

Figure 1: timing-pattern

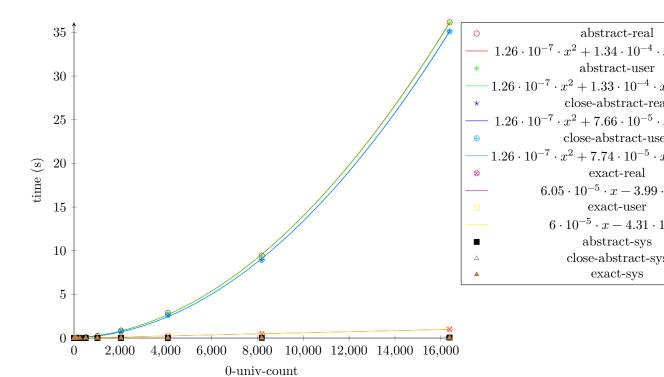


Figure 2: timing-n-polymorphic-universes param-1-n 0

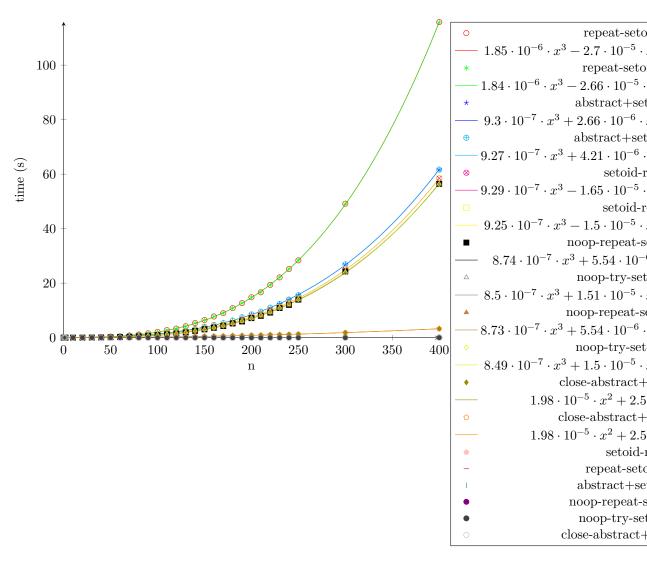
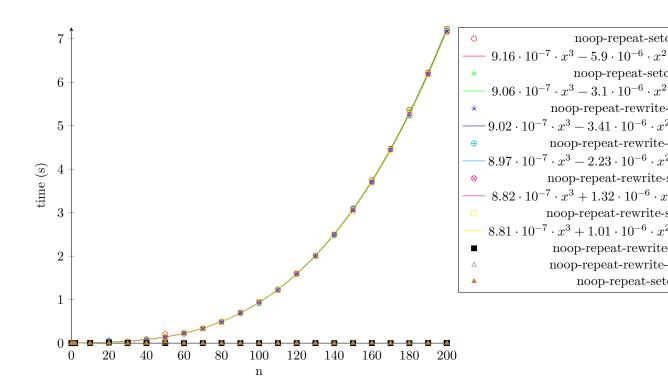


