

Figure 1: timing-pattern

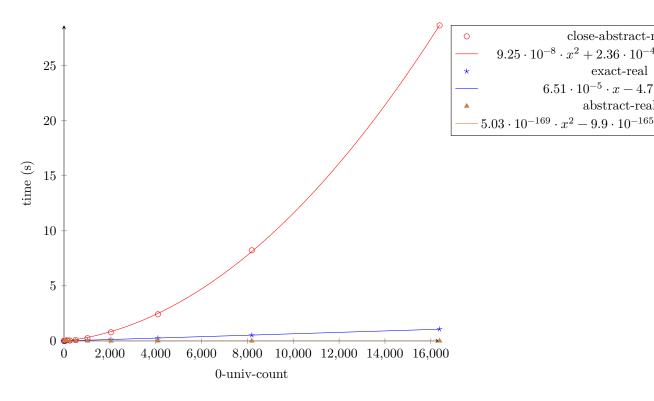
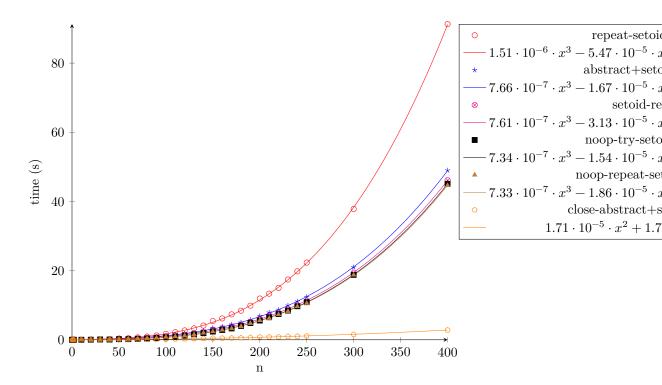
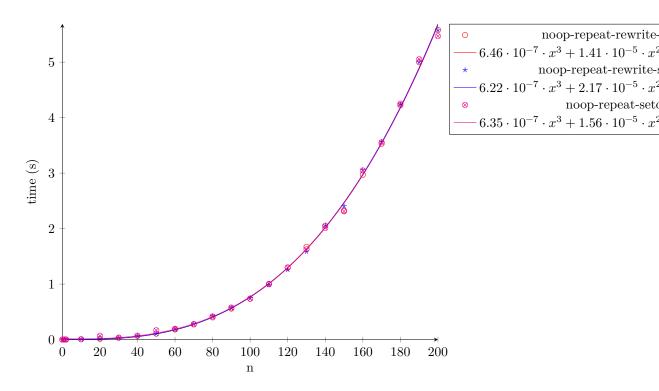


Figure 2: timing-n-polymorphic-universes param-1-n $\,0\,$



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



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

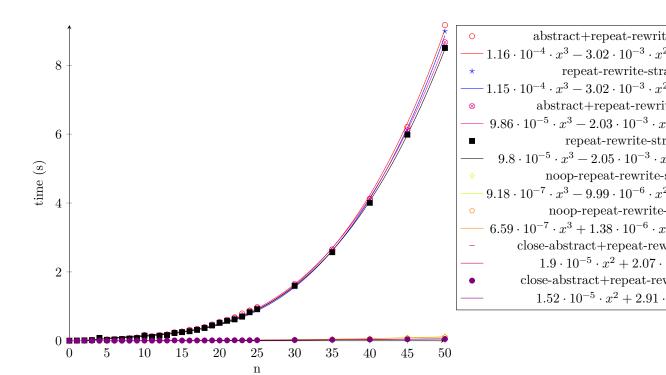
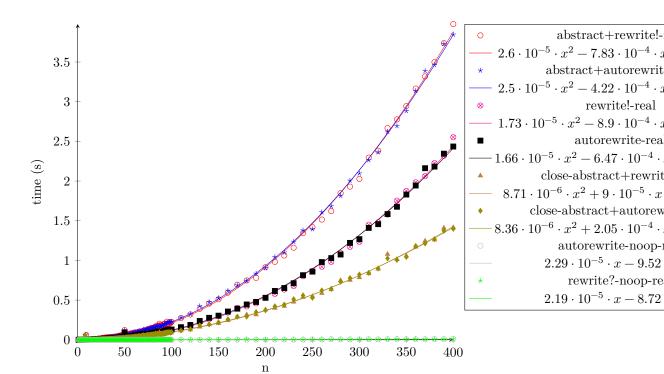
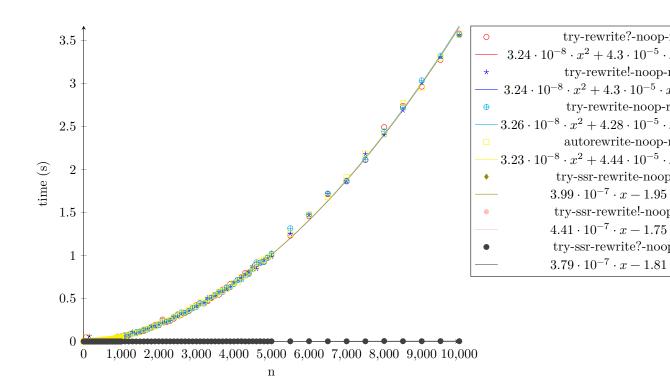


