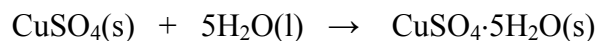


**Marks**  
**2**

- Anhydrous copper(II) sulfate is a white powder that reacts with water to give the familiar light blue crystals of copper(II) sulfate-5-water.



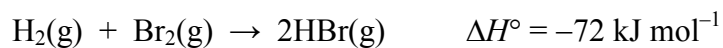
Calculate the standard enthalpy change for this reaction from the heats of solution.

Compound	$\Delta H^\circ_{\text{solution}} / \text{kJ mol}^{-1}$
$\text{CuSO}_4(\text{s})$	-66.5
$\text{CuSO}_4 \cdot 5\text{H}_2\text{O}(\text{s})$	+11.7

Answer:

**3**

- Using the given data, calculate  $\Delta H^\circ$  for the reaction:  $\text{H}(\text{g}) + \text{Br}(\text{g}) \rightarrow \text{HBr}(\text{g})$



Answer: