

Summary of Mathematical Questions 1, 2, and 3

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| 2006 | (1) Precipitation | (2) Thermodynamics (3) Empirical formula from combustion, MW from Ideal Gas Law, molecular formula |
| 2005 | (1) Acid/Base | (2) Combustion analysis, empirical formula, freezing point determination of molecular weight (3) Kinetics |
| 2004 | (1) Precipitation | (2) Thermodynamics (3) Reaction rates with spectrophotometer |
| 2003 | (1) Acid/Base | (2) Gas Laws (3) Kinetics/Electrochemistry |
| 2002 | (1) Acid/Base Equilibrium, Titration, Buffer | (2) Stoichiometry, Electrochemistry, Thermodynamics |
| 2001 | (1) Precipitation | (2) Thermodynamics, bond energy (3) Combustion analysis, acid/base titration |
| 2000 | (1) Gaseous Equilibrium | (2) Electrochemistry, thermodynamics (3) Hydrated crystal, redox titration |
| 1999 | (1) Acid/Base | (2) Calculations with light. Frequency, wavelength, energy transitions (3) Kinetics |
| 1998 | (1) Precipitation | (2) % Composition, Freezing Pt, Colligative Properties (3) Thermodynamics, Gas Law |
| 1997 | (1) Acid/Base | (2) Electrochemistry (3) Kinetics |
| 1996 | (1) Acid/Base, Buffer | (2) Thermodynamics (3) Solution concentrations, acid-base titration |
| 1995 | (1) Gas Equilibrium | (2) Gas stoichiometry, heat of reaction (3) Decomposition of solid carbonates |
| 1994 | (1) Precipitation | (2) Rate Law, Mechanisms (3) Gas Laws |
| 1993 | (1) Acid/Base | (2) Empirical formula, colligative prop. (3) Oxidation-Reduction Titration |

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| 1992 | (1) Gas Equilibrium | (2) Electrochemistry, thermodynamics (3) Thermodynamics, enthalpy and entropy |
| 1991 | (1) Acid/Base, Buffer | (2) Empirical Formula, Freezing pt (3) Rate Law, Mechanisms |
| 1990 | (1) Precipitation | (2) Gas Laws, Stoichiometry (3) Thermodynamics |
| 1989 | (1) Acid/Base | (2) Electrolysis (3) Thermodynamics |
| 1988 | (1) Gas Equilibrium | (2) Thermodynamics (3) Electrolysis |
| 1987 | (1) Acid/Base/Precipitation | (2) Rate laws (3) Acid-base titration |
| 1986 | (1) Acid/Base | (2) Redox/electrolysis (3) Empirical formula |
| 1985 | (1) Precipitation | (2) Redox/electrolysis (3) Freezing pt depression Empirical formula |
| 1984 | (1) Acid/base | (2) Rates (3) Thermodynamics |
| 1983 | (1) Gas Equilibrium | (2) Thermodynamics (3) Acid-base titration |
| 1982 | (1) Buffer solution | (2) Redox/electrolysis (3) Empirical formula |
| 1981 | (1) Gas Equilibrium | (2) Rates (3) Redox titration |