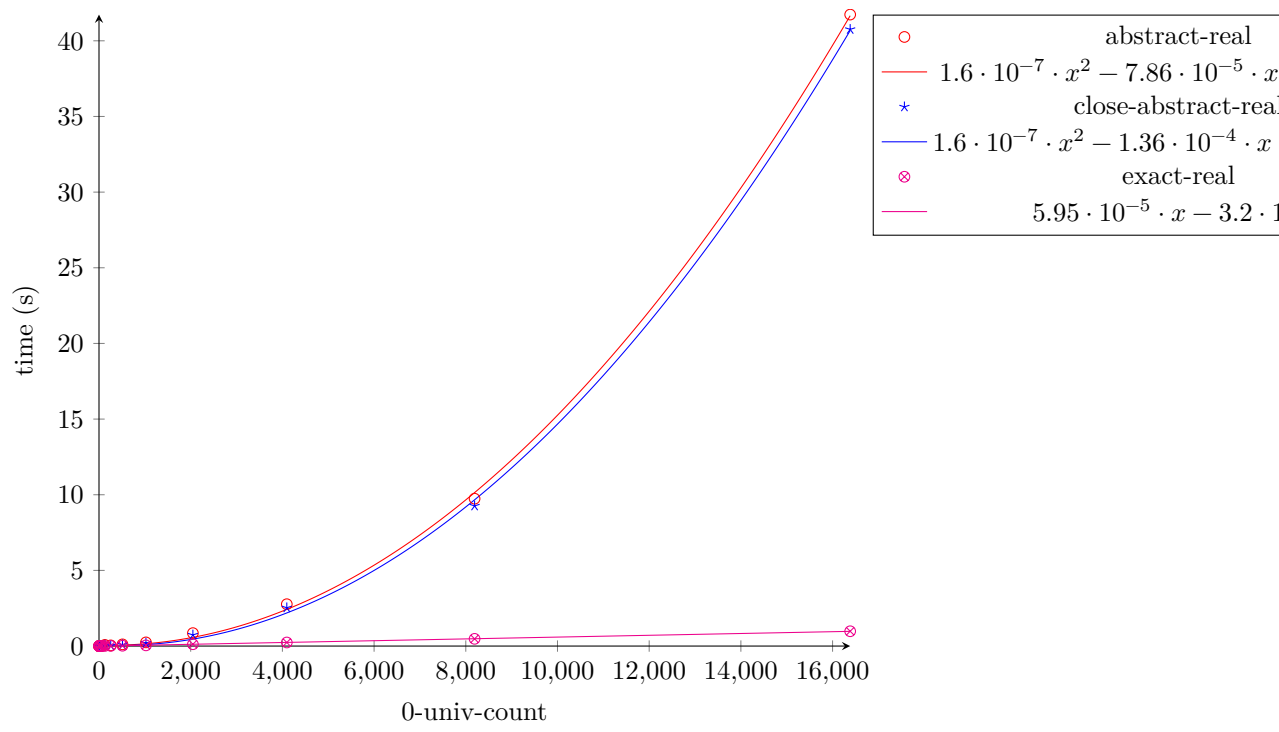Figure 1: timing-pattern

1

Figure 2: timing-n-polymorphic-universes param-1-n 0
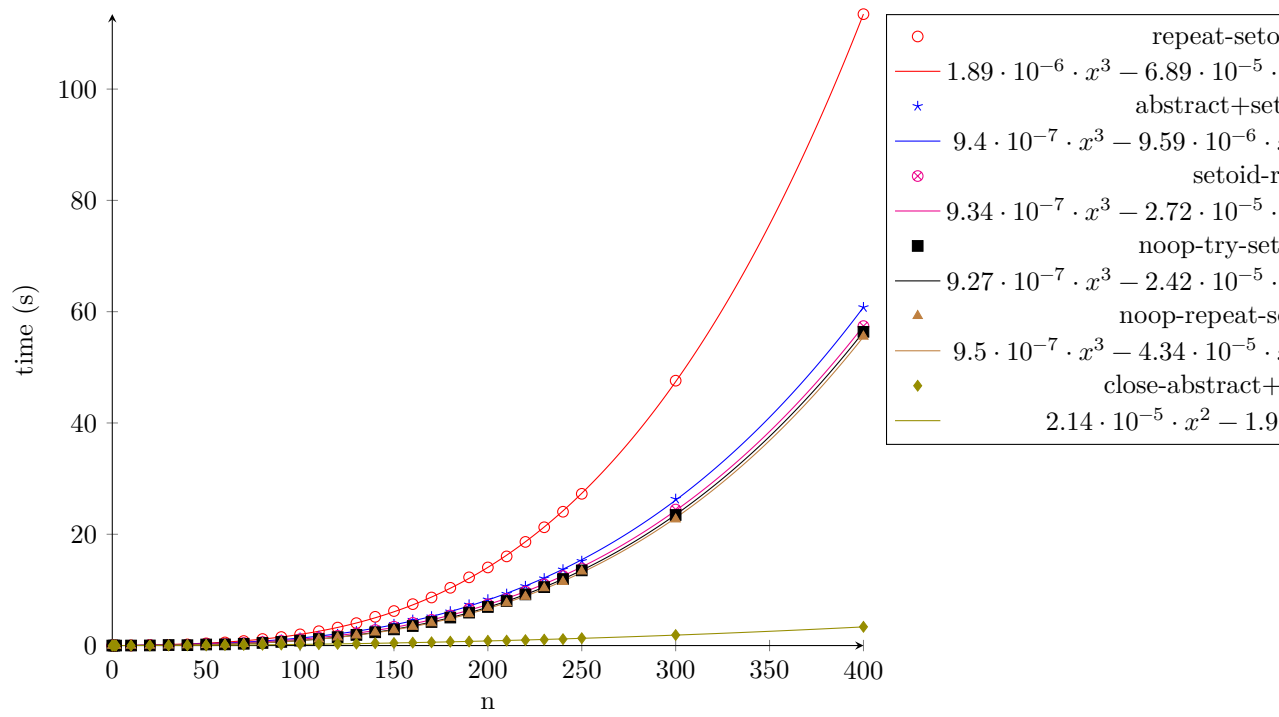
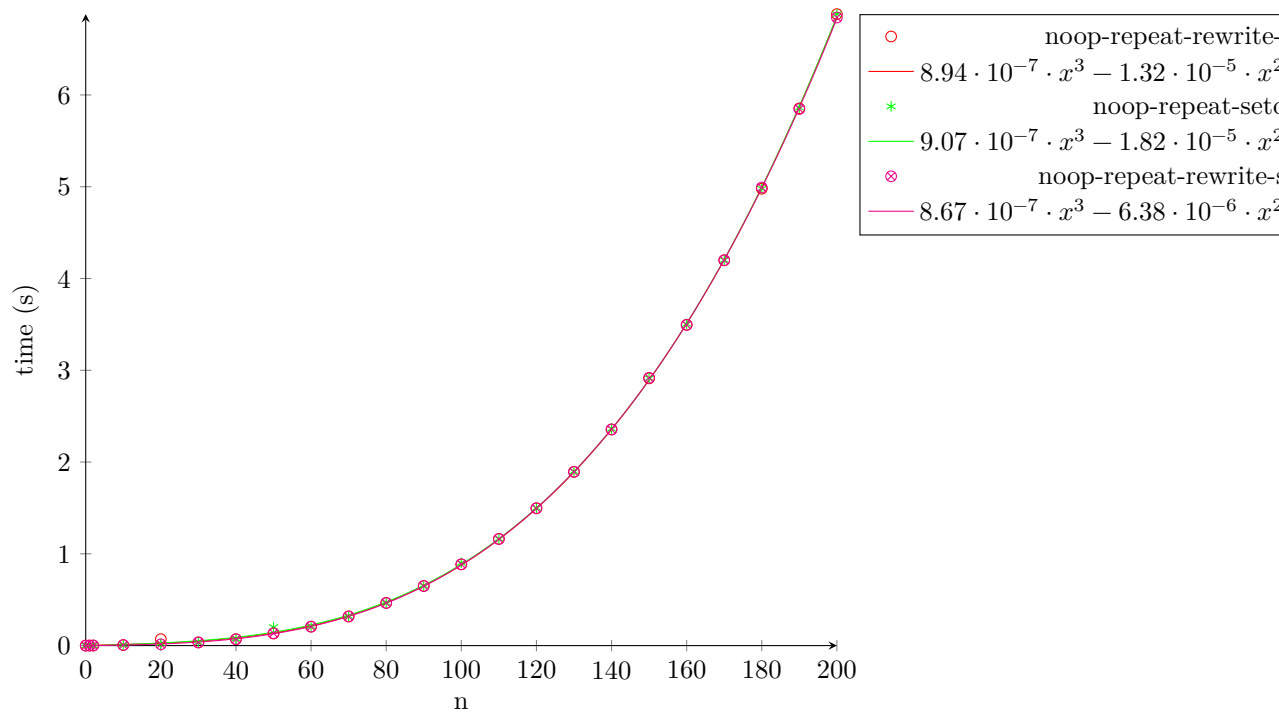Figure 3: