Problems

Problem 1. $\forall L \in \texttt{NatList}\colon \text{fold}*(\text{rev}(L)) = \text{fold}*(L)$.

Problem 2. $\forall X \in \texttt{PNat}\colon \text{rev}(\text{mkl1}(X)) = \text{mkl2}(X)$.

Problem 3. $\forall X \in \texttt{PNat}\colon \text{fact}(X) = \text{fold}*(\text{mkl2}(X))$.

Problem 4. $\forall L \in \texttt{NatList}\colon \text{rev}(\text{rev}(L)) = L$.

Problem 5. $\forall L \in \texttt{NatList}\colon \text{size}(L) = \text{size}(\text{rev}(L))$.

Problem 6. $\forall X \in \texttt{PNat}, L \in \texttt{NatList}\colon \text{has}(L, X) = \text{has}(\text{rev}(L), X)$.

Problem 7. $\forall L \in \texttt{NatList}\colon \text{diff}(L, \text{rev}(L)) = nil$.

Problem 8. $\forall L1, L2 \in \texttt{NatList}\colon \text{diff}(L1, L2) = \text{diff}(L1, \text{rev}(L2))$

Problem 9. $\forall L1, L2 \in \texttt{NatList}\colon \text{diff}(L1, L2) = \text{rev}(\text{diff}(\text{rev}(L1), L2))$.

Problem 10. $\forall X \in \texttt{PNat}, L \in \texttt{NatList}\colon \text{drop}(L, X) = \text{rev}(\text{drop}(\text{rev}(L), X))$.

Problem 11. $\forall X \in \texttt{PNat}, L \in \texttt{NatList}\colon \text{has}(\text{drop}(L, X), X) = false$.

Problem 12. $\forall L \in \texttt{NatList}\colon \text{sum}(L) = \text{sum}(\text{rev}(L))$.

Problem 13. $\forall X \in \texttt{Nat}, L \in \texttt{NatList}\colon \text{count}(L, X) = \text{count}(\text{rev}(L), X)$.

Problem 14. $\forall X \in \texttt{Nat}, \forall L1, L2 \in \texttt{NatList}\colon \text{diff}(L1, X \mid L2) = \text{drop}(\text{diff}(L1, L2), X)$.

Problem 15. $\forall L \in \texttt{NatList}\colon \text{diff}(\text{rev}(L), L) = nil$.

Problem 16. $\forall L \in \texttt{NatList}\colon \text{setEqual}(L, \text{rev}(L)) = true$.

Problem 17. $\forall L \in \texttt{NatList}\colon \text{rmDup}(\text{rmDup}(L)) = \text{rmDup}(L)$.

Problem 18. $\forall L \in \texttt{NatList}\colon \text{setEqual}(L, \text{rmDup}(L)) = true$.

Problem 19. $\forall L \in \texttt{NatList}\colon \text{diff}(L, L) = nil$.

Problem 20. $\forall L1, L2 \in \texttt{NatList}\colon \text{rmDup}(L1 \mathbin{@} L2) = \text{rmDup}(\text{rmDup}(L1) \mathbin{@} \text{rmDup}(L2))$.