

Figure 1: timing-pattern

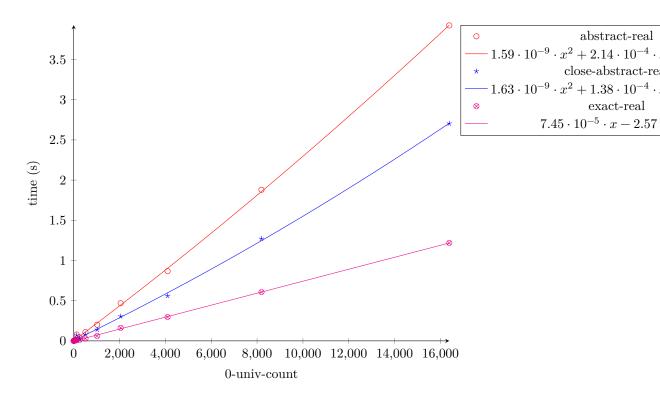


Figure 2: timing-n-polymorphic-universes param-1-n $\,0\,$

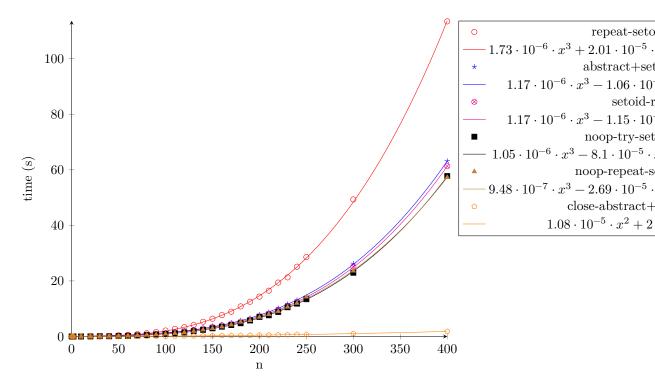
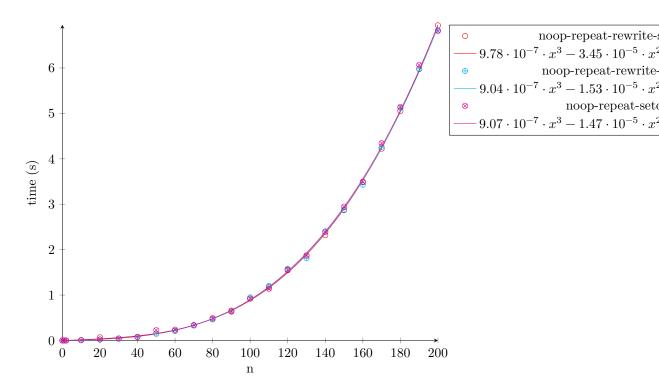
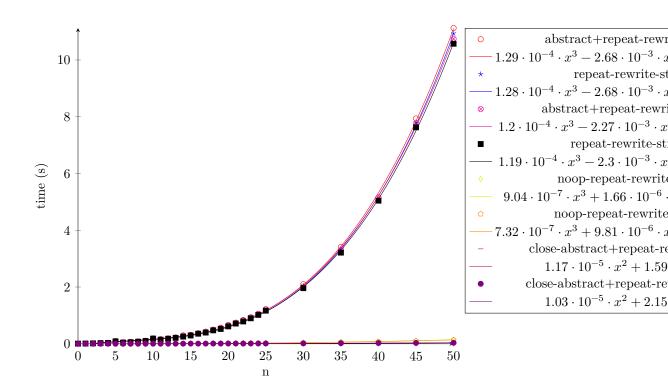


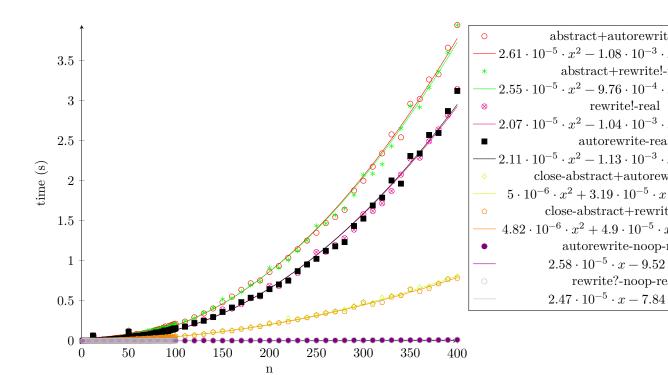
Figure 3: timing-repeat-setoid-rewrite-under-binders



