

Figure 1: timing-pattern

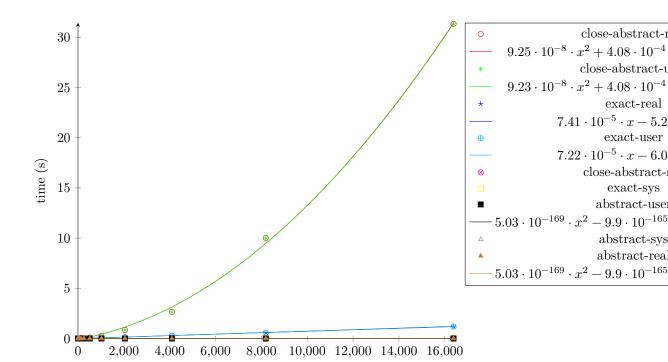


Figure 2: timing-n-polymorphic-universes param-1-n  $\,0$ 

-univ-count

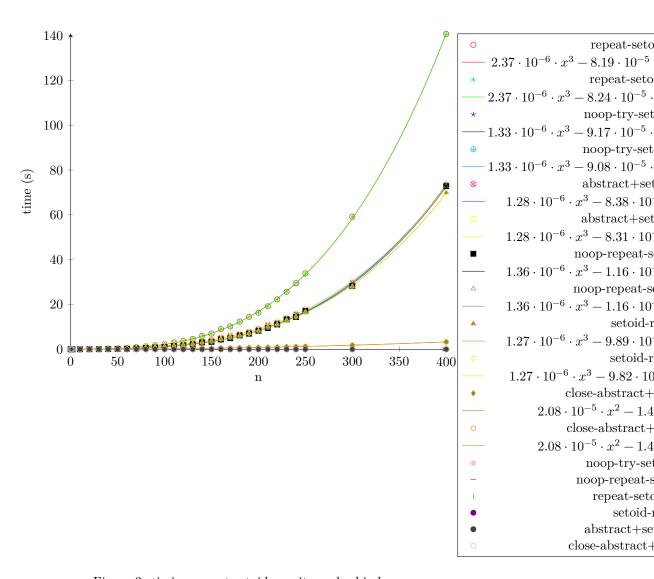


Figure 3: timing-repeat-setoid-rewrite-under-binders

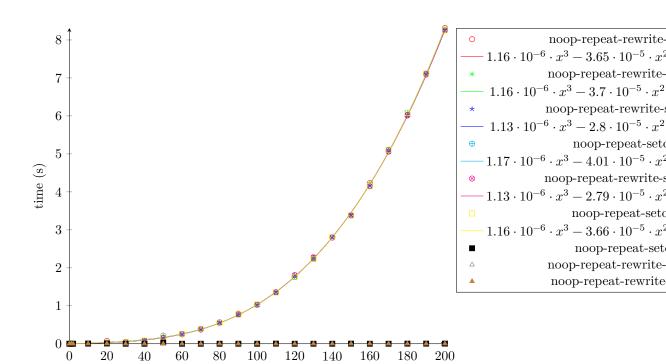


Figure 4: timing-repeat-setoid-rewrite-under-binders-noop

n

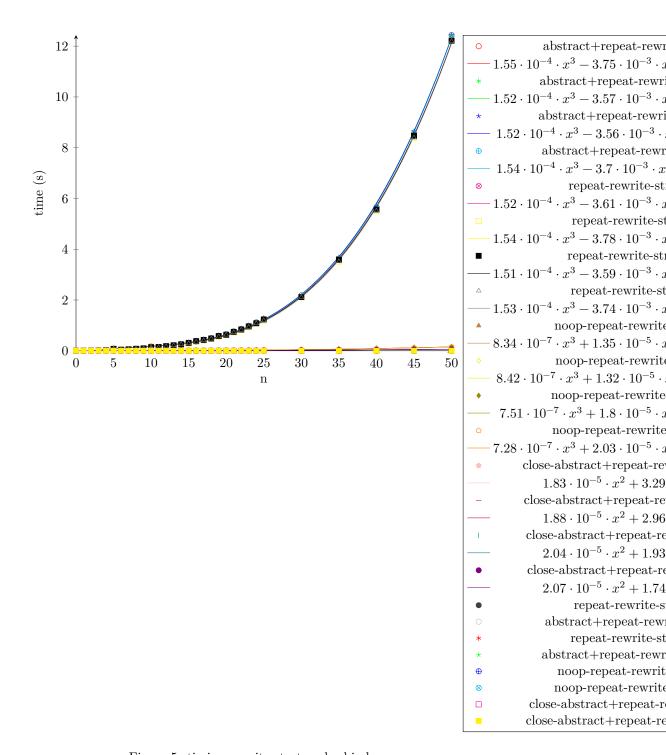
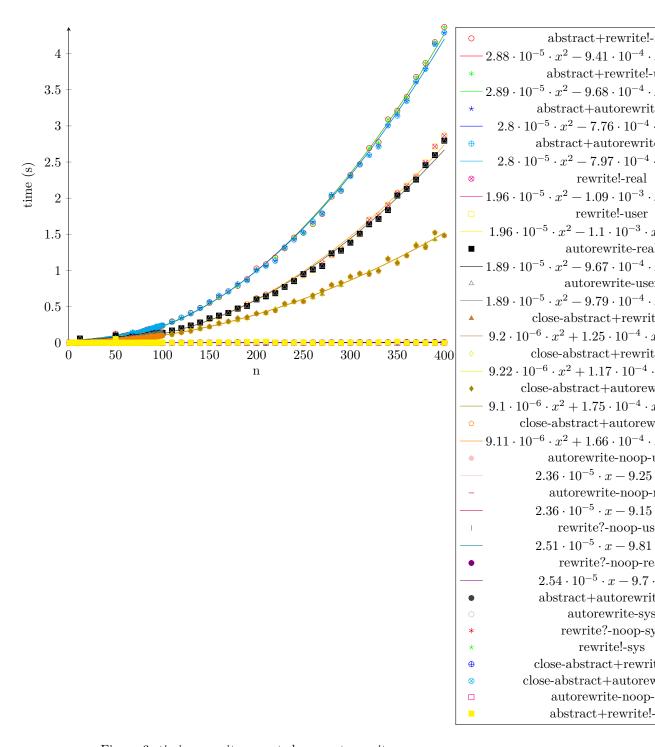


