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1 exType Theory

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Parent Theories: indexedLists, patternMatches

1.1 Definitions

[APP_def]

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

[Map_def]

$$\vdash (\forall f. \text{Map} \ f \ [l] = [l]) \wedge \forall f \ h \ l. \text{Map} \ f \ (h :: l) = f \ h :: \text{Map} \ f \ l$$

1.2 Theorems

[LENGTH_APP]

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

[Map_APP]

$$\vdash \text{Map} \ f \ (\text{APP} \ l_1 \ l_2) = \text{APP} \ (\text{Map} \ f \ l_1) \ (\text{Map} \ f \ l_2)$$

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