Sulfur trioxide is produced by reacting sulfur dioxide with oxygen.

$$2SO_2 + O_2 \rightleftharpoons 2SO_3$$

This reaction is exothermic. There are two statements below.

- 1 The atom economy of the reaction producing sulphur trioxide is 100%
- 2 An increase in temperature will increase the equilibrium yield of sulfur trioxide Which of these statements are correct?