

Figure 1: timing-pattern

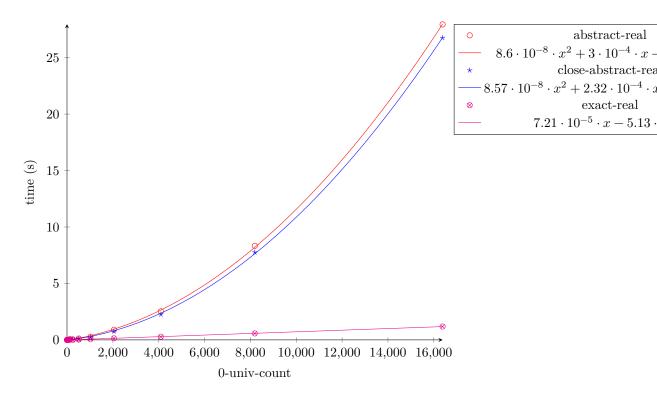
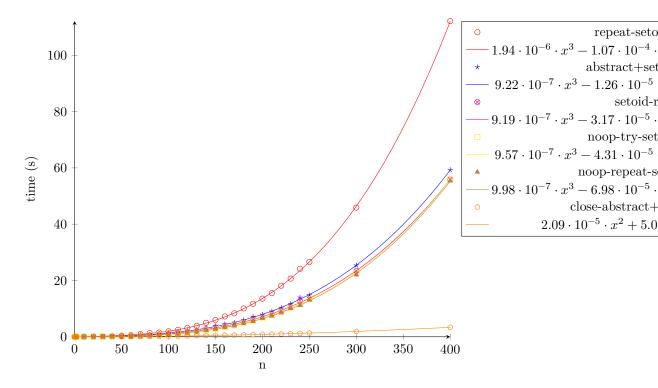


Figure 2: timing-n-polymorphic-universes param-1-n $\,0\,$



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

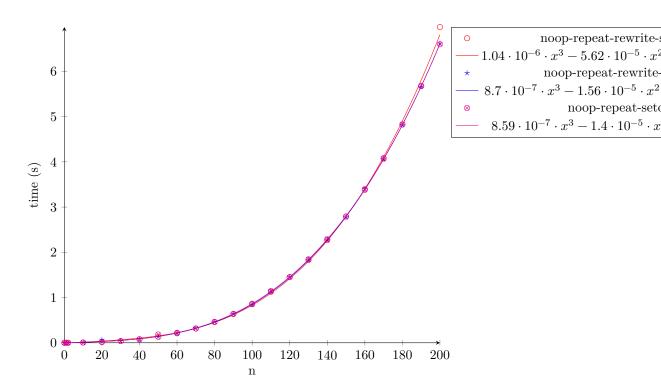
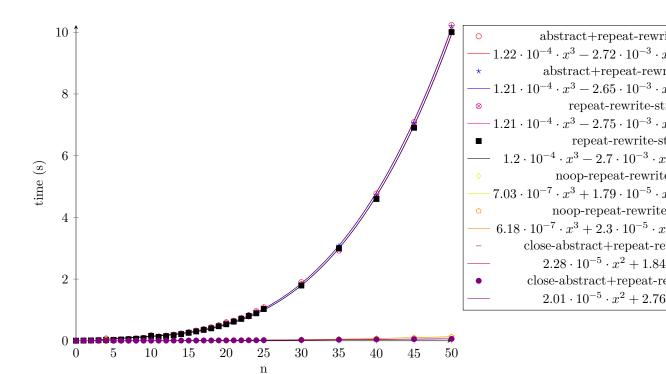
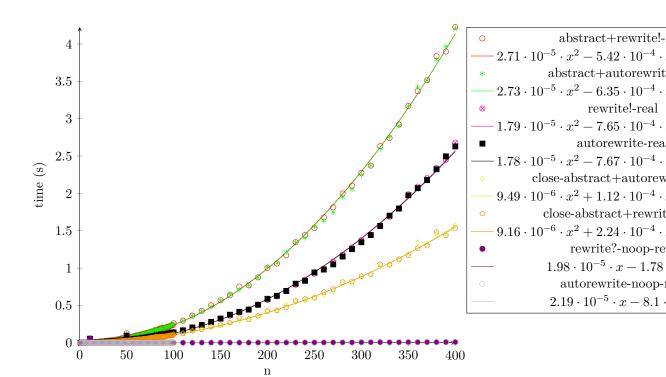


