

Figure 1: timing-pattern

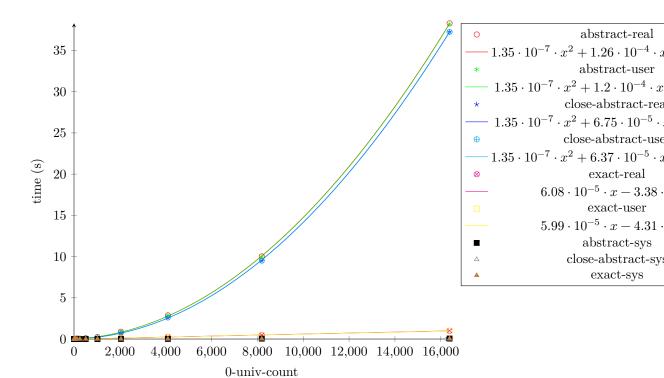


Figure 2: timing-n-polymorphic-universes param-1-n 0

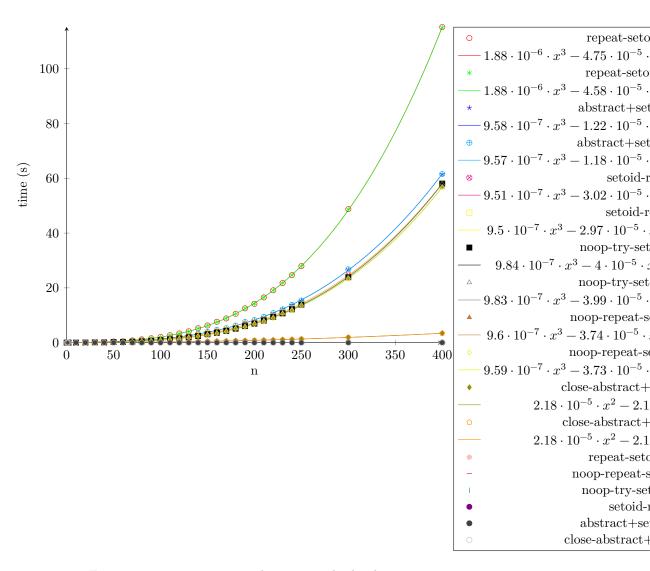
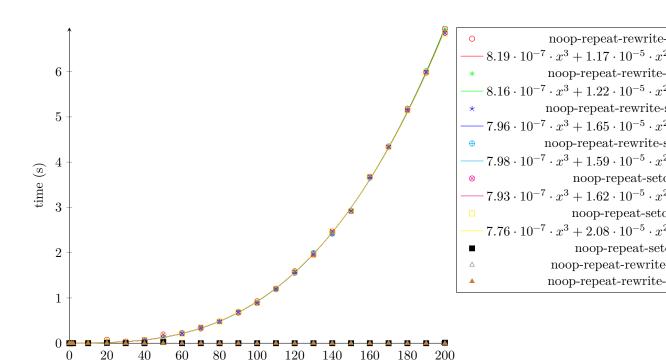


