

Figure 1: timing-pattern

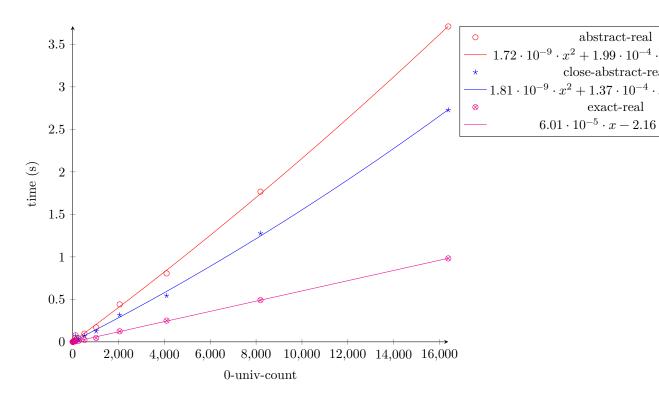


Figure 2: timing-n-polymorphic-universes param-1-n $\,0\,$

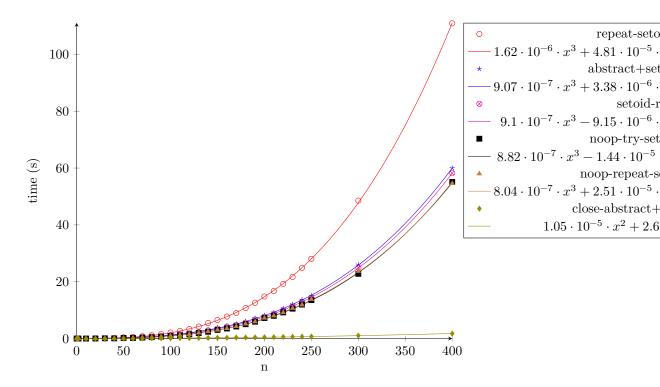


Figure 3: timing-repeat-setoid-rewrite-under-binders

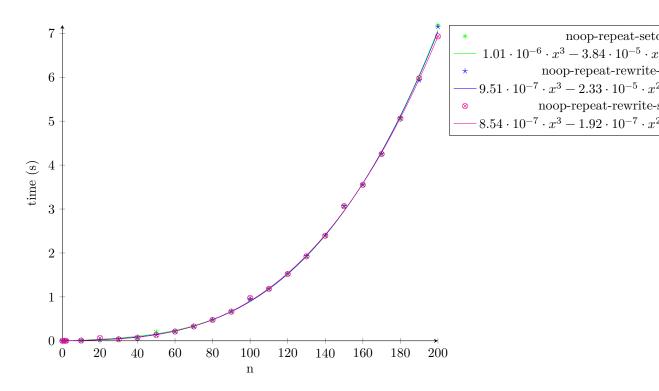
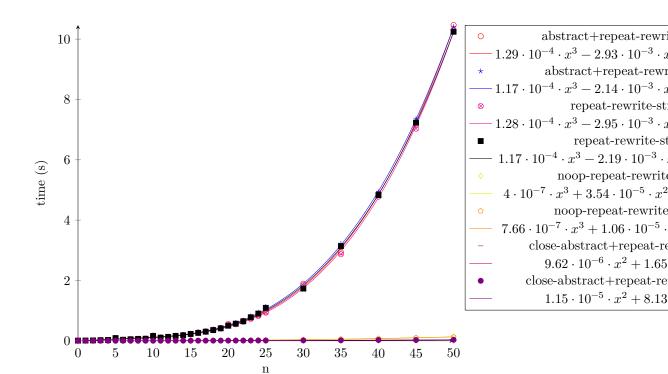
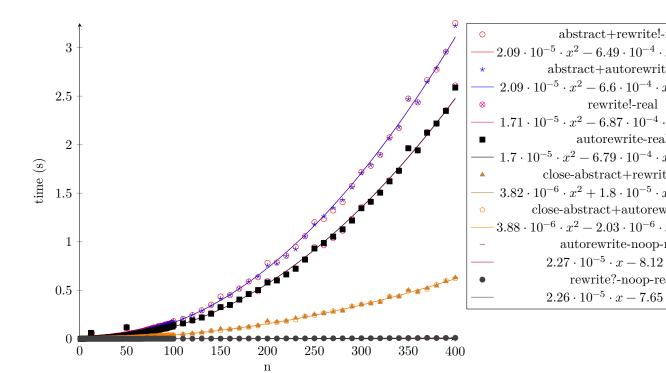


