

### Exam 3: Most common mistakes, most likely difficulties

- Most common mistakes
  - Sig figs, especially with logs
  - Algebra, arithmetic, not using calculator properly
  - Stoichiometry
  - Negative exponent means small number (e.g.,  $10^{-7} < 10^{-3}$ )
  - "p" means "negative log of"
- Most likely difficulties
  - Confusion over how to build molecular structures from formulas (where do H's attach, which H is the acidic one)
  - Unable to break apart ionic compounds into constituent ions
  - Tough to reason clearly when under pressure
  - Unable to recognize conjugate acid-base pairs or write down the formula (with correct charge) of a conjugate
  - Don't understand significance of value of one reaction's equilibrium constant in comparison to a different reaction's K
  - Memorized solution of group problems without fully understanding
  - Unable to recognize strong vs. weak, acid vs. base