Figure 3: timing-repeat-setoid-rewrite-under-binders



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

n

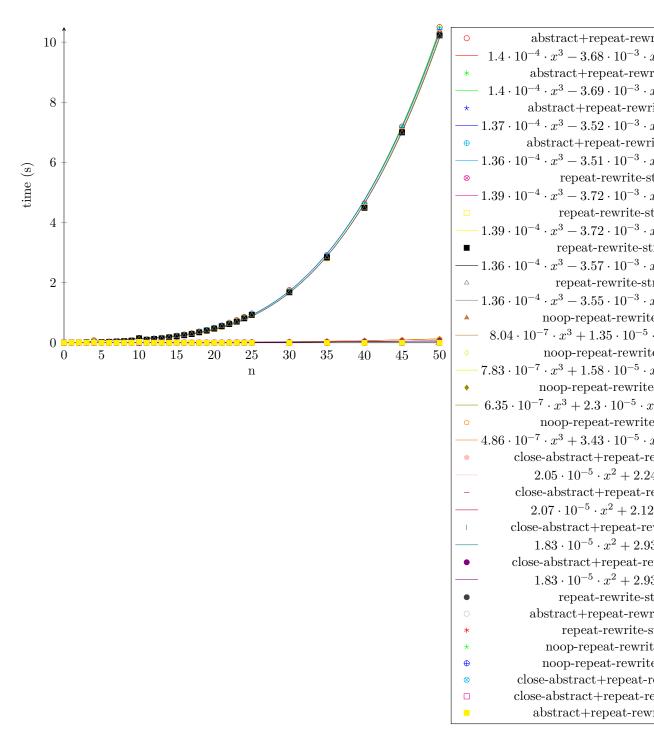
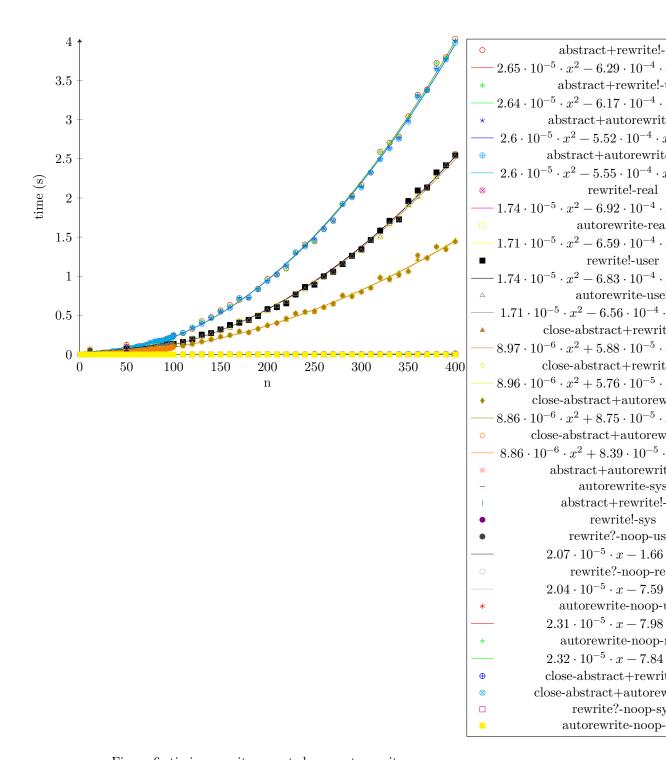


