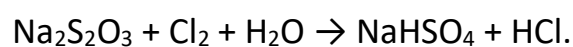


**Answer on Question #72654, Chemistry / General Chemistry :**

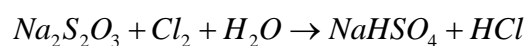
How many moles of H<sub>2</sub>O react if 0.48 moles of HCl is formed?

- A. 0.10 mol H<sub>2</sub>O
- B. 0.20 mol H<sub>2</sub>O
- C. 0.30 mol H<sub>2</sub>O
- D. 0.40 mol H<sub>2</sub>O
- E. 0.50 mol H<sub>2</sub>O

use the following: Chlorine is used to bleach cloth. Excess Chlorine is destroyed by its reaction with Sodium Thiosulfate (Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>) according to the unbalanced equation



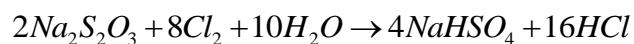
**Solution.**



$$n(\text{HCl}) = 0.48 \text{ mol}$$

$$n(\text{H}_2\text{O}) = ?$$

Balanced equation:



And:

$$n(\text{HCl}) = 0.48 \text{ mol}$$

$$n(\text{H}_2\text{O}) = \frac{n(\text{HCl})}{8} \cdot 10 = \frac{0.48}{8} \cdot 10 = 0.60 \text{ mol}$$

$$n(\text{H}_2\text{O}) = 0.60 \text{ mol}$$

**Answer:**  $n(\text{H}_2\text{O}) = 0.60 \text{ mol}$  .