timing-repeat-setoid-rewrite-under-binders

3

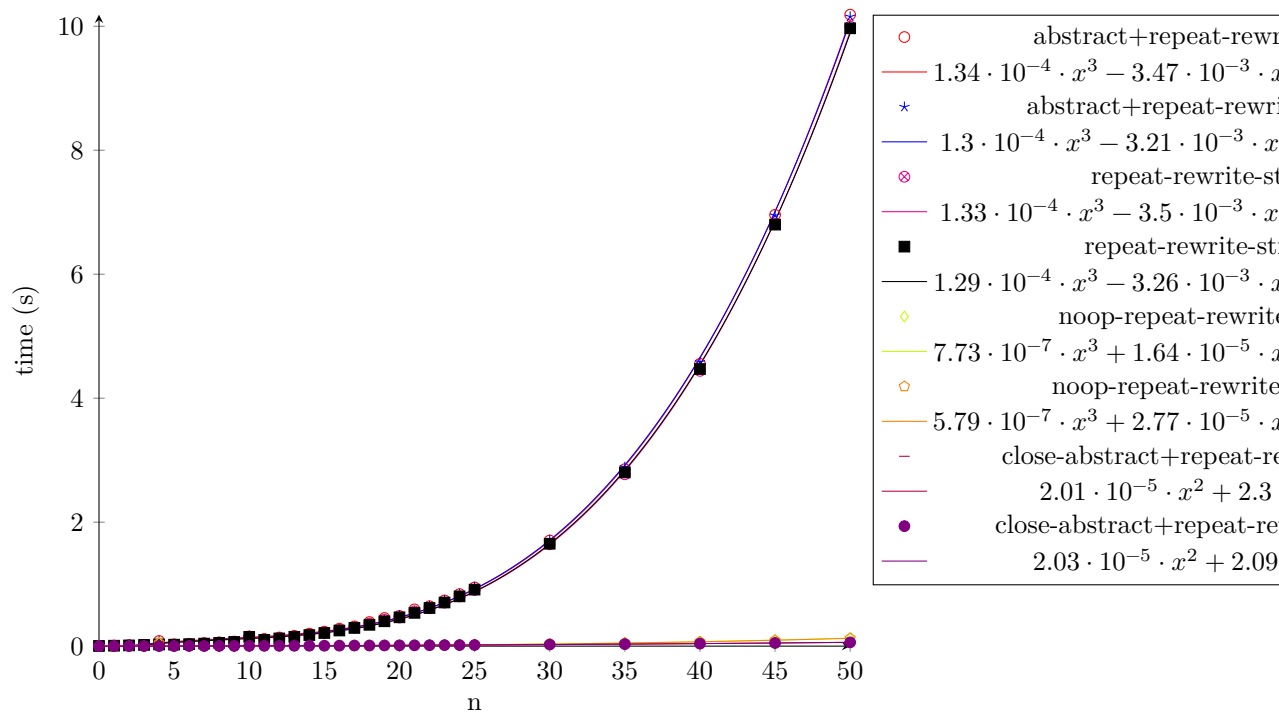Figure 4: timing-repeat-setoid-rewrite-under-binders-noop
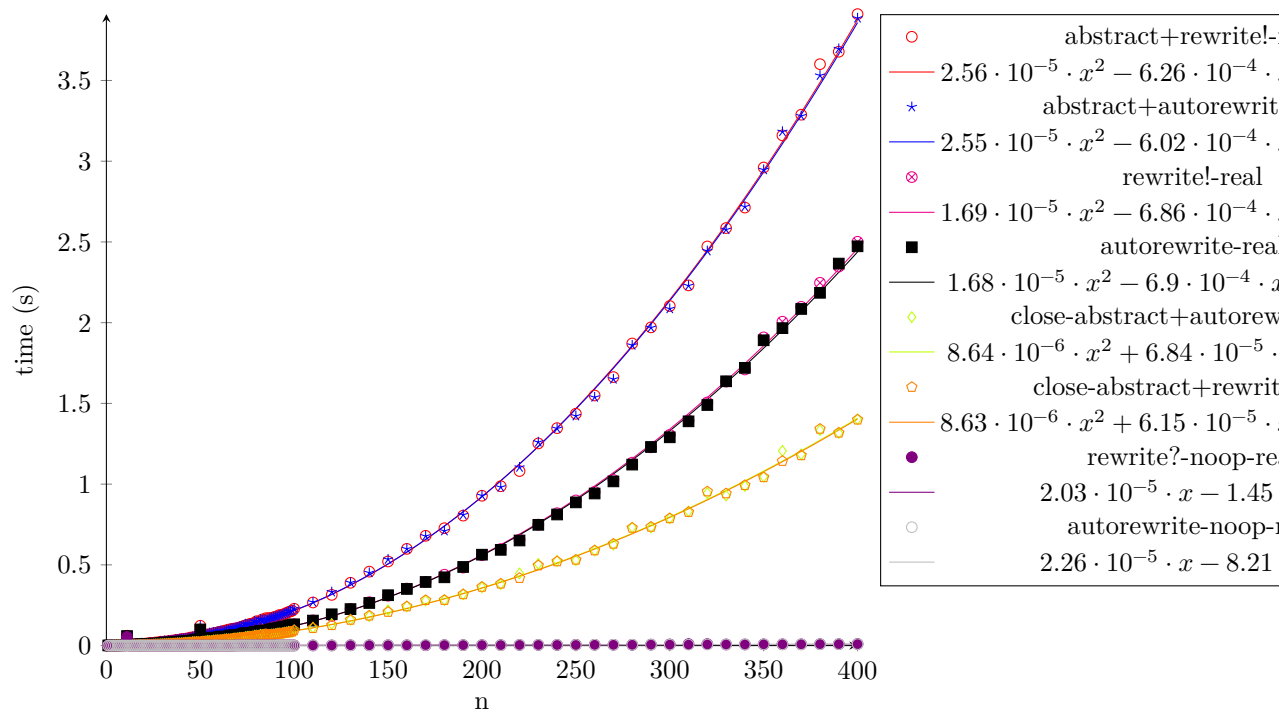
4

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