Figure 5: timing-rewrite-strat-under-binders



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

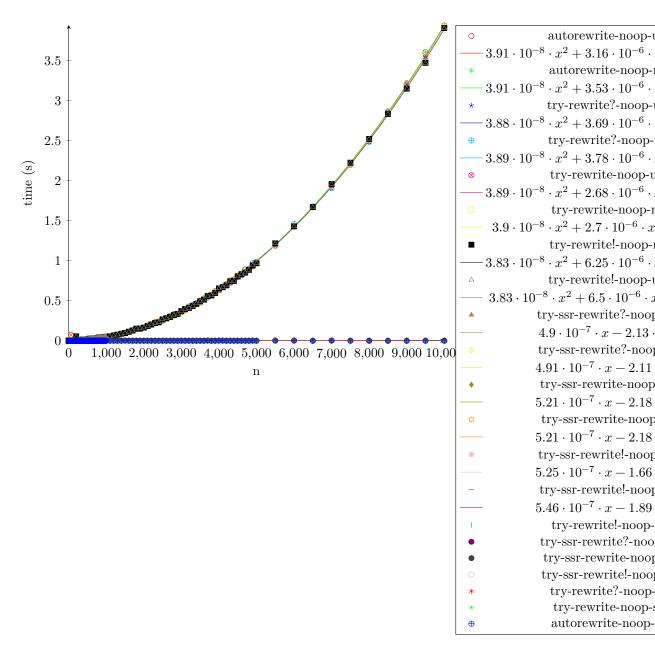


Figure 7: timing-rewrite-repeated-app-autorewrite-noop

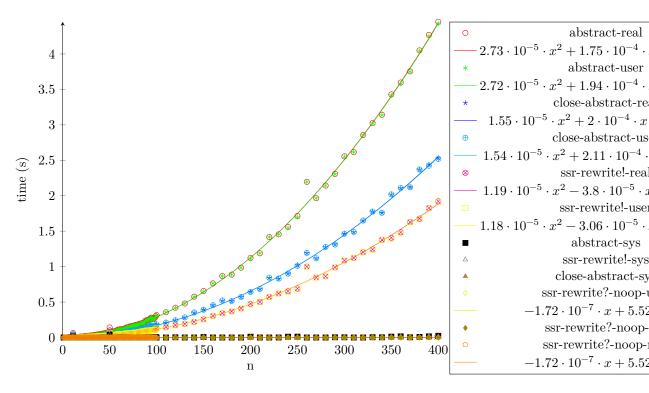


Figure 8: timing-rewrite-repeated-app-ssrrewrite

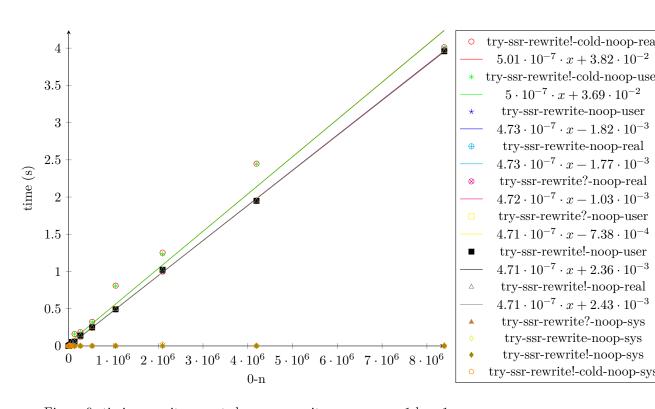
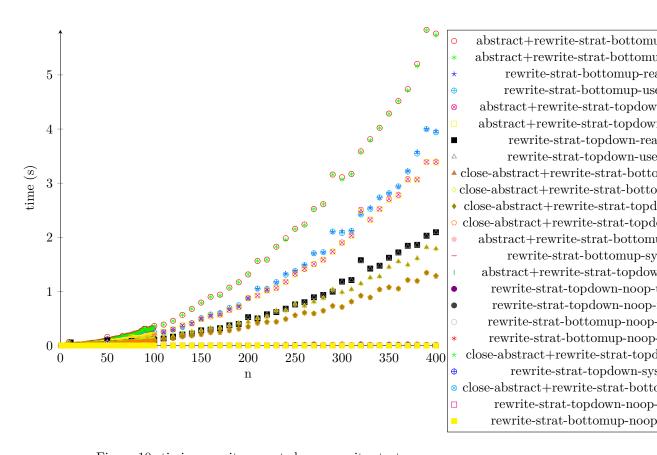
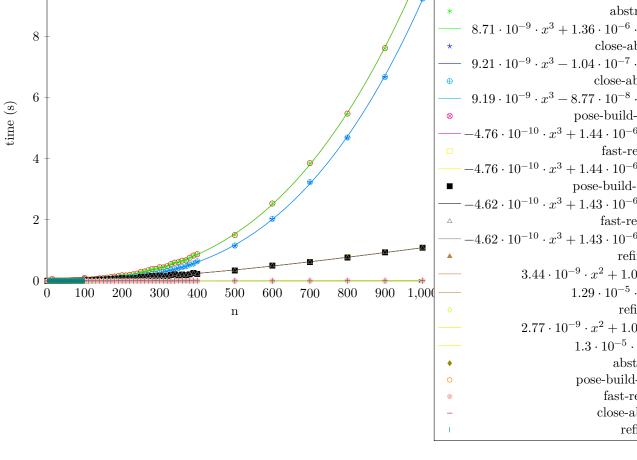


