(a) Write brief notes on the type-checking of polymorphic functions that involve equality tests. What is the type of the equality function itself? [3 marks]

(b) The list $l_2$ is a sublist of $l$ provided there exist lists $l_1$ and $l_3$ such that $l = l_1 @ l_2 @ l_3$. Write an ML function sublist to test whether one list is a sublist of another one. Include a clear explanation of how your code works. [7 marks]