Figure 6: timing-rewrite-repeated-app-autorewrite
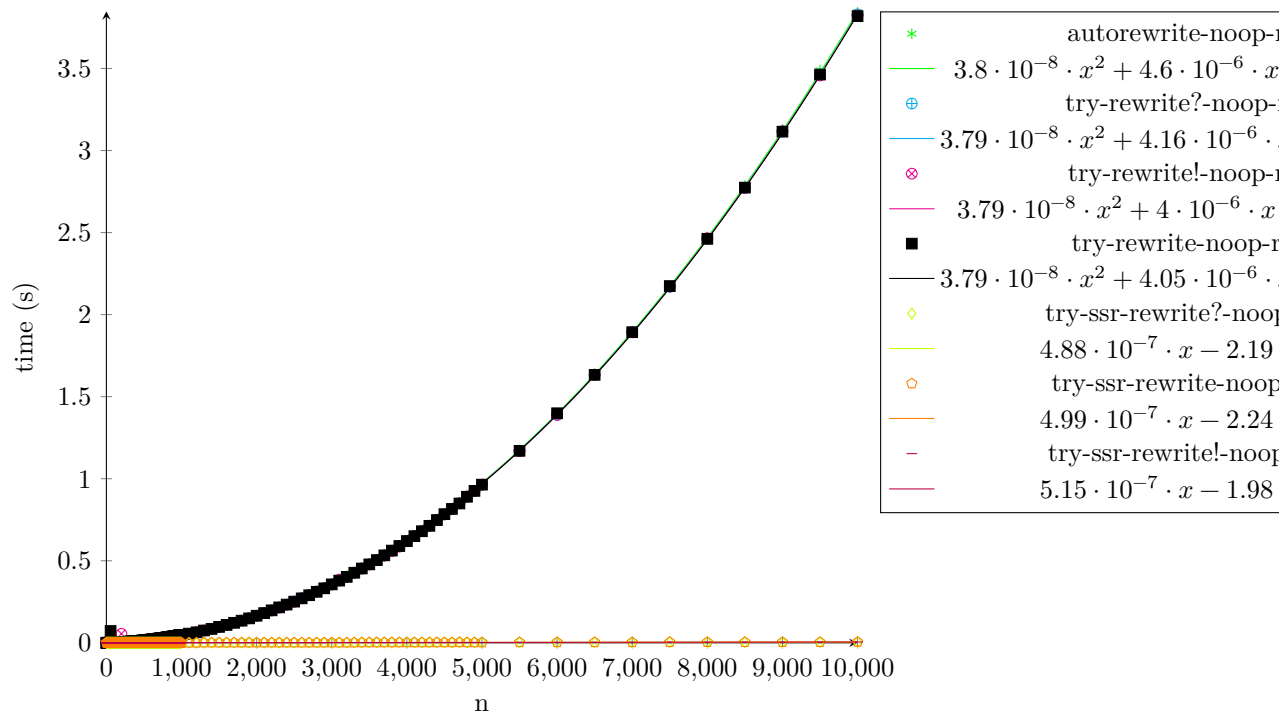
Figure 7: timing-rewrite-repeated-app-autorewrite-noop
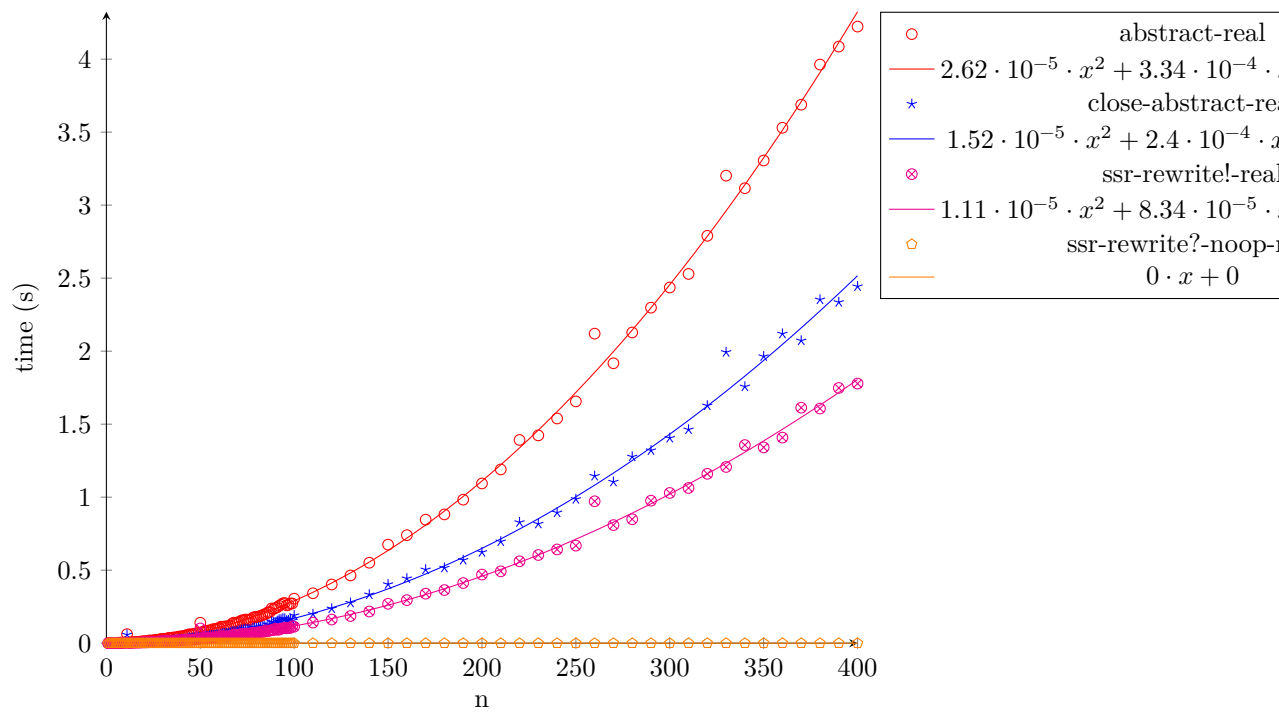
Figure 8: timing-rewrite-repeated-app-ssrrewrite
