

Figure 1: timing-pattern

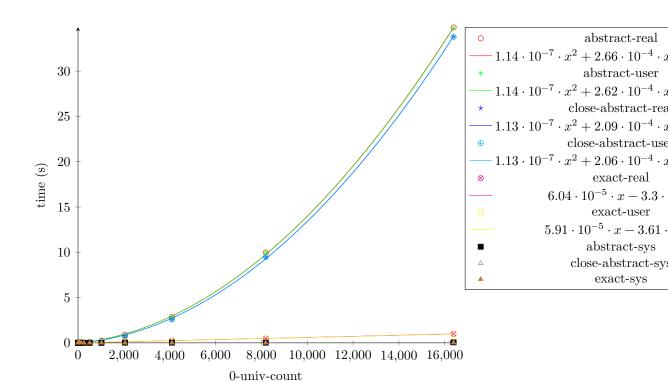


Figure 2: timing-n-polymorphic-universes param-1-n 0

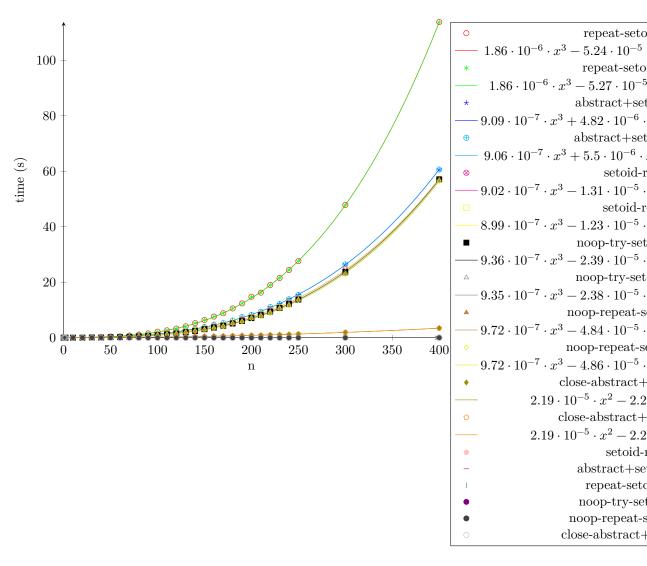


Figure 3: timing-repeat-setoid-rewrite-under-binders

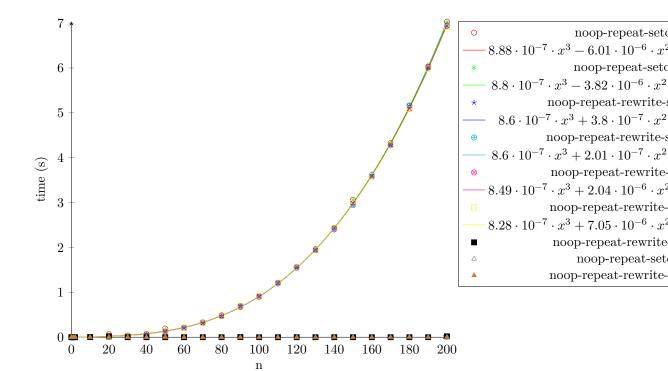


Figure 4: timing-repeat-setoid-rewrite-under-binders-noop

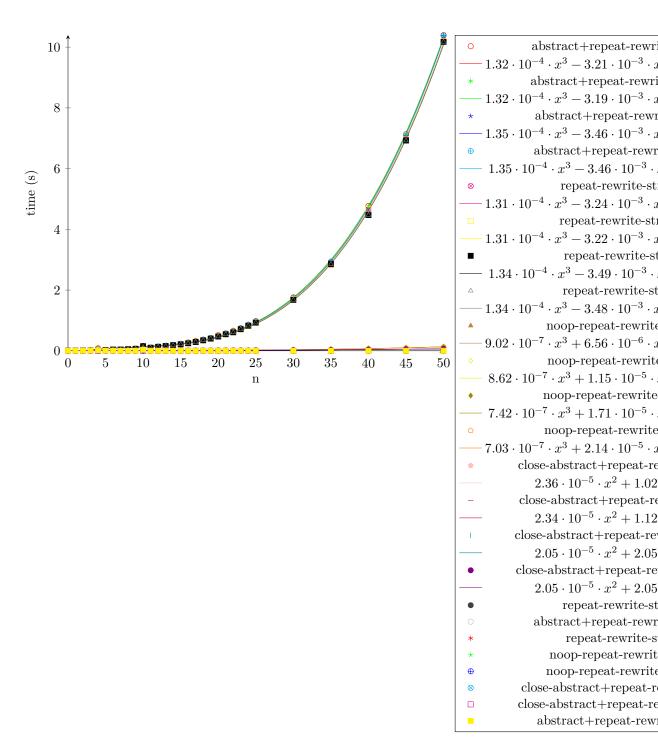