Figure 4: timing-repeat-setoid-rewrite-under-binders-noop



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



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

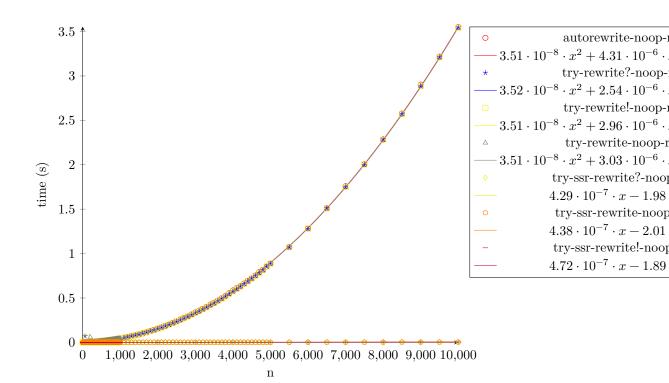


Figure 7: timing-rewrite-repeated-app-autorewrite-noop

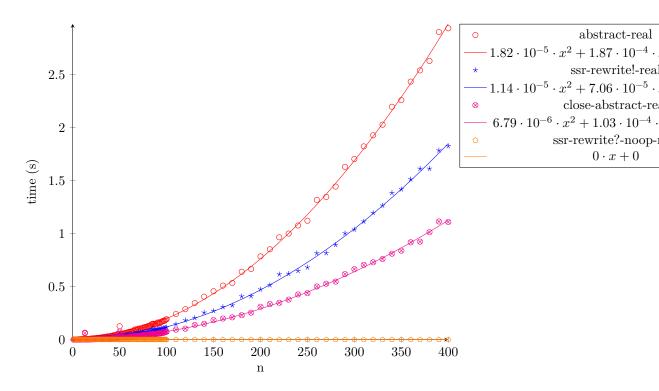
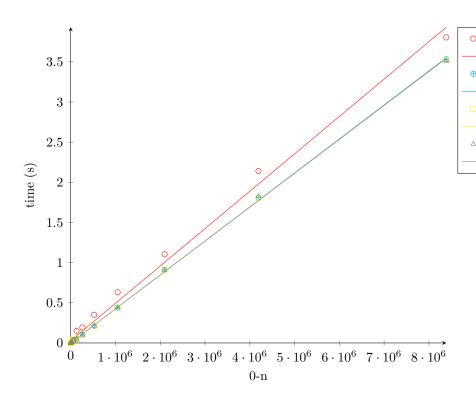


Figure 8: timing-rewrite-repeated-app-ssrrewrite



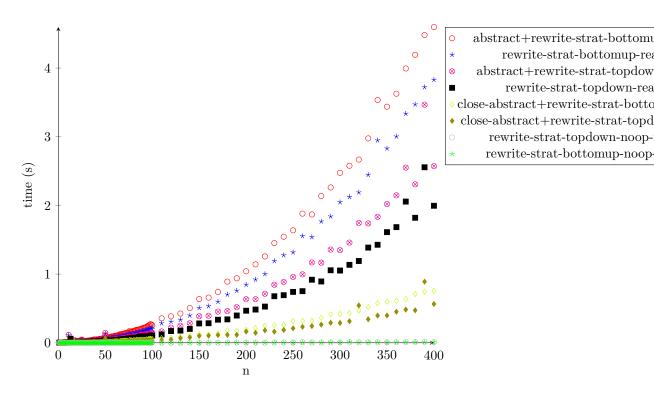
try-ssr-rewrite!-cold-noop-rea $4.65\cdot 10^{-7}\cdot x + 2.83\cdot 10^{-2}$

try-ssr-rewrite?-noop-real $4.23\cdot 10^{-7}\cdot x + 4.78\cdot 10^{-4}$

 $\begin{aligned} &\text{try-ssr-rewrite!-noop-real}\\ &4.22\cdot 10^{-7}\cdot x + 1.75\cdot 10^{-3}\\ &\text{try-ssr-rewrite-noop-real} \end{aligned}$