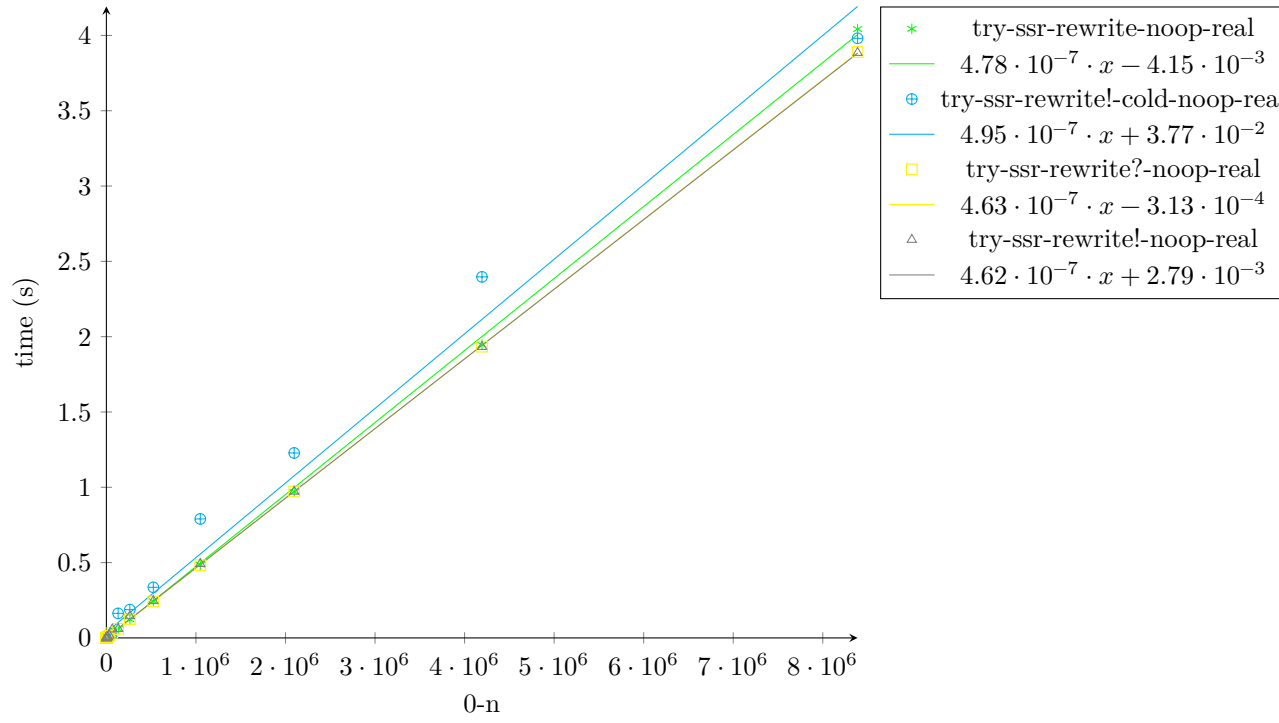
Figure 9: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn 1
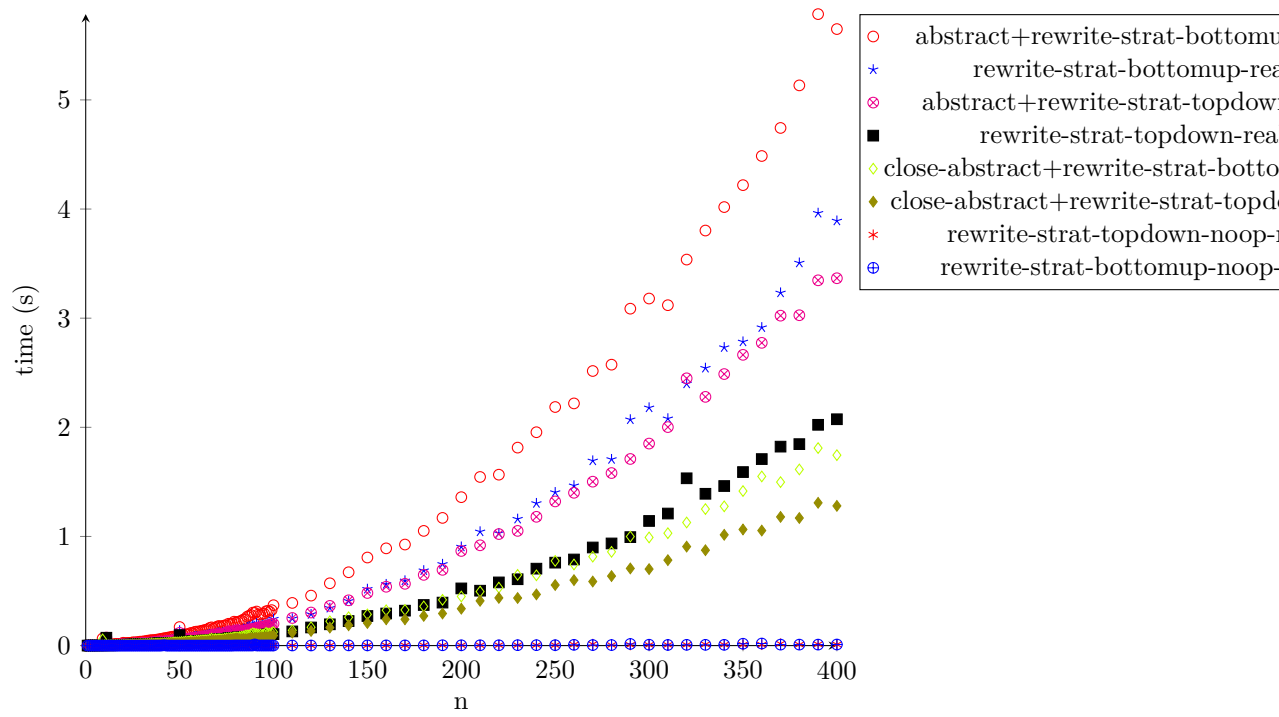
Figure 10: timing-rewrite-repeated-app-rewrite-strat

Legend:
- abstract+rewrite-strat-bottomu...
- rewrite-strat-bottomup-rea...
- abstract+rewrite-strat-topdow...
- rewrite-strat-topdown-rea...
- close-abstract+rewrite-strat-botto...
- close-abstract+rewrite-strat-topd...