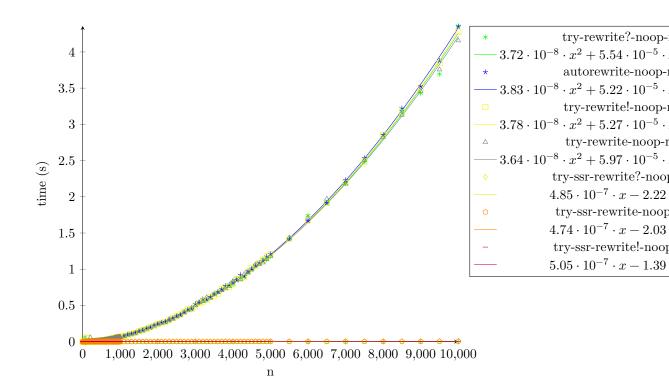
 $Figure\ 4:\ timing-repeat-setoid-rewrite-under-binders-noop$



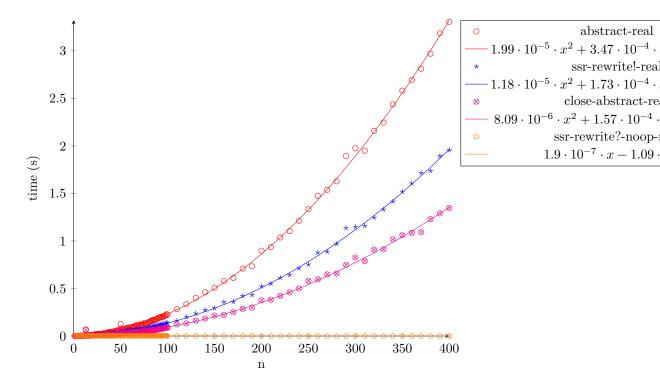
 $Figure\ 5:\ timing-rewrite-strat-under-binders$



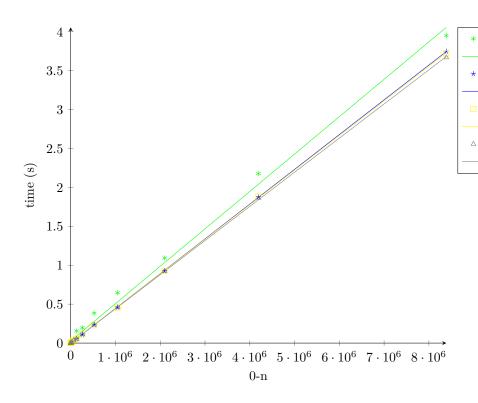
 $Figure \ 6: \ timing-rewrite-repeated-app-autorewrite \\$



 $Figure~7:~timing\mbox{-rewrite-repeated-app-autorewrite-noop}$



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



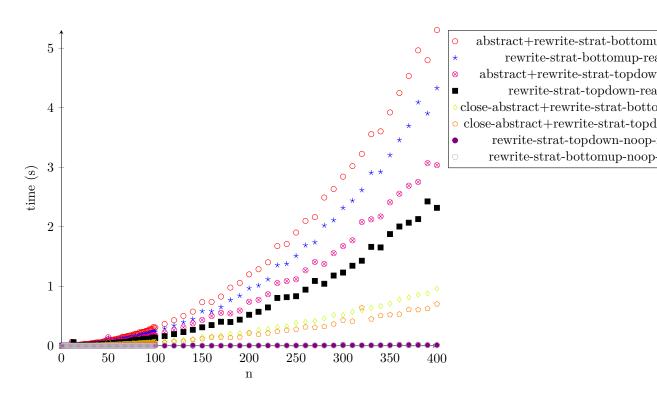
try-ssr-rewrite!-cold-noop-rea $4.8 \cdot 10^{-7} \cdot x + 2.71 \cdot 10^{-2}$

 $\begin{array}{l} \text{try-ssr-rewrite-noop-real} \\ 4.47 \cdot 10^{-7} \cdot x - 1.23 \cdot 10^{-3} \\ \text{try-ssr-rewrite!-noop-real} \end{array}$

 $\begin{array}{l} 4.44 \cdot 10^{-7} \cdot x + 2.17 \cdot 10^{-4} \\ \text{try-ssr-rewrite?-noop-real} \end{array}$

 $4.39 \cdot 10^{-7} \cdot x + 1.26 \cdot 10^{-3}$

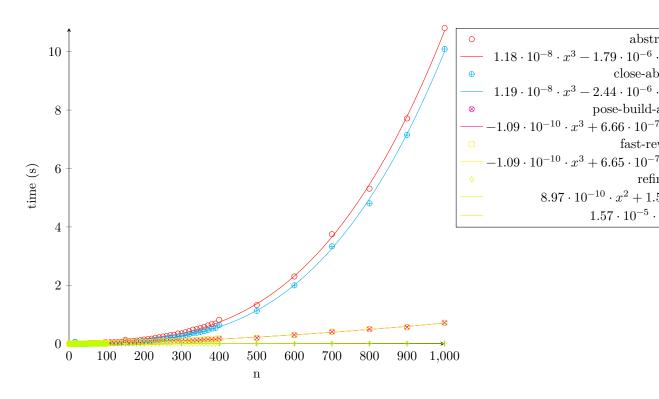
Figure 9: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn $\,1\,$



