1) $((\text{'a list} * \text{'a list}) \longrightarrow \text{bool}) \longrightarrow$ 'a list $\longrightarrow$ 'a list $\longrightarrow$ bool

2) isOrdered $(h_1 :: h_2 :: t)$ is wrong form of writing a list it assumes that h_2 is also a list.

3) correct code would be
isOrdered $(h_1 :: (h_2 :: t)) = R(h_1, h_2)$ andalso isOrdered $(h_2 :: t)$

4) fun isOrdered [] R = true |
isOrdered [h] R = true |
isOrdered $(h_1 :: (h_2 :: t))$ R = $R(h_1, h_2)$ and also isOrdered $(h_2 :: t)$

5) 'a list $\longrightarrow$ ('a * 'a $\longrightarrow$ bool) $\longrightarrow$ bool