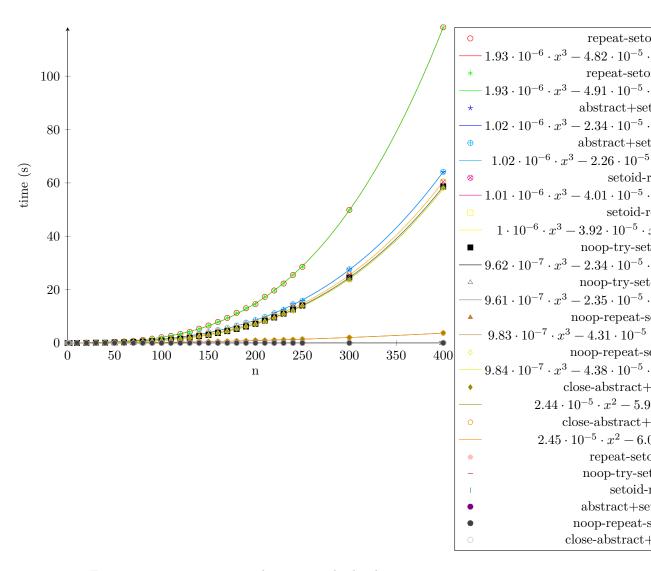
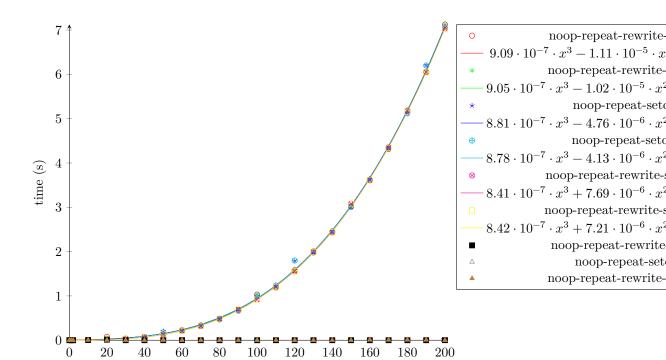


Figure 3: timing-repeat-setoid-rewrite-under-binders



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

n

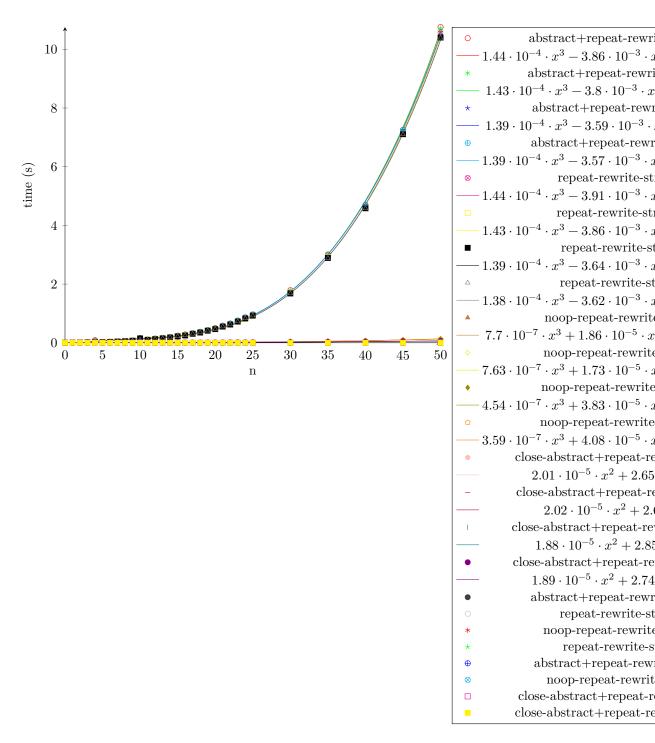
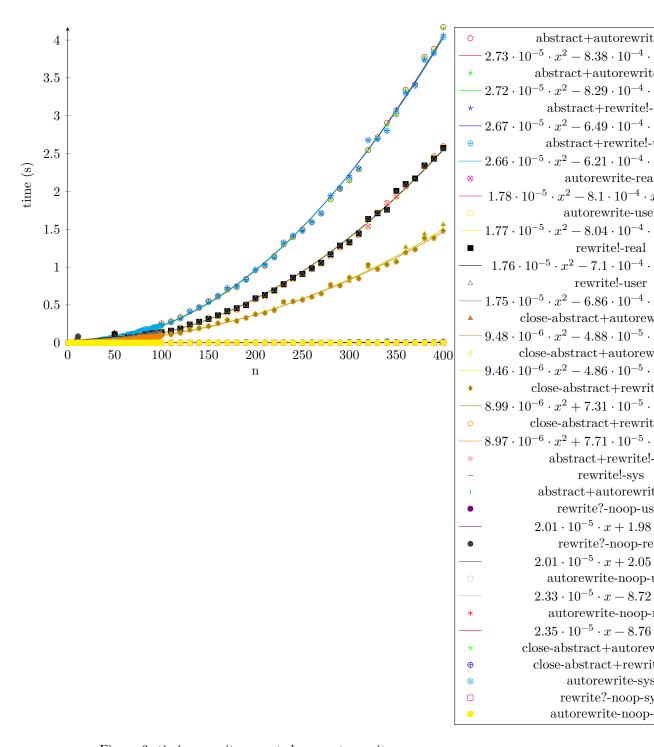


