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1 exType Theory

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Parent Theories: indexedLists, patternMatches

1.1 Definitions

[APP_def]

$$\vdash (\forall l. \text{APP } [] \ l = l) \wedge \forall h \ l_1 \ l_2. \text{APP } (h :: l_1) \ l_2 = h :: \text{APP } l_1 \ l_2$$

1.2 Theorems

[APP_ASSOC]

$$\vdash \forall l_1 \ l_2 \ l_3. \text{APP } (\text{APP } l_1 \ l_2) \ l_3 = \text{APP } l_1 \ (\text{APP } l_2 \ l_3)$$

[LENGTH_APP_def]

$$\begin{aligned} \vdash & (\text{LENGTH_APP } [] \ [] = 0) \wedge \\ & (\text{LENGTH_APP } [] \ (v_6 :: v_7) = \text{LENGTH } (\text{APP } [] \ (v_6 :: v_7))) \wedge \\ & (\text{LENGTH_APP } (v_2 :: v_3) \ l_2 = \text{LENGTH } (\text{APP } (v_2 :: v_3) \ l_2)) \end{aligned}$$

[LENGTH_APP_ind]

$$\begin{aligned} \vdash & \forall P. \\ & P \ [] \ [] \wedge (\forall v_6 \ v_7. P \ [] \ (v_6 :: v_7)) \wedge \\ & (\forall v_2 \ v_3 \ l_2. P \ (v_2 :: v_3) \ l_2) \Rightarrow \\ & \forall v \ v_1. P \ v \ v_1 \end{aligned}$$

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