Prove that f + g is $\Theta(h)$.
The proof can be divided into two subproofs:

Proof 1:
f + g = $\Theta(h)$ + O(h)
= O(h) + O(h)
= O(h)

Proof 2:
f + g = $\Theta(h)$ + O(h)
= $\Omega(h)$ + O(h)
= $\Omega(h)$

Since f + g is both O(h) and $\Omega(h)$ then it proves f + g is $\Theta(h)$.