Figure 3: timing-repeat-setoid-rewrite-under-binders



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

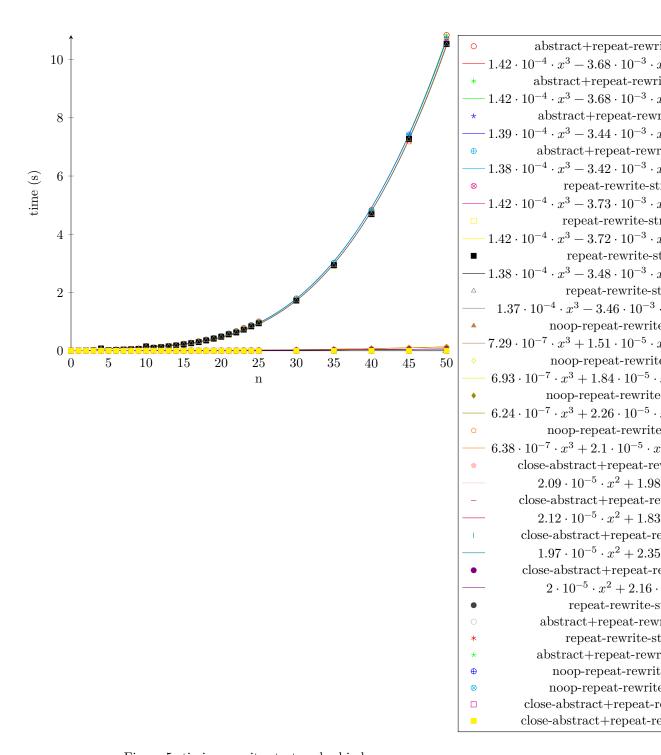
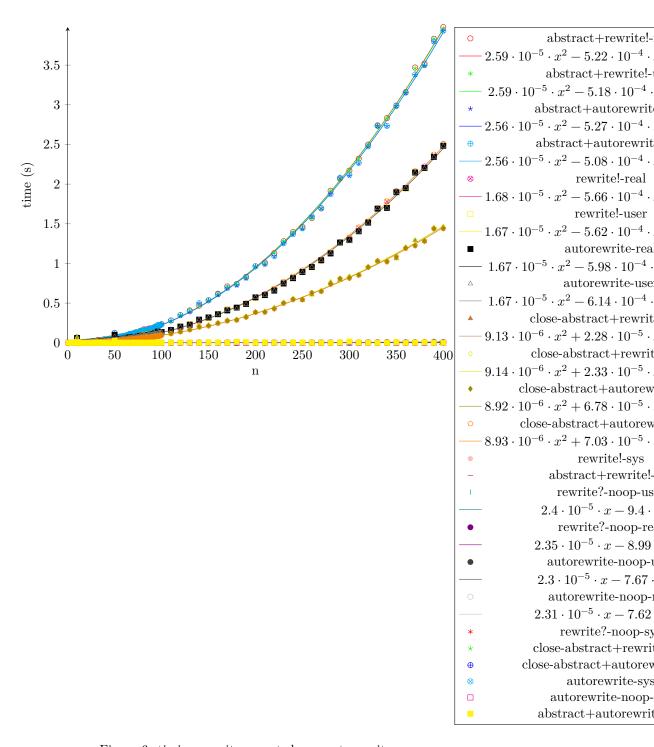


