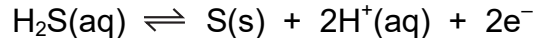


- 3** The reaction of hydrogen sulfide with sulfur dioxide gives sulfur as one of the products.

The two relevant redox equations are shown.



How many moles of hydrogen sulfide are needed to react with sulfur dioxide to produce 1 mol of sulfur?

**A**  $\frac{1}{3}$  mol

**B**  $\frac{2}{3}$  mol

**C**  $\frac{3}{2}$  mol

**D** 2 mol