 $4.22\cdot 10^{-7}\cdot x + 1.18\cdot 10^{-3}$

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



rewrite-strat-bottomup-real

rewrite-strat-topdown-rea

rewrite-strat-topdown-noop-

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

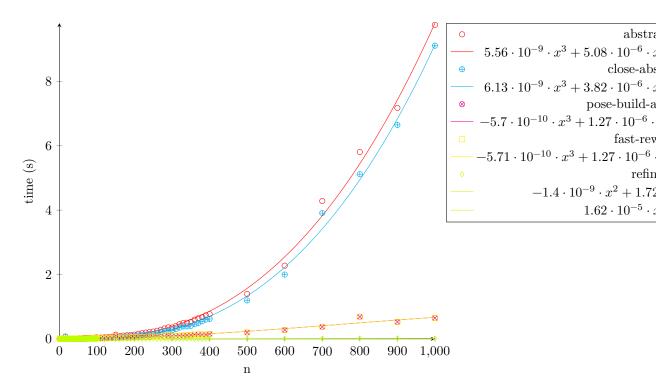
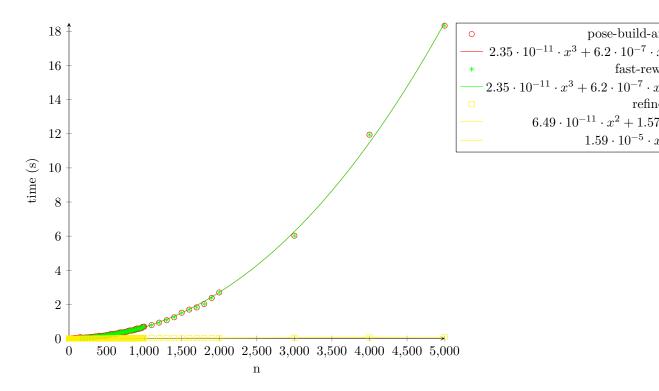


Figure 11: timing-rewrite-repeated-app-fast-rewrite



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

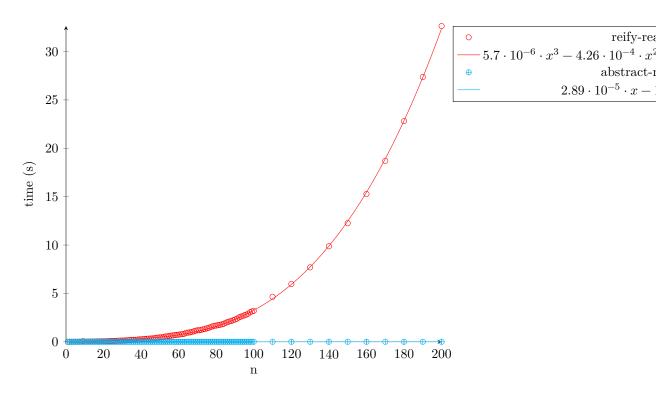


Figure 13: timing-typeclass-reification-let-in-HOAS

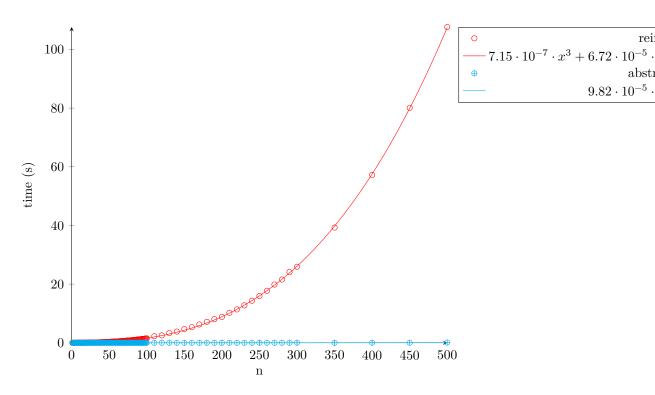


Figure 14: timing-typeclass-reification-let-in-PHOAS

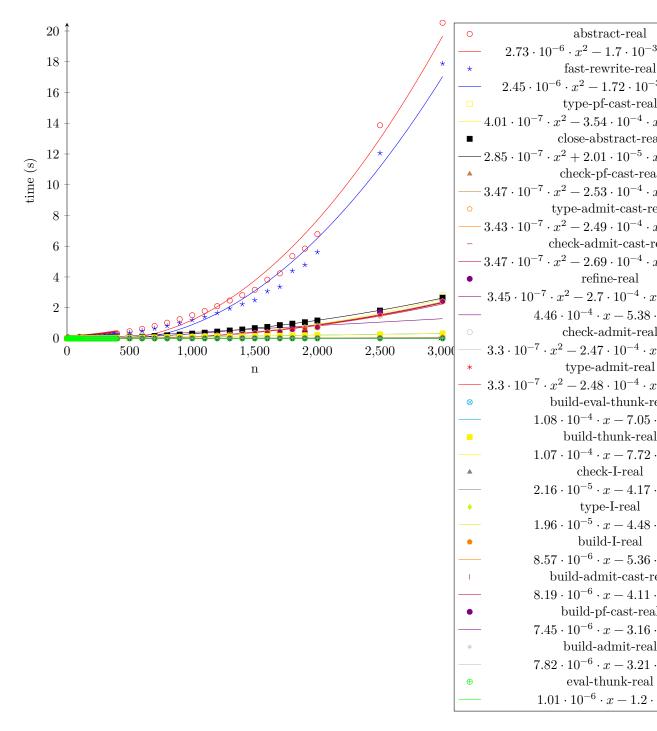


Figure 15: timing-rewrite-repeated-app-fast-rewrite-ltac2