Figure 5: timing-rewrite-strat-under-binders



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

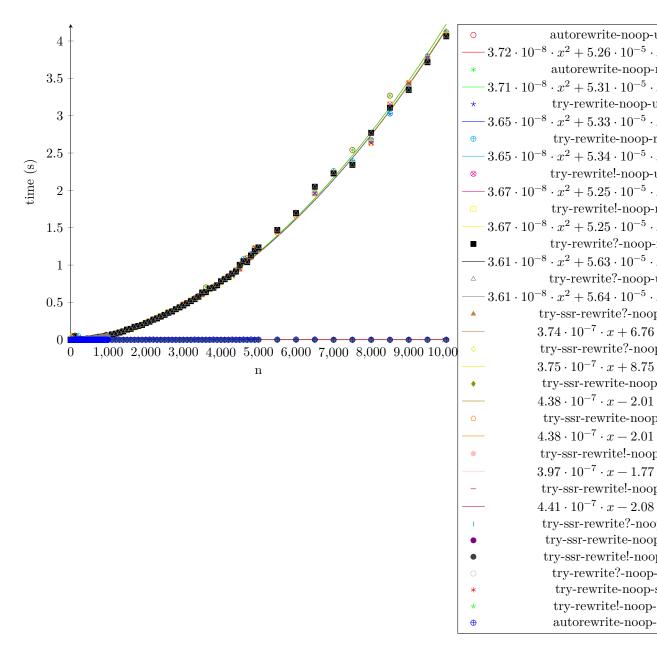
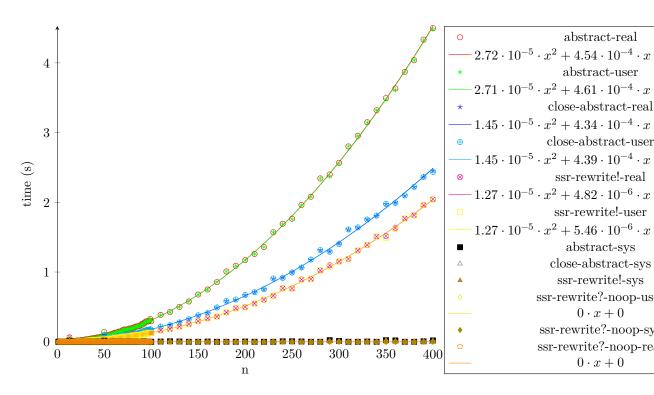


Figure 7: timing-rewrite-repeated-app-autorewrite-noop



 ${\bf Figure~8:~timing\text{-}rewrite\text{-}repeated\text{-}app\text{-}ssrrewrite}$ 