Figure 5: timing-rewrite-strat-under-binders

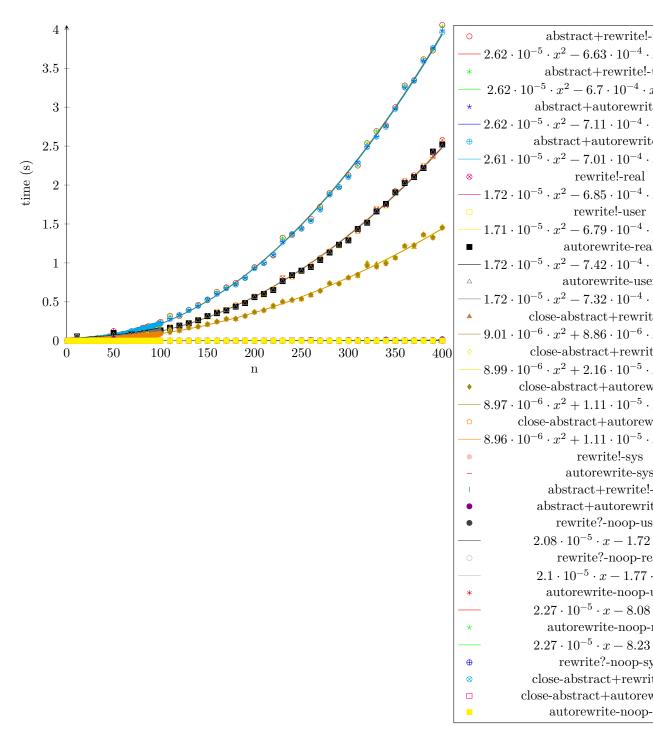


Figure 6: timing-rewrite-repeated-app-autorewrite

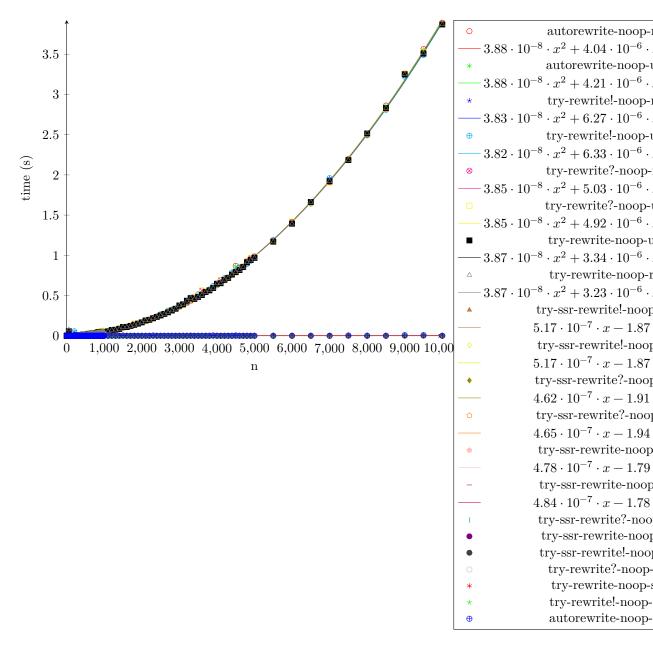


Figure 7: timing-rewrite-repeated-app-autorewrite-noop

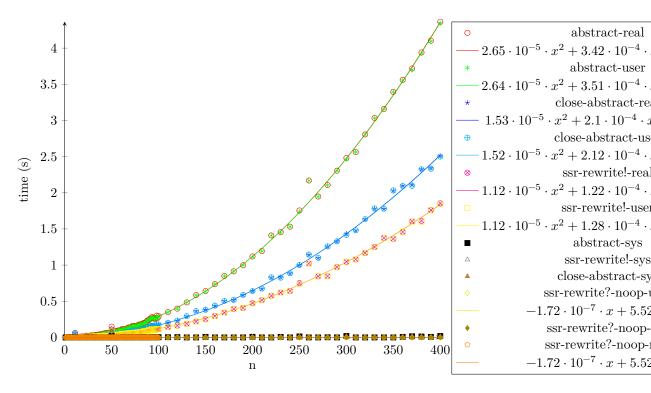


Figure 8: timing-rewrite-repeated-app-ssrrewrite