Figure 4: timing-repeat-setoid-rewrite-under-binders-noop



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



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

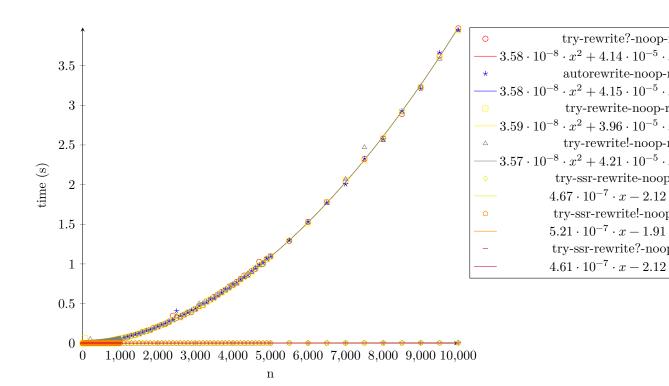


Figure 7: timing-rewrite-repeated-app-autorewrite-noop

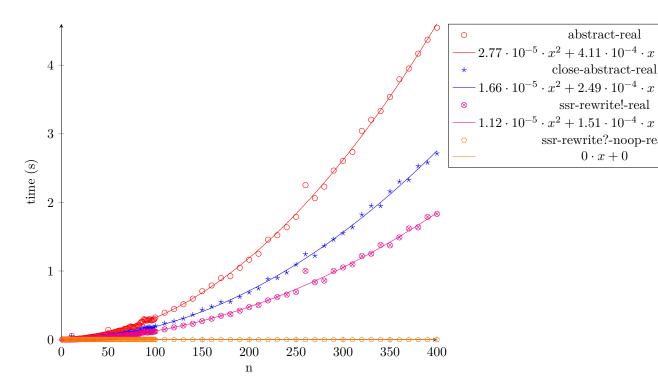
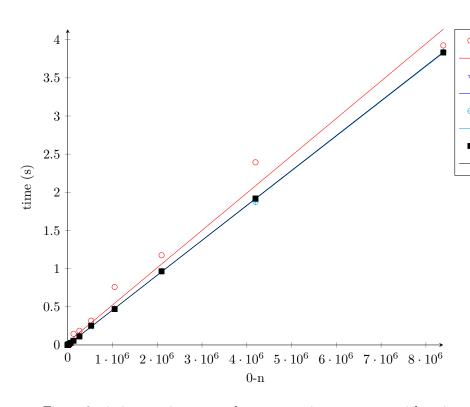


Figure 8: timing-rewrite-repeated-app-ssrrewrite



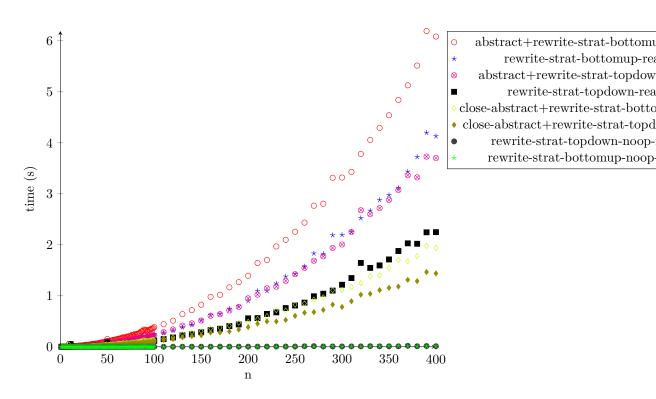
try-ssr-rewrite!-cold-noop-rea $4.89 \cdot 10^{-7} \cdot x + 3.39 \cdot 10^{-2}$ try-ssr-rewrite!-noop-real

 $\begin{array}{l} 4.57 \cdot 10^{-7} \cdot x + 5.21 \cdot 10^{-4} \\ \text{try-ssr-rewrite?-noop-real} \end{array}$

 $\begin{array}{l} 4.56 \cdot 10^{-7} \cdot x - 1.16 \cdot 10^{-3} \\ \text{try-ssr-rewrite-noop-real} \end{array}$

 $4.57 \cdot 10^{-7} \cdot x - 4.84 \cdot 10^{-4}$

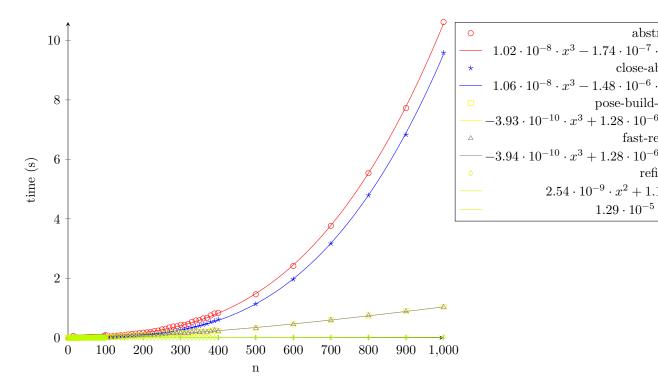
Figure 9: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn $\ 1$



