

- Explain why the acidity of hydrogen halides *increases* with increasing halogen size (*i.e.*,  $K_a(\text{HCl}) < K_a(\text{HBr}) < K_a(\text{HI})$ ), while the acidity of hypohalous acids *decreases* with increasing halogen size (*i.e.*,  $K_a(\text{HOCl}) > K_a(\text{HOBr}) > K_a(\text{HOI})$ ).