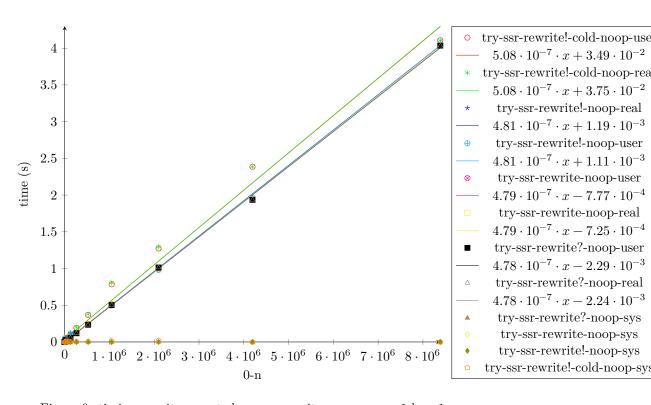


Figure 9: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn  $\ 1$ 

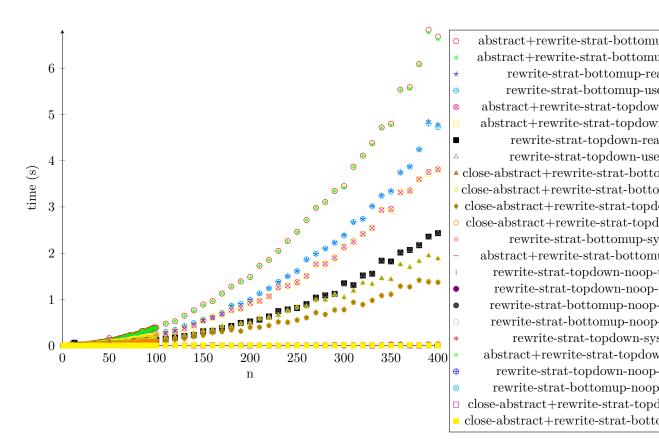


Figure 10: timing-rewrite-repeated-app-rewrite-strat

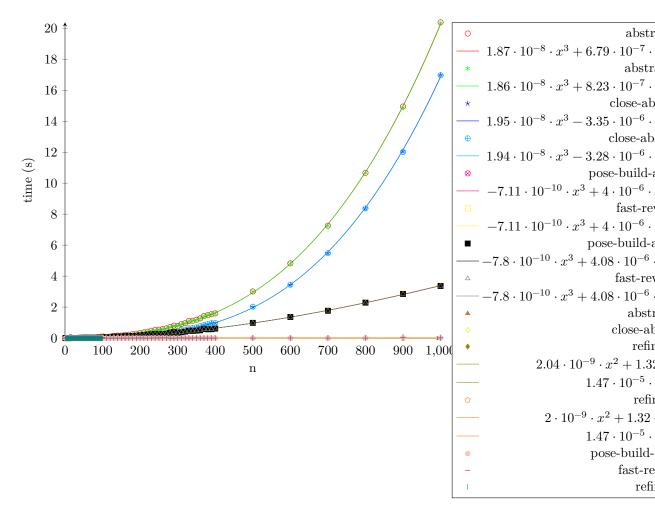
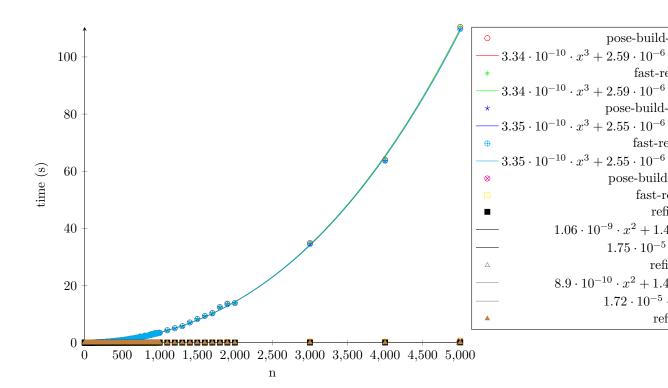
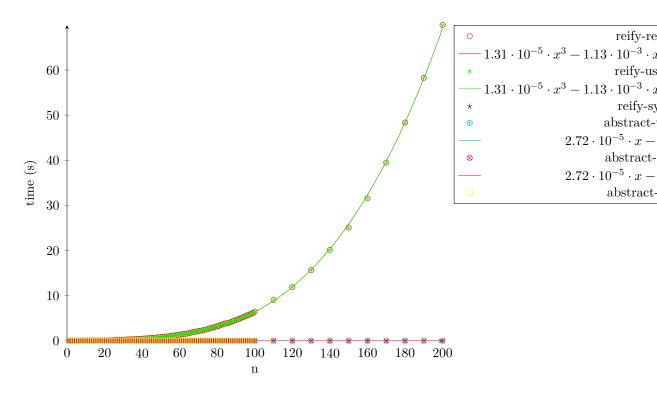


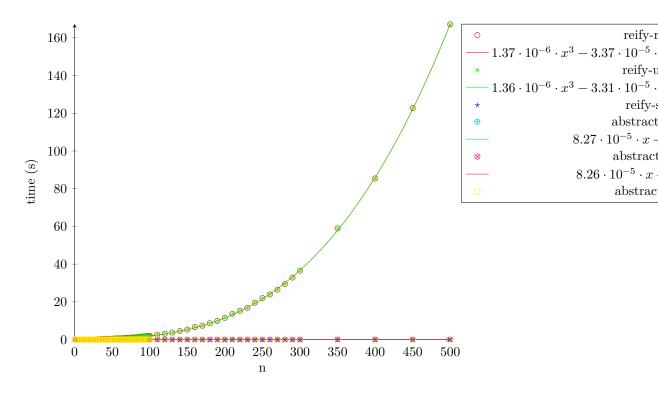
Figure 11: timing-rewrite-repeated-app-fast-rewrite



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



 ${\bf Figure~13:~timing-type class-reification-let-in-HOAS}$ 



 ${\bf Figure~14:~timing-type class-reification-let-in-PHOAS}$