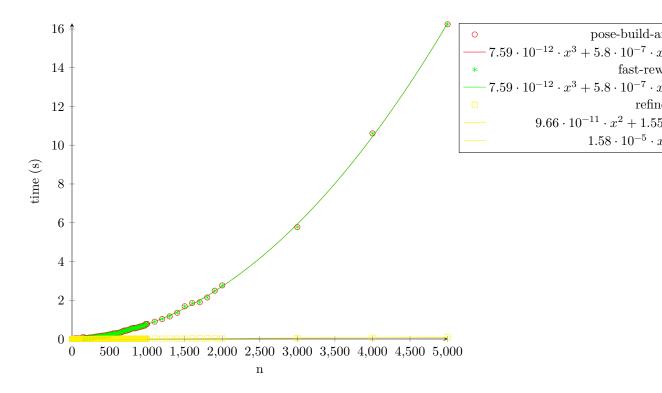
rewrite-strat-bottomup-rea

rewrite-strat-topdown-rea

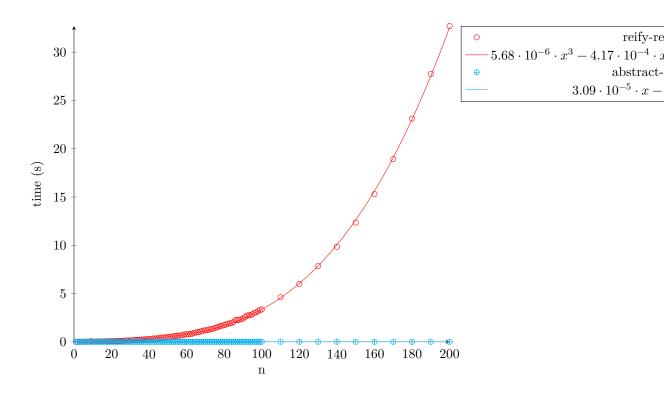
 $Figure~10:~timing\mbox{-rewrite-repeated-app-rewrite-strat}$



 $Figure~11:~timing\mbox{-rewrite-repeated-app-fast-rewrite}$



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



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

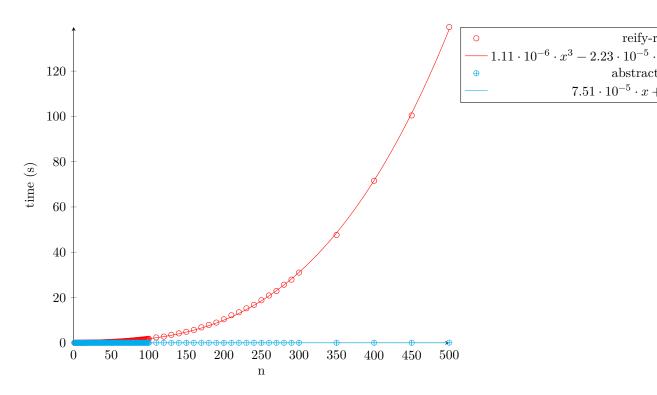


Figure 14: timing-typeclass-reification-let-in-PHOAS

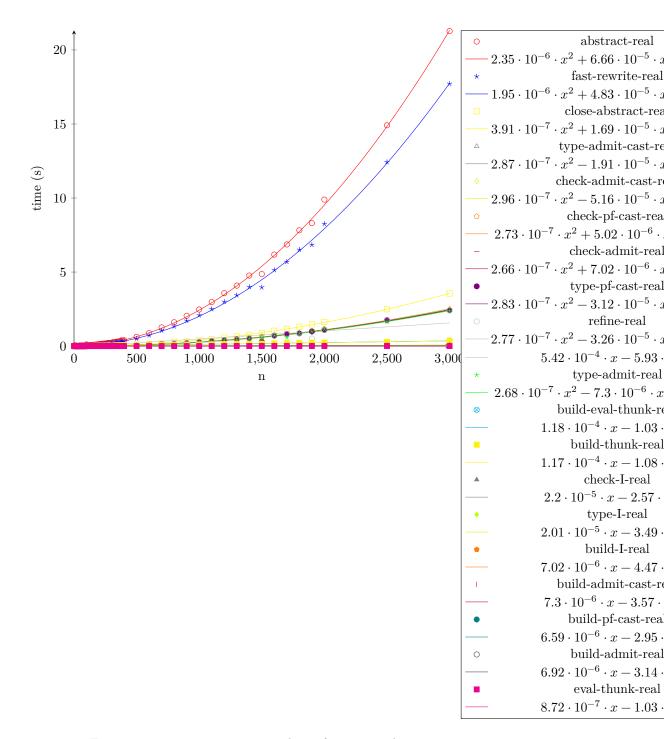


Figure 15: timing-rewrite-repeated-app-fast-rewrite-ltac2