Figure 5: timing-rewrite-strat-under-binders



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



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

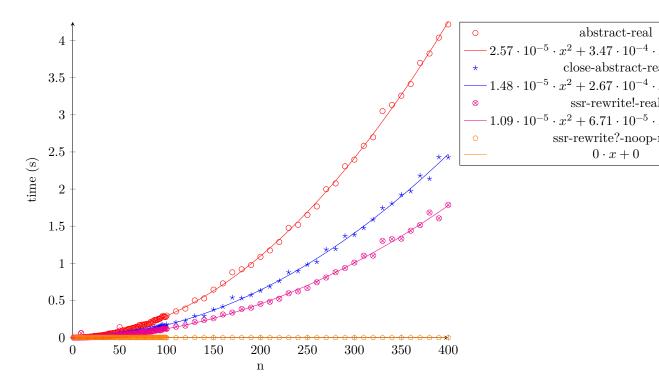
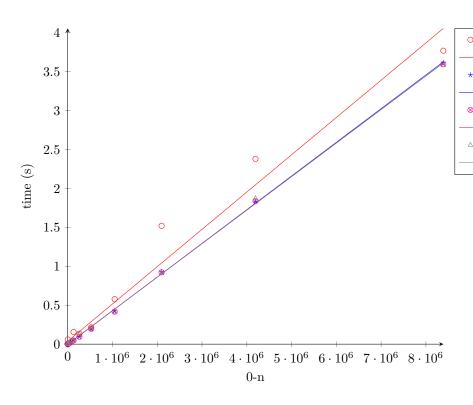


Figure 8: timing-rewrite-repeated-app-ssrrewrite



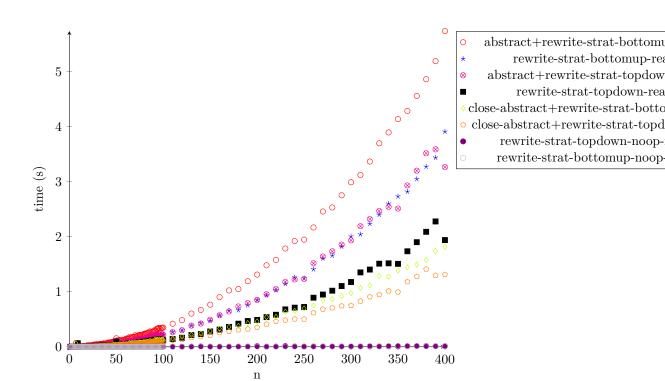
try-ssr-rewrite!-cold-noop-rea $4.79 \cdot 10^{-7} \cdot x + 3.72 \cdot 10^{-2}$ try-ssr-rewrite?-noop-real

 $\begin{array}{l} 4.33 \cdot 10^{-7} \cdot x - 3.71 \cdot 10^{-3} \\ \text{try-ssr-rewrite-noop-real} \end{array}$

