Sodium carbonate (Na₂CO₃), can be made in the reaction below $CaCO_3 + 2NaCl \rightarrow Na_2CO_3 + CaCl_2$

(Formula masses: $CaCO_3 = 100 2 NaCl = 117 Na_2CO_3 = 106 CaCl_2 = 111$) Use the equation below to calculate the atom economy for the production of sodium carbonate.

Atom economy = <u>mass of required product</u> ×100% total mass of products