Problem of the Week
Problem E
Sum Product Function

A function, \(g\), has \(g(2) = 5\) and \(g(3) = 7\). In addition, \(g\) has the property that

\[ g(a) + g(b) = g(ab) \]

for all positive integers \(a\) and \(b\).

For example, \(g(6) = g(2) + g(3) = 12\).

What is the value of \(g(648)\)?