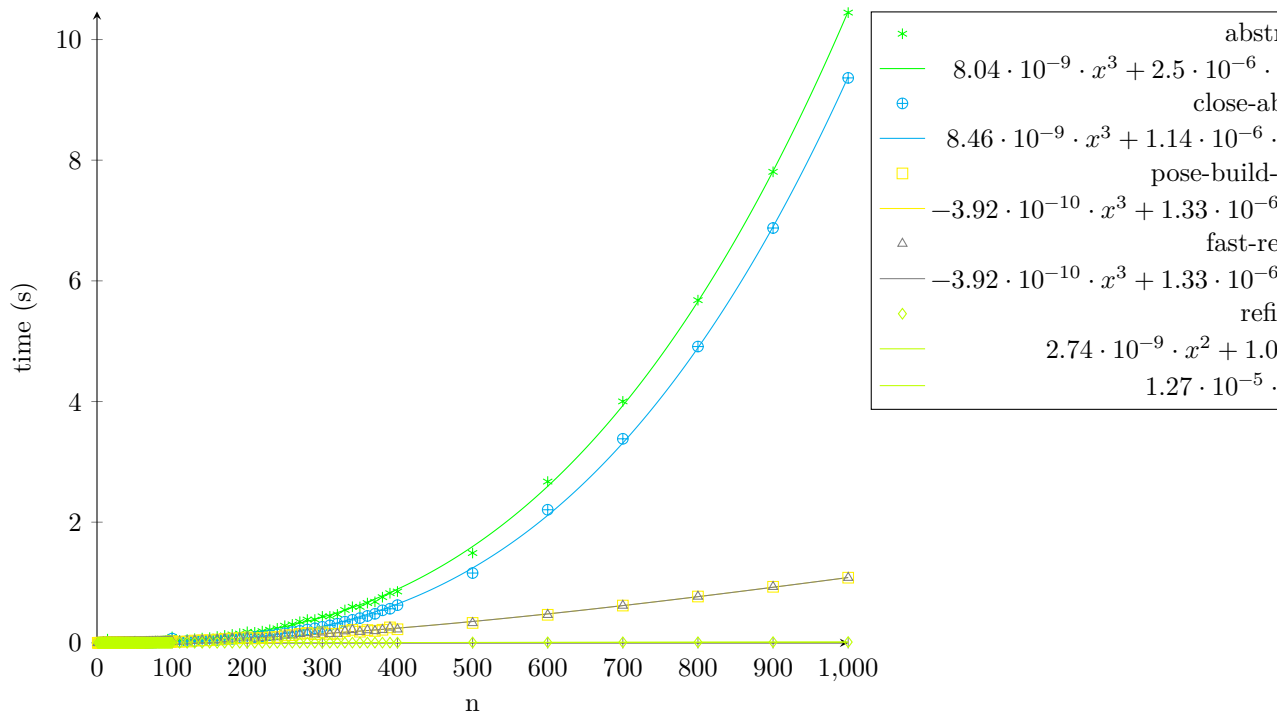- rewrite-strat-topdown-noop-...
- rewrite-strat-bottomup-noop-...

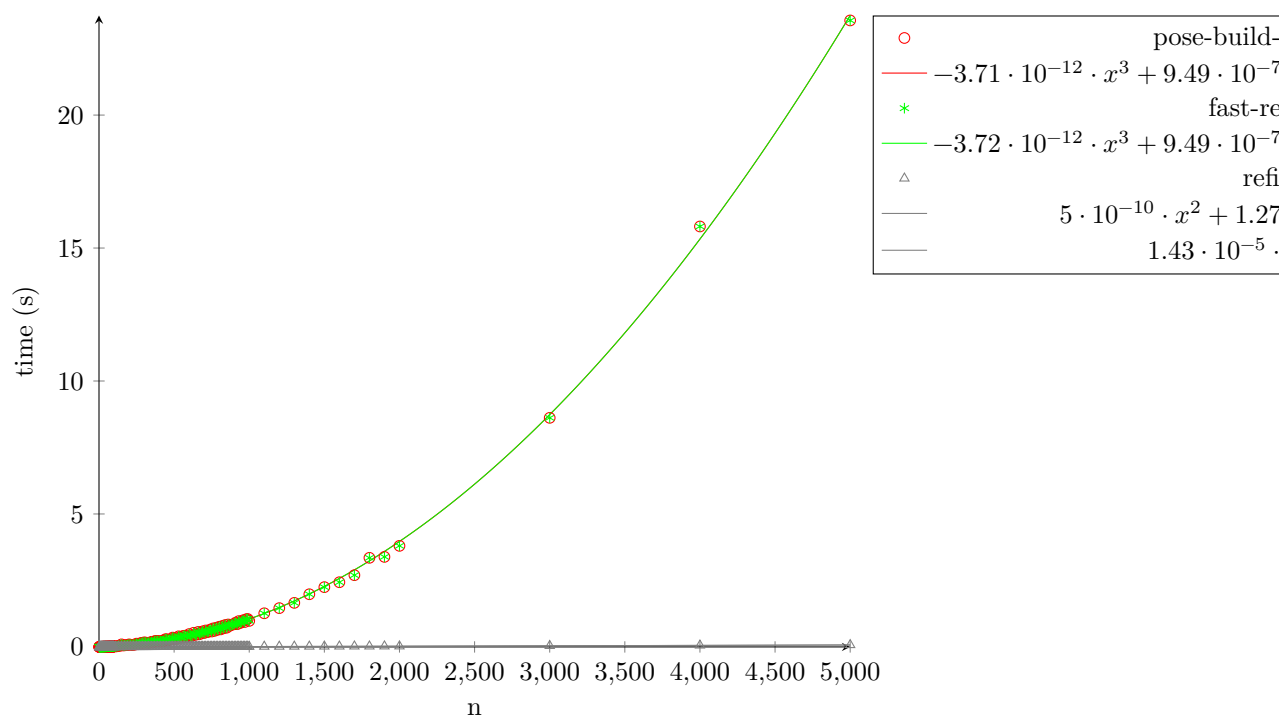Figure 11: timing-rewrite-repeated-app-fast-rewrite

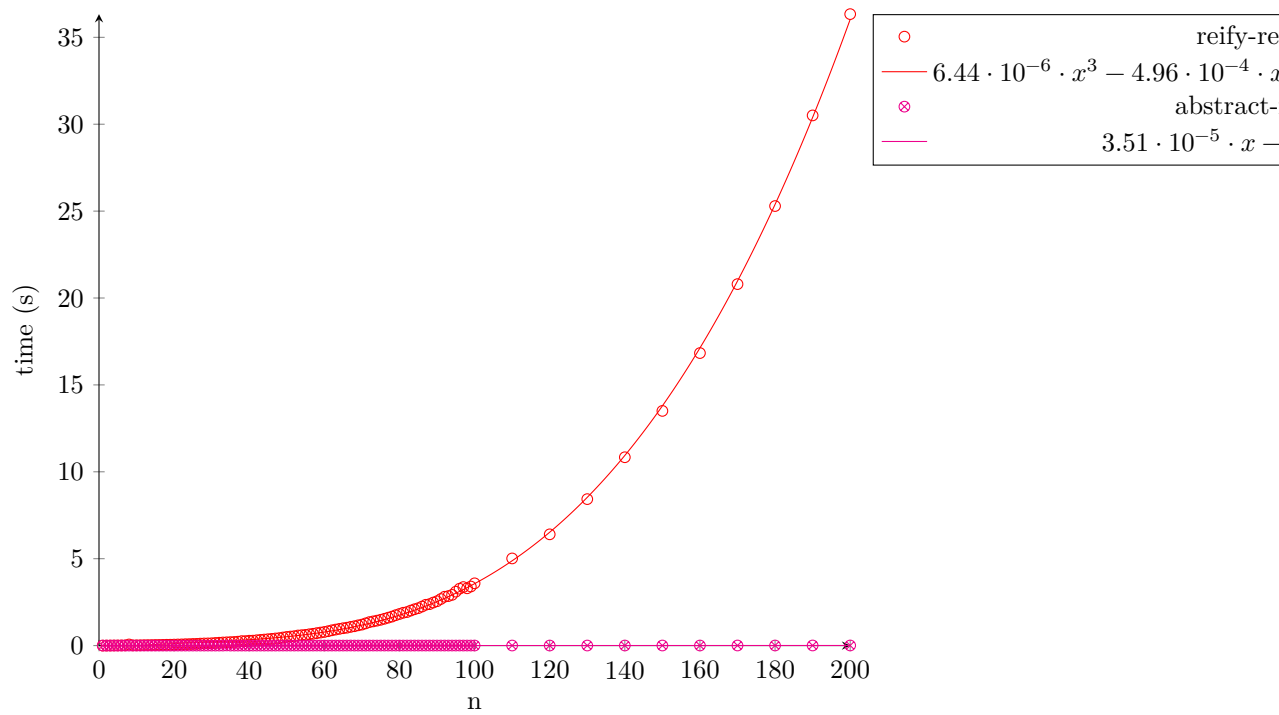Figure 12: timing-rewrite-repeated-app-fast-rewrite-no-abstract

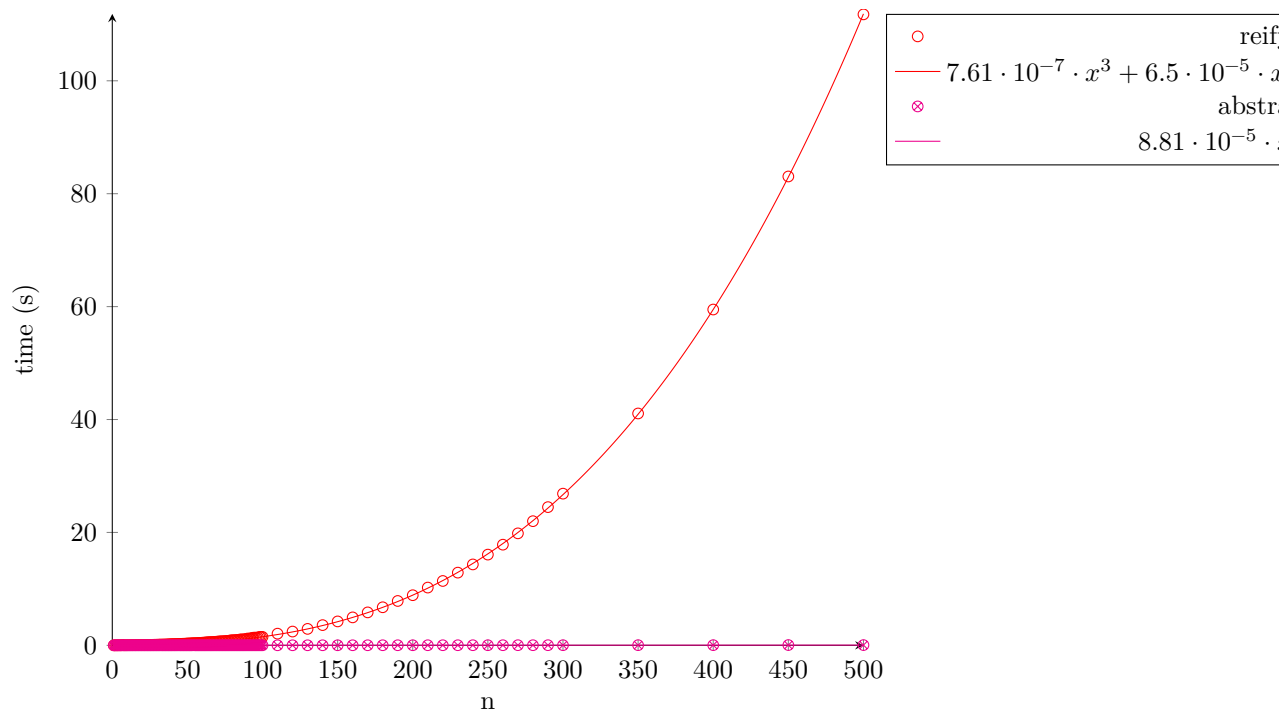Figure 13: timing-typeclass-reification-let-in-HOAS

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

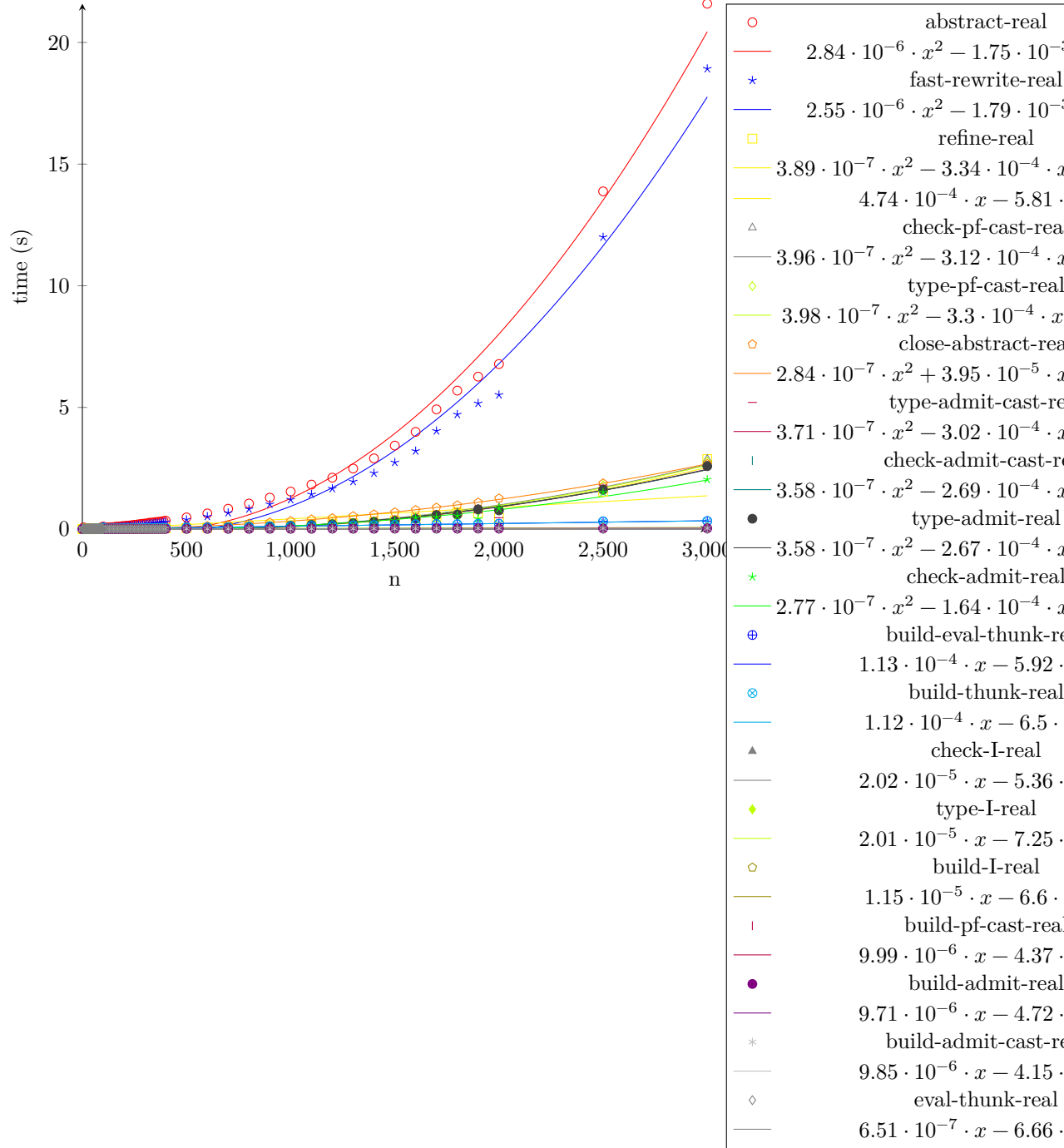|	
○	abstract-real
—	$2.84 \cdot 10^{-6} \cdot x^2 - 1.75 \cdot 10^{-3}$
✶	fast-rewrite-real
—	$2.55 \cdot 10^{-6} \cdot x^2 - 1.79 \cdot 10^{-3}$
