

Figure 1: timing-pattern

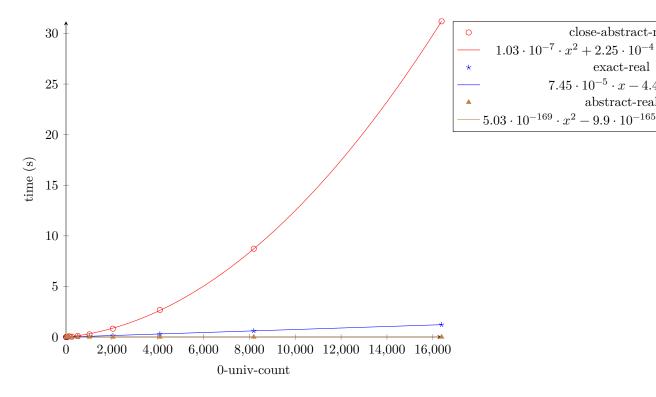
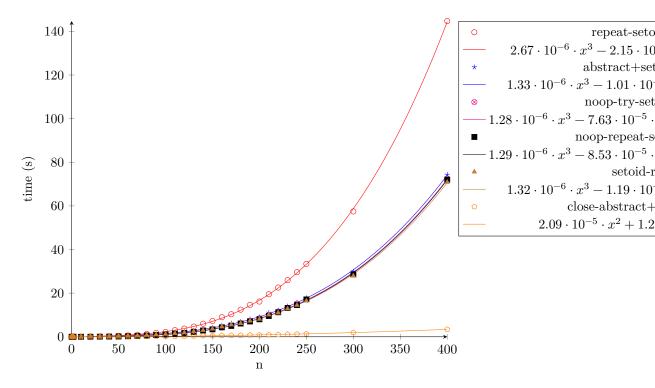


Figure 2: timing-n-polymorphic-universes param-1-n  $\,0\,$ 



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

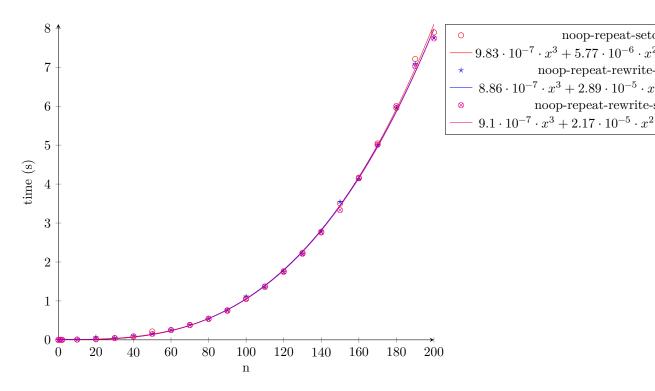
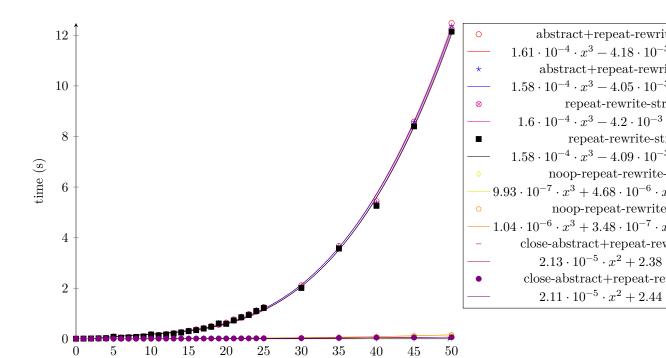
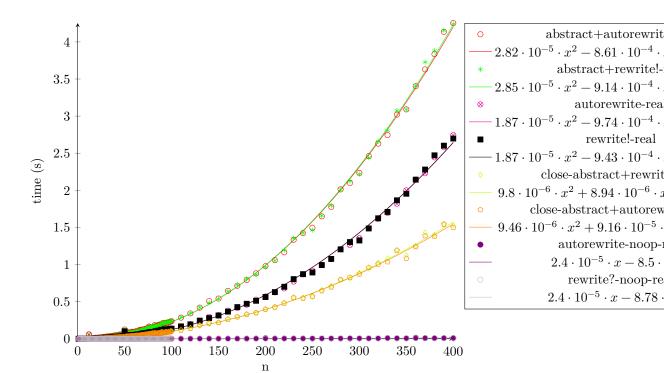