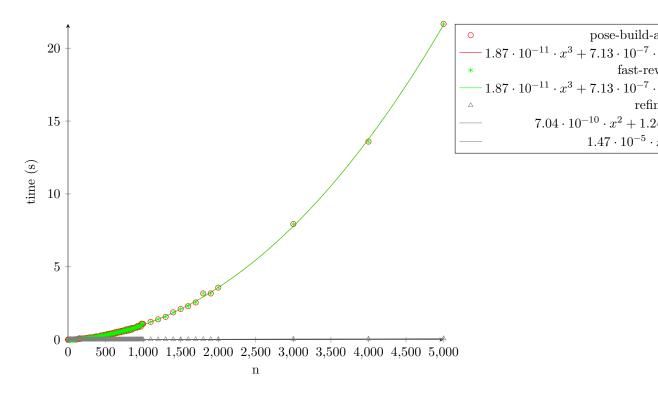
rewrite-strat-bottomup-rea

rewrite-strat-topdown-rea

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



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



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

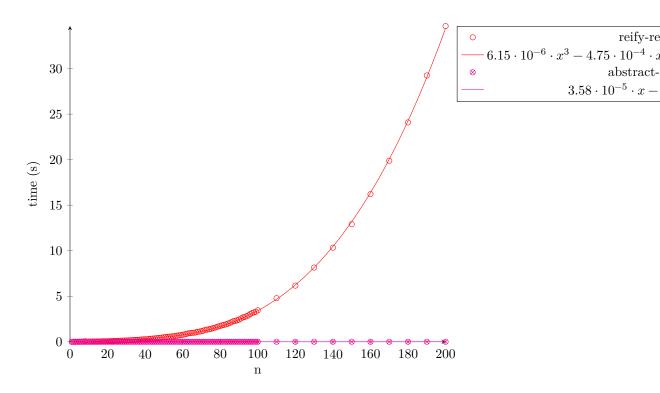


Figure 13: timing-typeclass-reification-let-in-HOAS

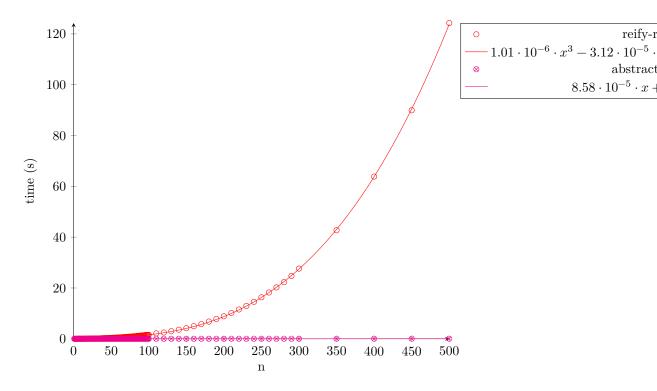


Figure 14: timing-typeclass-reification-let-in-PHOAS

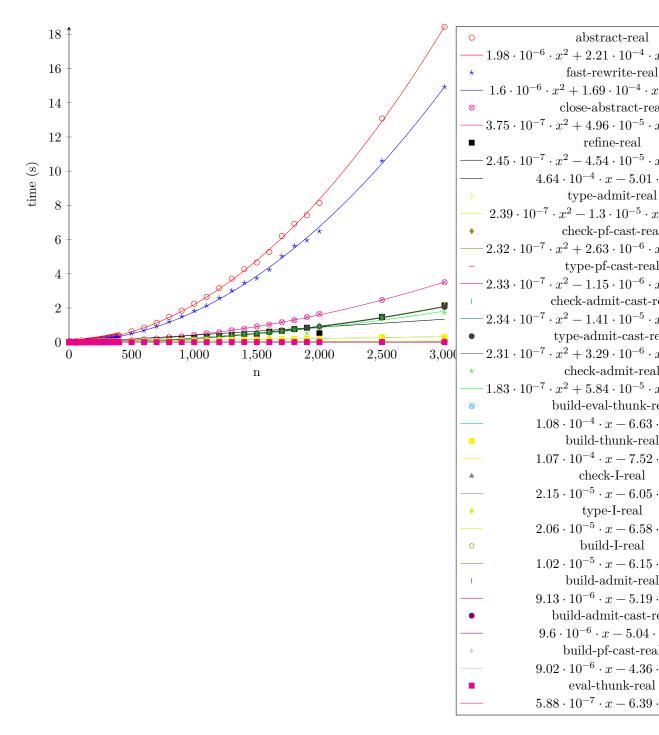


Figure 15: timing-rewrite-repeated-app-fast-rewrite-ltac2