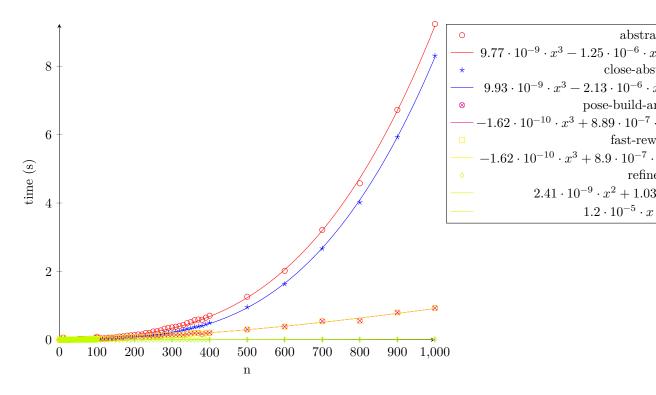
 $4.31\cdot 10^{-7}\cdot x - 3.03\cdot 10^{-3}$ try-ssr-rewrite!-noop-real

 $4.3\cdot 10^{-7}\cdot x + 7.22\cdot 10^{-4}$

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



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



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

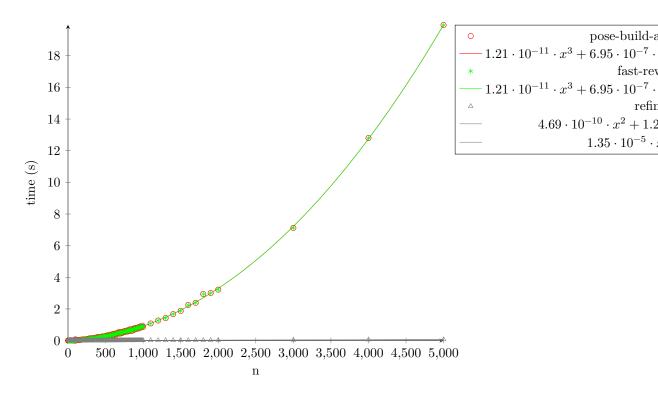


Figure 12: timing-rewrite-repeated-app-fast-rewrite-no-abstract

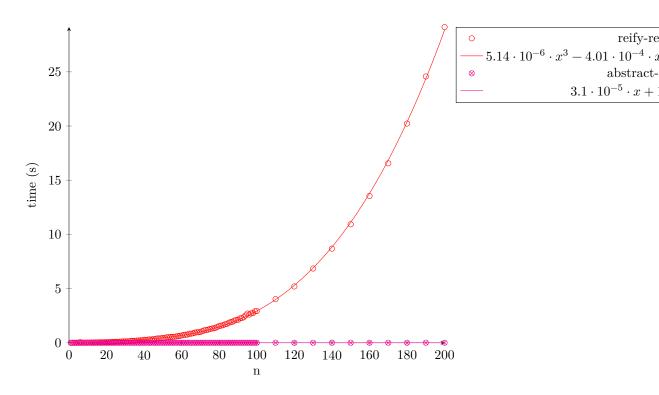


Figure 13: timing-typeclass-reification-let-in-HOAS

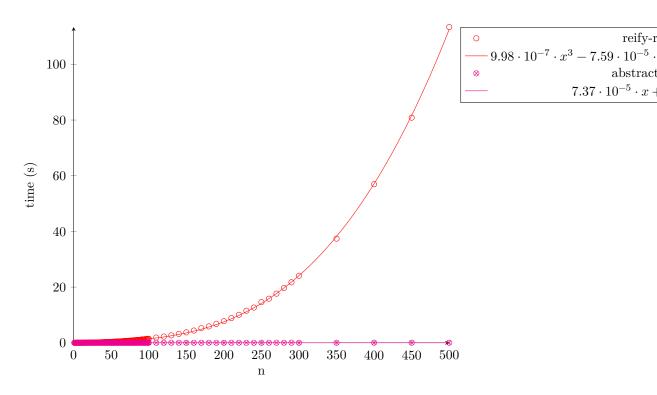


Figure 14: timing-typeclass-reification-let-in-PHOAS