Figure 5: timing-rewrite-strat-under-binders



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

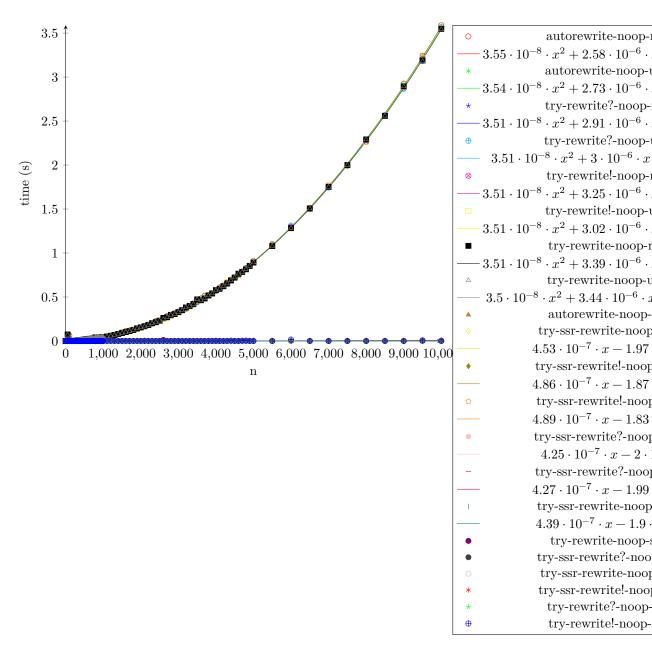


Figure 7: timing-rewrite-repeated-app-autorewrite-noop

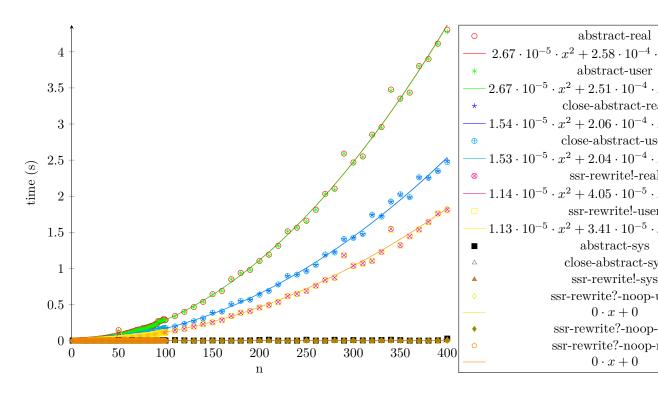


Figure 8: timing-rewrite-repeated-app-ssrrewrite

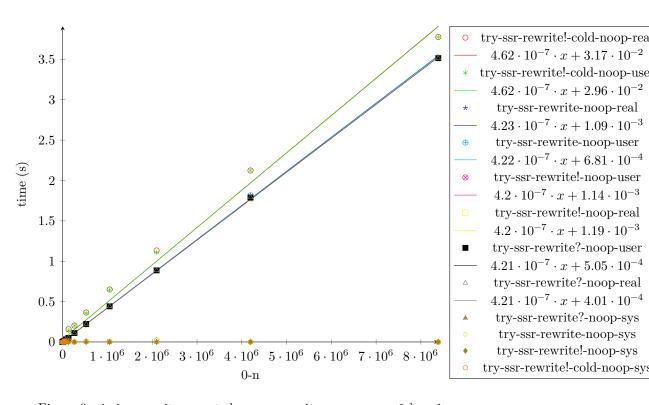


Figure 9: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn $\ 1$

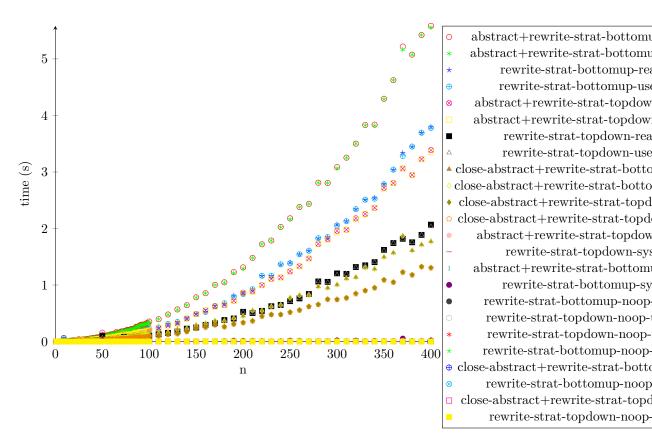


Figure 10: timing-rewrite-repeated-app-rewrite-strat

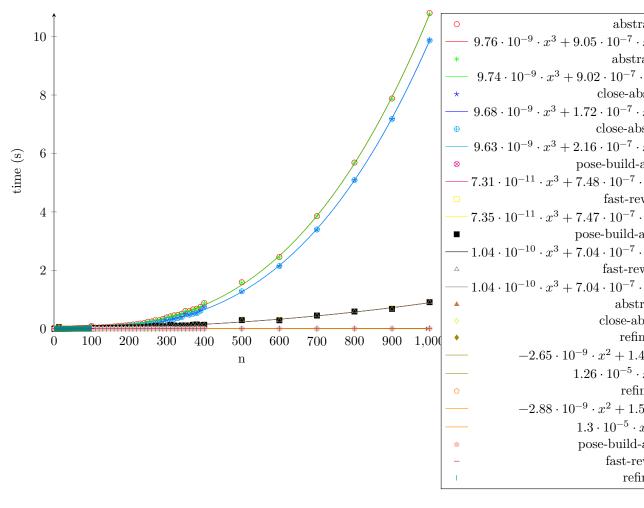
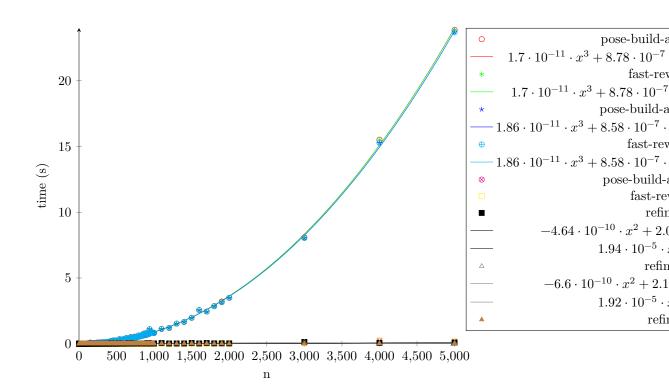
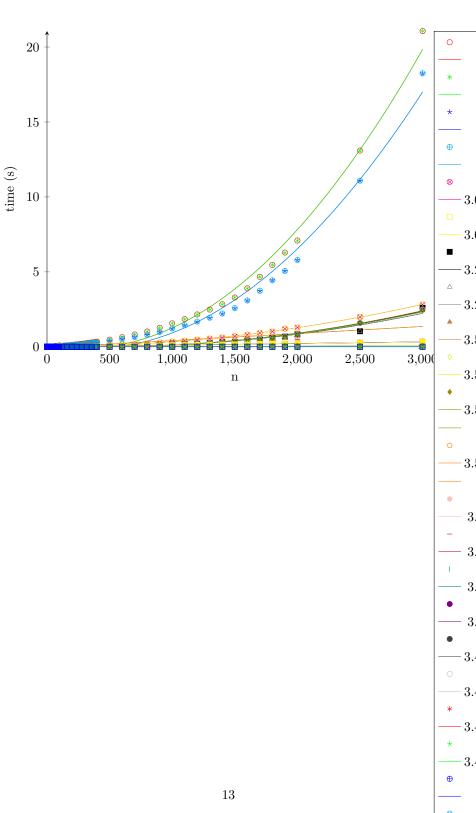