Figure 5: timing-rewrite-strat-under-binders



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

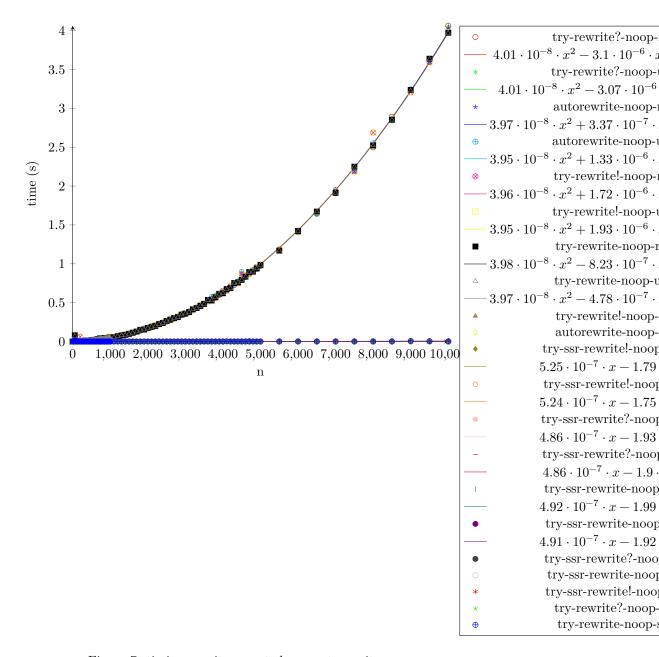
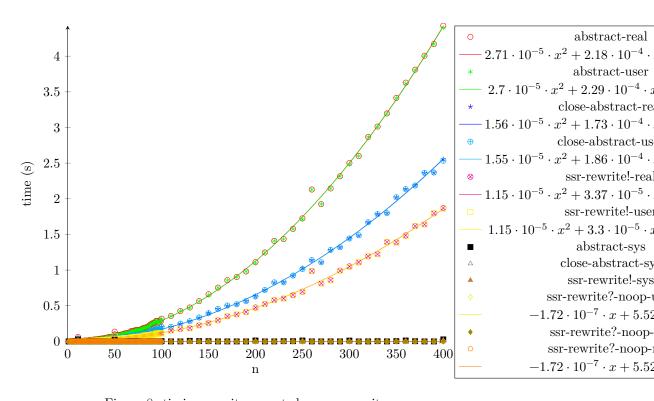


Figure 7: timing-rewrite-repeated-app-autorewrite-noop



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

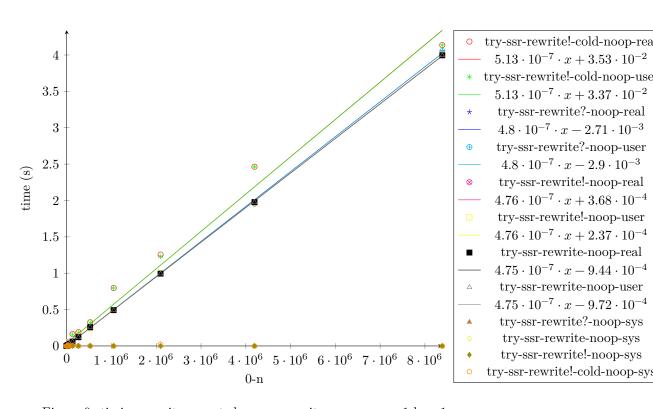


Figure 9: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn $\ 1$

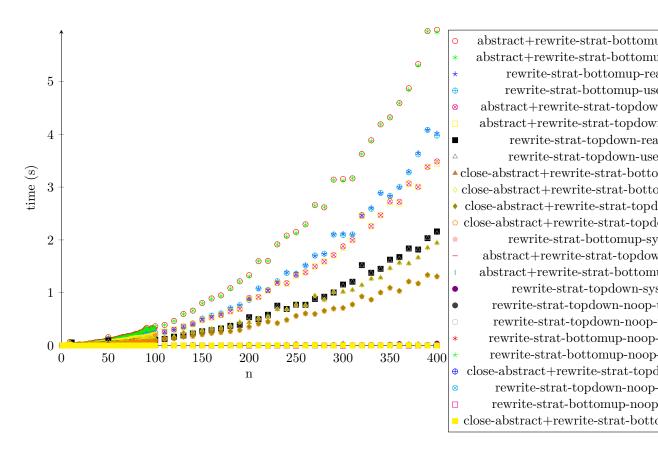
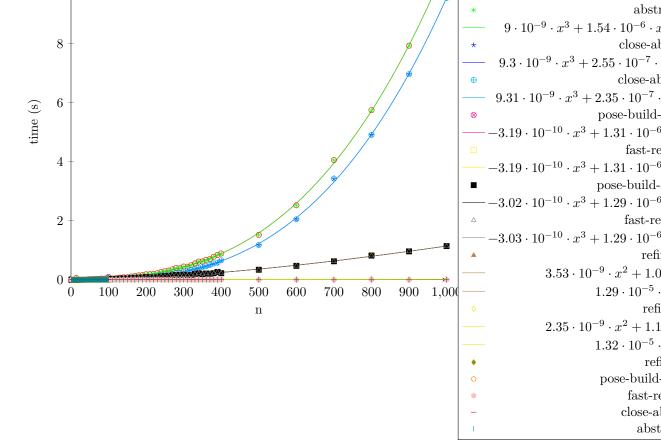