Figure 4: timing-repeat-setoid-rewrite-under-binders-noop



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

n



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

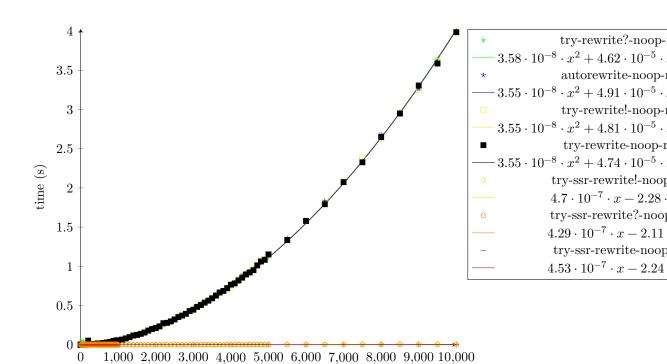


Figure 7: timing-rewrite-repeated-app-autorewrite-noop

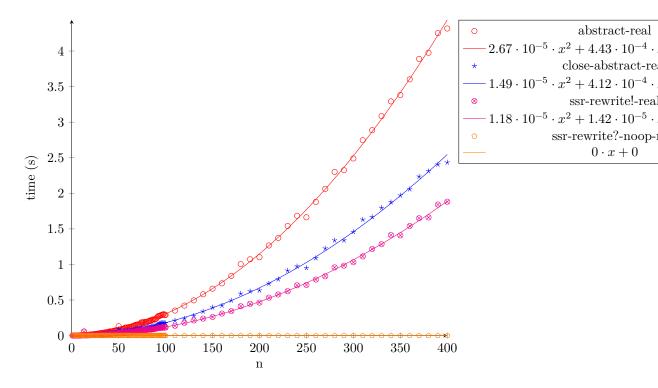
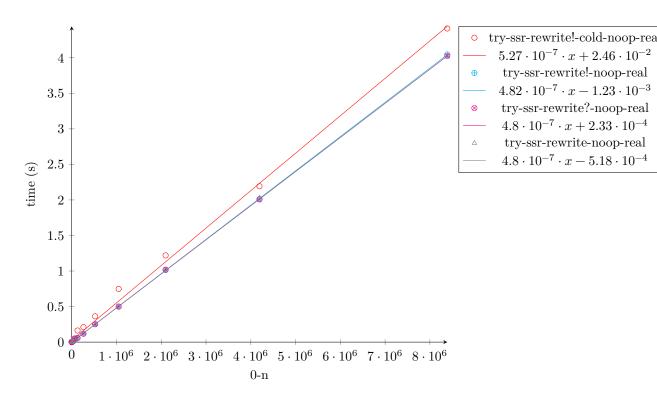


Figure 8: timing-rewrite-repeated-app-ssrrewrite



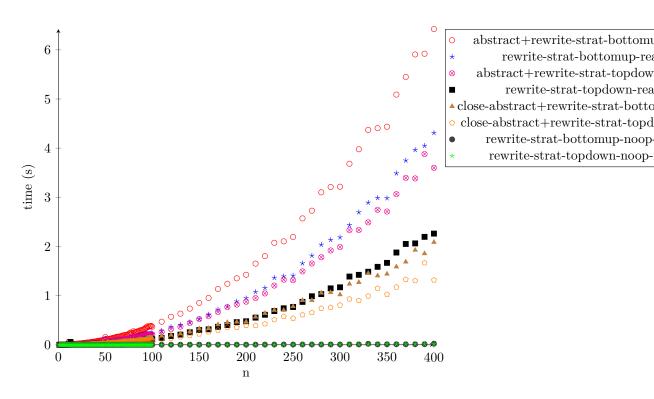
 $5.27 \cdot 10^{-7} \cdot x + 2.46 \cdot 10^{-2}$ 

try-ssr-rewrite!-noop-real  $4.82\cdot 10^{-7}\cdot x - 1.23\cdot 10^{-3}$ 

try-ssr-rewrite?-noop-real  $4.8 \cdot 10^{-7} \cdot x + 2.33 \cdot 10^{-4}$ 

try-ssr-rewrite-noop-real  $4.8\cdot 10^{-7}\cdot x - 5.18\cdot 10^{-4}$ 

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



rewrite-strat-bottomup-rea

rewrite-strat-topdown-rea

rewrite-strat-bottomup-noop-

rewrite-strat-topdown-noop-

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

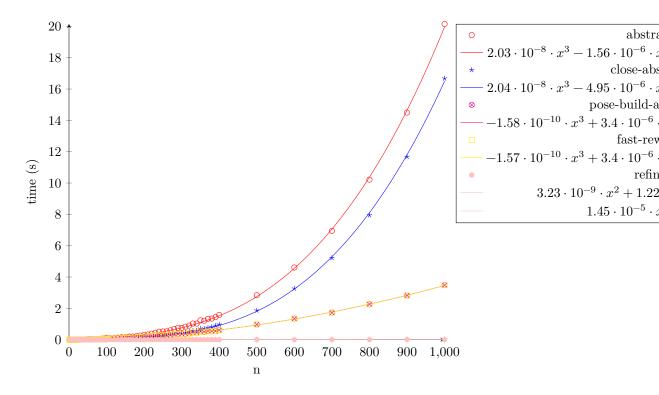
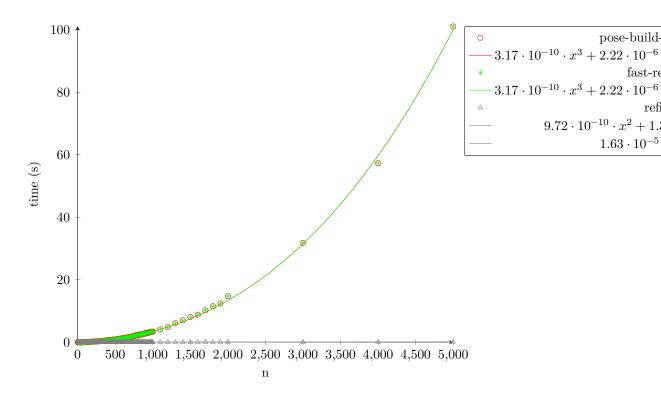


Figure 11: timing-rewrite-repeated-app-fast-rewrite



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