□	refine-real
—	$3.89 \cdot 10^{-7} \cdot x^2 - 3.34 \cdot 10^{-4} \cdot x$
—	$4.74 \cdot 10^{-4} \cdot x - 5.81$
△	check-pf-cast-real
—	$3.96 \cdot 10^{-7} \cdot x^2 - 3.12 \cdot 10^{-4} \cdot x$
◇	type-pf-cast-real
—	$3.98 \cdot 10^{-7} \cdot x^2 - 3.3 \cdot 10^{-4} \cdot x$
⬠	close-abstract-real
—	$2.84 \cdot 10^{-7} \cdot x^2 + 3.95 \cdot 10^{-5} \cdot x$
—	type-admit-cast-real
—	$3.71 \cdot 10^{-7} \cdot x^2 - 3.02 \cdot 10^{-4} \cdot x$
∣	check-admit-cast-real
—	$3.58 \cdot 10^{-7} \cdot x^2 - 2.69 \cdot 10^{-4} \cdot x$
●	type-admit-real
—	$3.58 \cdot 10^{-7} \cdot x^2 - 2.67 \cdot 10^{-4} \cdot x$
✶	check-admit-real
—	$2.77 \cdot 10^{-7} \cdot x^2 - 1.64 \cdot 10^{-4} \cdot x$
⊕	build-eval-thunk-real
—	$1.13 \cdot 10^{-4} \cdot x - 5.92$
⊗	build-thunk-real
—	$1.12 \cdot 10^{-4} \cdot x - 6.5$
▲	check-I-real
—	$2.02 \cdot 10^{-5} \cdot x - 5.36$
◆	type-I-real
—	$2.01 \cdot 10^{-5} \cdot x - 7.25$
⬠	build-I-real
—	$1.15 \cdot 10^{-5} \cdot x - 6.6$
∣	build-pf-cast-real
—	$9.99 \cdot 10^{-6} \cdot x - 4.37$
●	build-admit-real
—	$9.71 \cdot 10^{-6} \cdot x - 4.72$
✳	build-admit-cast-real
—	$9.85 \cdot 10^{-6} \cdot x - 4.15$
◇	eval-thunk-real
—	$6.51 \cdot 10^{-7} \cdot x - 6.66$

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