

Solutions

Each answer shows the steps, then the **result**.

2.1

- HI

2.2

- HClO_4

2.3

- A weaker H–X bond; a more polar H–X bond

3.1 B

- stronger

3.2

- $\text{HClO} < \text{HClO}_2 < \text{HClO}_3$; more oxygen atoms pull electron density from the O–H bond and stabilize the anion, increasing acid strength

3.3

- The H–I bond is much weaker than H–F (I is a large atom), so H^+ is released more easily; the weaker bond outweighs F's higher electronegativity