Figure 11: timing-rewrite-repeated-app-fast-rewrite



 ${\bf Figure~12:~timing\text{-}rewrite\text{-}repeated\text{-}app\text{-}fast\text{-}rewrite\text{-}no\text{-}abstract}}$



 $2.73 \cdot 10^{-6} \cdot x^2 - 1.63 \cdot 10^{-6}$ $2.73 \cdot 10^{-6} \cdot x^2 - 1.64 \cdot 10^{-6}$ $2.42 \cdot 10^{-6} \cdot x^2 - 1.66 \cdot 10^{-6}$ $2.43 \cdot 10^{-6} \cdot x^2 - 1.66 \cdot 10^{-6}$ $3.06 \cdot 10^{-7} \cdot x^2 + 2.52 \cdot 10^{-5} \cdot x^2$ $3.06 \cdot 10^{-7} \cdot x^2 + 2.45 \cdot 10^{-5} \cdot x^2$ $3.27 \cdot 10^{-7} \cdot x^2 - 2.46 \cdot 10^{-4} \cdot x^2$ $3.27 \cdot 10^{-7} \cdot x^2 - 2.46 \cdot 10^{-4} \cdot x^2$ $3.57 \cdot 10^{-7} \cdot x^2 - 2.75 \cdot 10^{-4} \cdot x^2$ $3.57 \cdot 10^{-7} \cdot x^2 - 2.75 \cdot 10^{-4} \cdot x^2$ $3.53 \cdot 10^{-7} \cdot x^2 - 2.63 \cdot 10^{-4} \cdot x^2$ $3.53 \cdot 10^{-7} \cdot x^2 - 2.62 \cdot 10^{-4} \cdot x^2$ $3.5 \cdot 10^{-7} \cdot x^2 - 2.76 \cdot 10^{-4} \cdot x$ $3.5 \cdot 10^{-7} \cdot x^2 - 2.76 \cdot 10^{-4} \cdot x$ $3.5 \cdot 10^{-7} \cdot x^2 - 2.65 \cdot 10^{-4} \cdot x$ $3.5 \cdot 10^{-7} \cdot x^2 - 2.64 \cdot 10^{-4} \cdot x$ $3.42 \cdot 10^{-7} \cdot x^2 - 2.55 \cdot 10^{-4} \cdot x^2$ $3.42 \cdot 10^{-7} \cdot x^2 - 2.55 \cdot 10^{-4} \cdot x^2$ $3.41 \cdot 10^{-7} \cdot x^2 - 2.55 \cdot 10^{-4} \cdot x^2$ $3.42 \cdot 10^{-7} \cdot x^2 - 2.56 \cdot 10^{-4} \cdot x^2$

abstract-real

abstract-user

fast-rewrite-real

fast-rewrite-user

close-abstract-rea

close-abstract-use

type-pf-cast-real

type-pf-cast-user

type-admit-cast-us

type-admit-cast-re

 $4.71 \cdot 10^{-4} \cdot x - 5.68 \cdot$ refine-real

 $4.71 \cdot 10^{-4} \cdot x - 5.69 \cdot$ check-pf-cast-rea

check-pf-cast-use

check-admit-user

check-admit-real

type-admit-real

type-admit-user

check-admit-cast-u

check-admit-cast-r

build-eval-thunk-ua

 $1.1 \cdot 10^{-4} \cdot x - 8.69 \cdot$ build-eval-thunk-re $1.11 \cdot 10^{-4} \cdot x - 8.2 \cdot$ build-thunk-user $1.09 \cdot 10^{-4} \cdot x - 9.38 \cdot$ build-thunk-real $1.1 \cdot 10^{-4} \cdot x - 8.97 \cdot$

refine-user