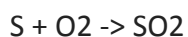
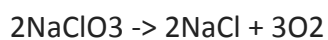


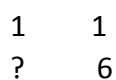
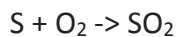
Question #70146 - Chemistry - General Chemistry

How many moles of NaClO₃ are needed to produce 6.00 moles of SO₂ in the following two-step reaction?



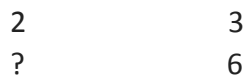
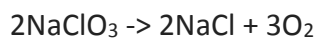
Solution

Find how many moles of O₂ are needed to produce 6.00 moles of SO₂:



$$n(\text{O}_2) = (1 \cdot 6) / 1 = 6 \text{ moles}$$

Then find how many moles of NaClO₃ are needed to produce 6.00 moles of O₂:



$$n(\text{NaClO}_3) = (2 \cdot 6) / 3 = 4 \text{ moles}$$

Answer

It has to be 4 moles of NaClO₃ to produce 6.00 moles of SO₂