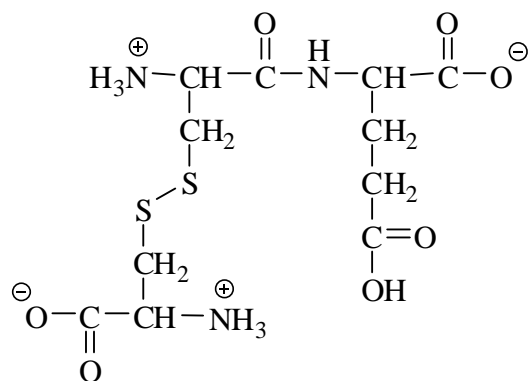


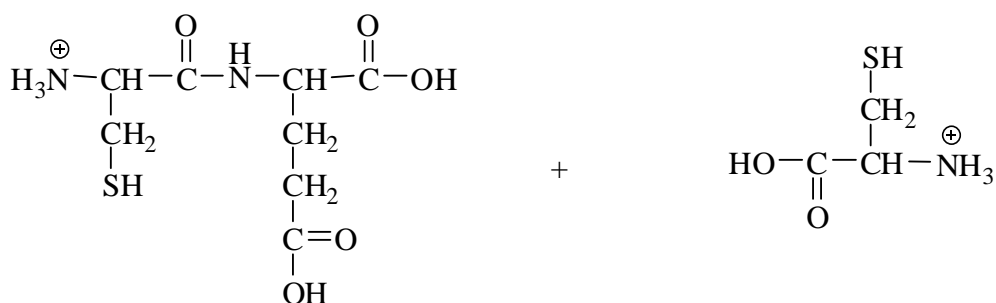
- A peptide has the following structure.



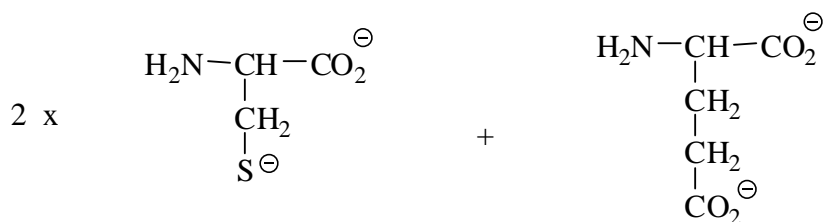
Would you expect this peptide to be soluble in water? Explain your answer.

**Yes. It has a number of charged groups that will be solvated by water molecules due to ion-dipole interactions.**

Give the products formed after treatment of the peptide with  $\text{Zn}/\text{H}^+$ .



These products are then heated with excess aqueous  $\text{OH}^-$ . Draw the constitutional formulas of the different amino acids formed. Ensure you represent the amino acids in the correct charge state for the conditions.



Choose one of the amino acids produced on hydrolysis and draw the (*S*) configuration.