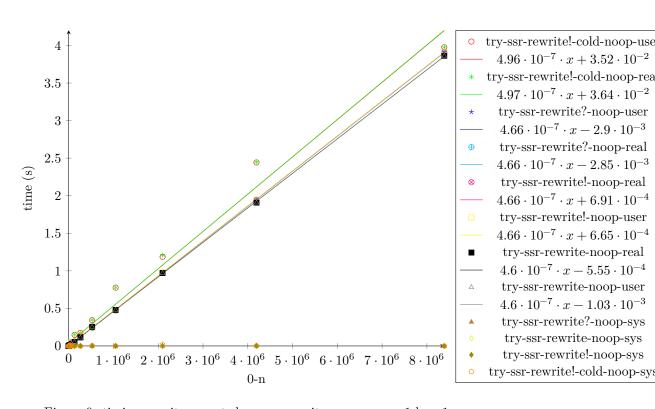


Figure 9: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn  $\ 1$ 

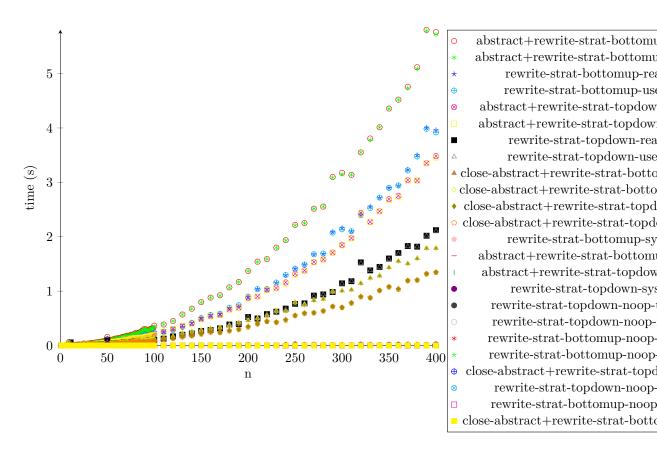


Figure 10: timing-rewrite-repeated-app-rewrite-strat

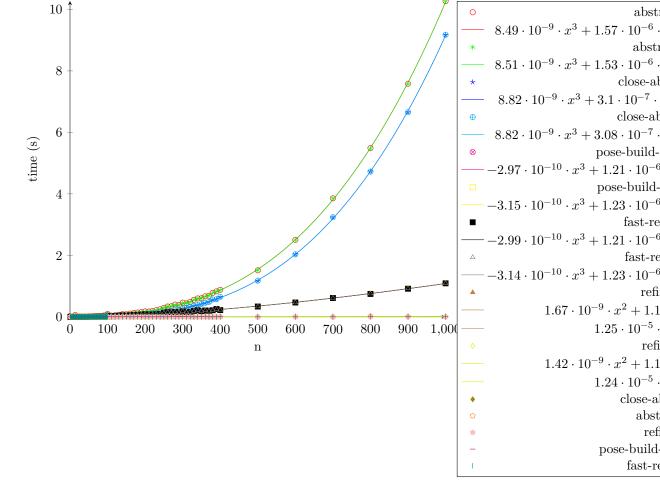
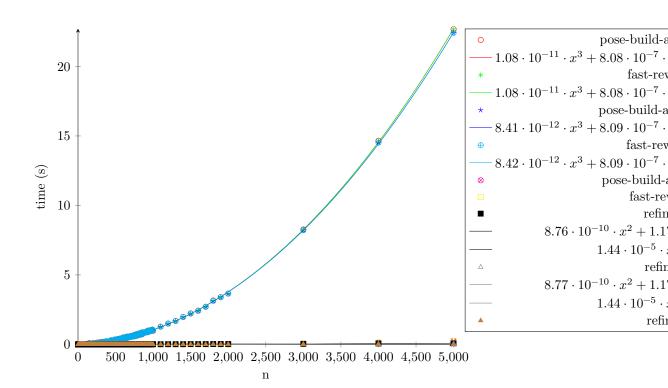
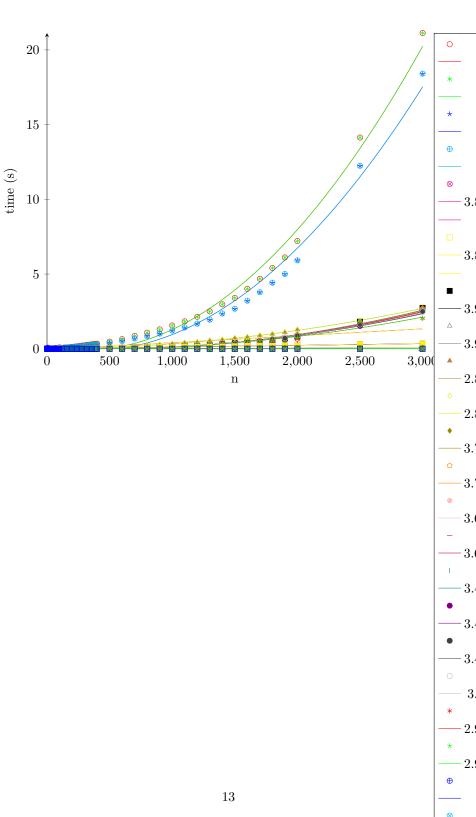


Figure 11: timing-rewrite-repeated-app-fast-rewrite



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



 $2.79 \cdot 10^{-6} \cdot x^2 - 1.67 \cdot 10^{-6}$  $2.79 \cdot 10^{-6} \cdot x^2 - 1.67 \cdot 10^{-6}$  $2.5 \cdot 10^{-6} \cdot x^2 - 1.72 \cdot 10^{-3}$  $2.5 \cdot 10^{-6} \cdot x^2 - 1.72 \cdot 10^{-3}$  $3.83 \cdot 10^{-7} \cdot x^2 - 3.31 \cdot 10^{-4} \cdot x^2$  $3.82 \cdot 10^{-7} \cdot x^2 - 3.31 \cdot 10^{-4} \cdot x^2$  $3.91 \cdot 10^{-7} \cdot x^2 - 3.21 \cdot 10^{-4} \cdot x^2$  $3.91 \cdot 10^{-7} \cdot x^2 - 3.21 \cdot 10^{-4} \cdot x^2$  $2.86 \cdot 10^{-7} \cdot x^2 + 4.51 \cdot 10^{-5} \cdot x^2$  $2.86 \cdot 10^{-7} \cdot x^2 + 4.42 \cdot 10^{-5} \cdot x^2$  $3.75 \cdot 10^{-7} \cdot x^2 - 2.93 \cdot 10^{-4} \cdot x^2$  $3.75 \cdot 10^{-7} \cdot x^2 - 2.93 \cdot 10^{-4} \cdot x^2$  $3.62 \cdot 10^{-7} \cdot x^2 - 2.72 \cdot 10^{-4} \cdot x^2$  $3.62 \cdot 10^{-7} \cdot x^2 - 2.71 \cdot 10^{-4} \cdot x^2$  $3.43 \cdot 10^{-7} \cdot x^2 - 2.53 \cdot 10^{-4} \cdot x^2$  $3.43 \cdot 10^{-7} \cdot x^2 - 2.53 \cdot 10^{-4} \cdot x^2$  $3.47 \cdot 10^{-7} \cdot x^2 - 2.51 \cdot 10^{-4} \cdot x^2$  $3.47 \cdot 10^{-7} \cdot x^2 - 2.5 \cdot 10^{-4} \cdot x$  $2.95 \cdot 10^{-7} \cdot x^2 - 1.85 \cdot 10^{-4} \cdot x^2$  $2.95 \cdot 10^{-7} \cdot x^2 - 1.85 \cdot 10^{-4} \cdot x^2$ 

abstract-real

abstract-user

fast-rewrite-real

fast-rewrite-user

refine-real

 $4.64 \cdot 10^{-4} \cdot x - 5.69$ refine-user

 $4.64 \cdot 10^{-4} \cdot x - 5.68 \cdot$ 

type-admit-cast-us

type-admit-cast-re

close-abstract-rea

close-abstract-use

check-admit-cast-u

check-admit-cast-r

type-admit-user

type-admit-real

check-pf-cast-rea

check-pf-cast-use

type-pf-cast-user

type-pf-cast-real

check-admit-user

check-admit-real

build-eval-thunk-u

 $1.16 \cdot 10^{-4} \cdot x - 8.53$ build-eval-thunk-re  $1.16 \cdot 10^{-4} \cdot x - 6.78 \cdot$ build-thunk-user  $1.15 \cdot 10^{-4} \cdot x - 9.6 \cdot$ build-thunk-real  $1.15 \cdot 10^{-4} \cdot x - 7.92 \cdot$ ob ools I sea