Figure 10: timing-rewrite-repeated-app-rewrite-strat



abst

 $8.96 \cdot 10^{-9} \cdot x^3 + 1.59 \cdot 10^{-6}$

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

10

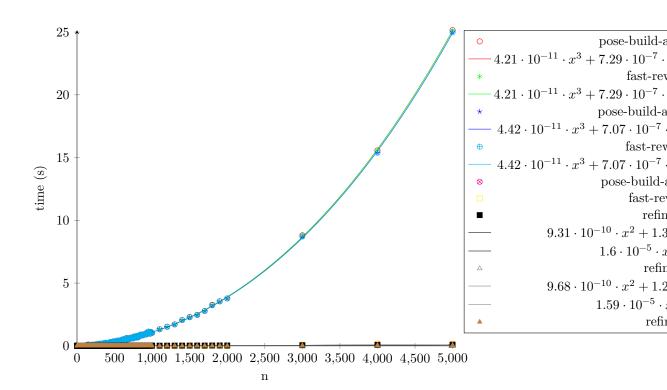
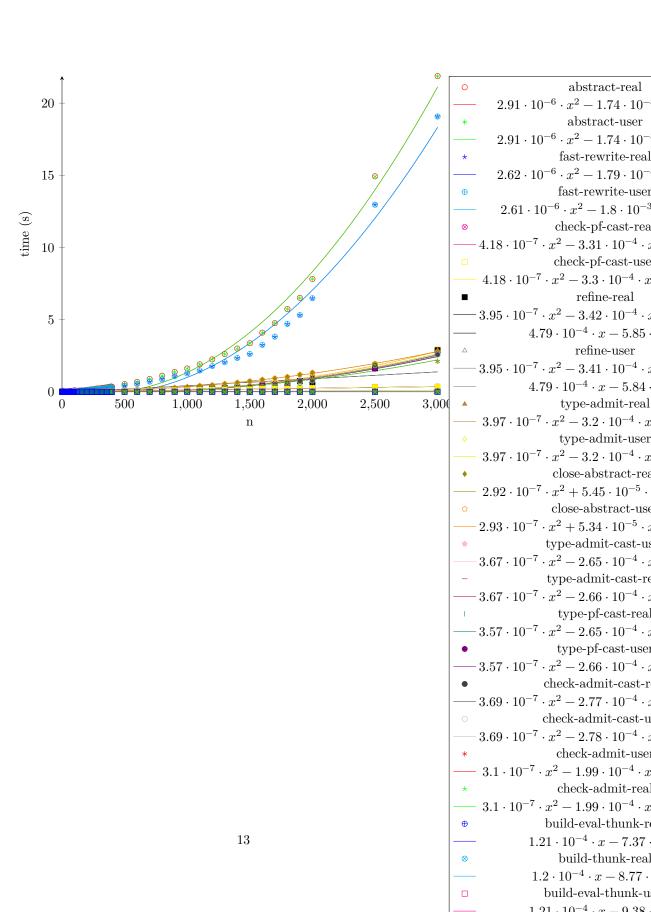


Figure 12: timing-rewrite-repeated-app-fast-rewrite-no-abstract



abstract-real

abstract-user

fast-rewrite-real

fast-rewrite-user

check-pf-cast-rea

check-pf-cast-use

refine-real

 $4.79 \cdot 10^{-4} \cdot x - 5.85 \cdot$ refine-user

 $4.79 \cdot 10^{-4} \cdot x - 5.84 \cdot$

type-admit-real

type-admit-user

close-abstract-rea

close-abstract-use

type-admit-cast-us

type-admit-cast-re

type-pf-cast-real

type-pf-cast-user

check-admit-cast-r

check-admit-cast-u

check-admit-user

check-admit-real

build-eval-thunk-re

 $1.21 \cdot 10^{-4} \cdot x - 7.37$ build-thunk-real $1.2 \cdot 10^{-4} \cdot x - 8.77 \cdot$ build-eval-thunk-u $1.21 \cdot 10^{-4} \cdot x - 9.38 \cdot$ build-thunk-user $1.2 \cdot 10^{-4} \cdot x - 1.09 \cdot$ ob ools I see