Figure 9: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn $\ 1$



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

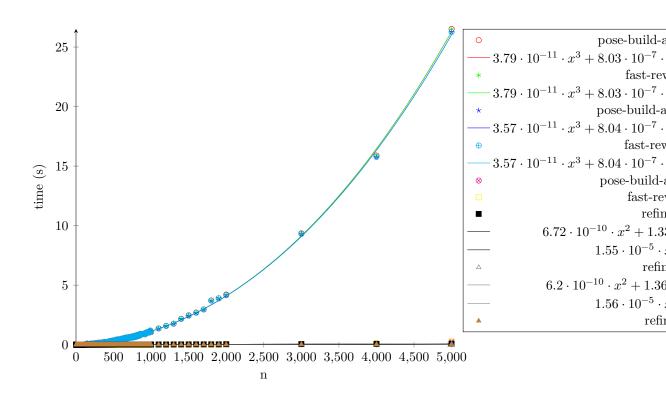


abst

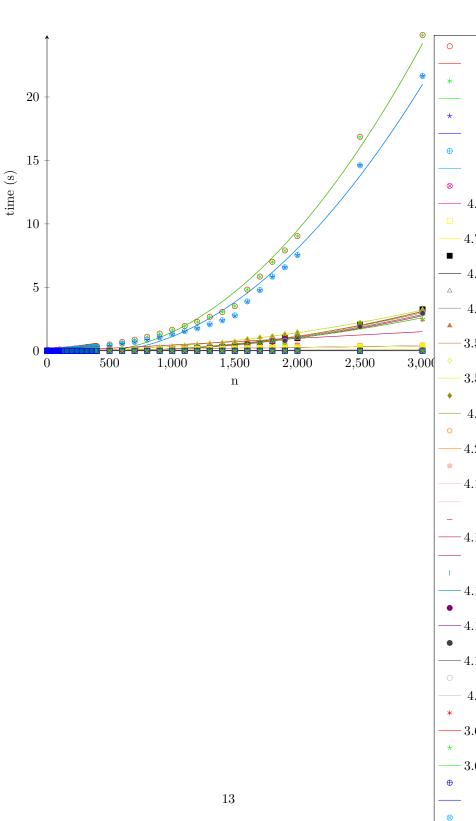
 $8.71 \cdot 10^{-9} \cdot x^3 + 1.37 \cdot 10^{-6}$

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

10



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



 $3.36\cdot 10^{-6}\cdot x^2 - 2.08\cdot 10^{-}$ $3.36 \cdot 10^{-6} \cdot x^2 - 2.08 \cdot 10^{-6}$ $3.01 \cdot 10^{-6} \cdot x^2 - 2.08 \cdot 10^{-6}$ $3 \cdot 10^{-6} \cdot x^2 - 2.08 \cdot 10^{-3}$ $4.72\cdot 10^{-7}\cdot x^2 - 3.86\cdot 10^{-4}\cdot$ $4.71 \cdot 10^{-7} \cdot x^2 - 3.85 \cdot 10^{-4} \cdot x^2$ $4.71 \cdot 10^{-7} \cdot x^2 - 3.9 \cdot 10^{-4} \cdot x$ $4.71 \cdot 10^{-7} \cdot x^2 - 3.9 \cdot 10^{-4} \cdot x$ $3.58 \cdot 10^{-7} \cdot x^2 - 4.94 \cdot 10^{-6} \cdot x^2$ $3.58 \cdot 10^{-7} \cdot x^2 - 5.61 \cdot 10^{-6} \cdot x^2$ $4.3 \cdot 10^{-7} \cdot x^2 - 2.98 \cdot 10^{-4} \cdot x$ $4.29 \cdot 10^{-7} \cdot x^2 - 2.98 \cdot 10^{-4} \cdot x^2$ $4.19 \cdot 10^{-7} \cdot x^2 - 3.47 \cdot 10^{-4} \cdot x^2$ $4.19 \cdot 10^{-7} \cdot x^2 - 3.47 \cdot 10^{-4} \cdot x^2$ $4.18 \cdot 10^{-7} \cdot x^2 - 3.08 \cdot 10^{-4} \cdot x^2$ $4.18 \cdot 10^{-7} \cdot x^2 - 3.09 \cdot 10^{-4} \cdot x^2$ $4.19 \cdot 10^{-7} \cdot x^2 - 3.19 \cdot 10^{-4} \cdot x^2$ $4.19\cdot 10^{-7}\cdot x^2 - 3.2\cdot 10^{-4}\cdot x$ $3.64 \cdot 10^{-7} \cdot x^2 - 2.29 \cdot 10^{-4} \cdot x^2$ $3.63 \cdot 10^{-7} \cdot x^2 - 2.29 \cdot 10^{-4} \cdot x^2$

 $abstract\text{-}\mathrm{real}$

abstract-user

fast-rewrite-real

fast-rewrite-user

type-admit-cast-re

type-admit-cast-us

type-admit-real

type-admit-user

close-abstract-rea

close-abstract-use

check-pf-cast-rea

check-pf-cast-use

refine-real

 $5.23 \cdot 10^{-4} \cdot x - 6.39 \cdot$ refine-user

 $5.23 \cdot 10^{-4} \cdot x - 6.38 \cdot$ type-pf-cast-real

type-pf-cast-user

check-admit-cast-r

check-admit-cast-u

check-admit-real

check-admit-user

build-eval-thunk-re

 $1.32 \cdot 10^{-4} \cdot x - 1.17$ build-thunk-real $1.31 \cdot 10^{-4} \cdot x - 1.28 \cdot$ build-eval-thunk-u $1.31\cdot 10^{-4}\cdot x - 1.3\cdot$ build-thunk-user $1.3 \cdot 10^{-4} \cdot x - 1.4 \cdot 1$ abaal. I ...aa