

Honors Chemistry
Semester Final Topics
Dooner/Carmel High

For the Final Exam, which will consist of approximately 35-50 problems, you will be required to solve problems in the following areas:

Calculating Percent Error when given a data set

EXAMPLE: p 65

PRACTICE PROBLEM: p 72 # 13

Converting Between Kelvin and Celcius Temperature Scales

EXAMPLE: p 78

PRACTICE PROBLEM: p 79 # 26

Calculating Density

EXAMPLE: p 91

PRACTICE PROBLEM: # 46, 47 on p 91

Determining the Composition of an Atom

EXAMPLE: p 112

PRACTICE PROBLEM: p 112 #17, 18

Writing Electron Configurations

EXAMPLE: p 135

PRACTICE PROBLEMS: p 135 # 8, 9

Calculating Wavelength and Frequency

EXAMPLE: p 140

PRACTICE PROBLEMS: p 140 # 14, 15

Identifying Periodic Trends

EXAMPLE: p 178 Figure 6.22

PRACTICE PROBLEMS: p 178 # 16-23

Writing the Symbols and Names of Ions

EXAMPLE: p 193

PRACTICE PROBLEM: p 193 # 9, 10

Drawing an Electron Dot Structure

EXAMPLE: p 220

PRACTICE PROBLEMS: p 220 # 7, 8

Writing Formulas for Binary Ionic Compounds

EXAMPLE: p 263

PRACTICE PROBLEMS: p 263 # 11

Writing Formulas for Binary Molecular Compounds

EXAMPLE: p 270

PRACTICE PROBLEMS: p 270 # v22, 23, and 24

Converting Number of Atoms to Moles/Moles to Atoms

EXAMPLE: p 291/292

PRACTICE PROBLEMS: p 291 # 3; p 292 # 5, 6

Finding the Molar Mass of a Compound

EXAMPLE: p 296

PRACTICE PROBLEMS: p 296 # 7, 8

Converting Moles to Mass

EXAMPLE: p 298

PRACTICE PROBLEMS: p 298 # 17

Calculating the Volume of a Gas at STP

EXAMPLE: p 301

PRACTICE PROBLEMS: p 301 # 21

Calculating the Molar Mass from Density

EXAMPLE: p 302

PRACTICE PROBLEM: p 302 # 22

Calculating Percent Composition from a Formula

EXAMPLE: p 307

PRACTICE PROBLEM: p 307 # 34, 35

Determining the Empirical Formula of a Compound

EXAMPLE: p 310

PRACTICE PROBLEM: p 310 # 36

Writing a Balanced Chemical Equation

EXAMPLE: p 327

PRACTICE PROBLEM: p 327 # 3

Writing Equations for Single Replacement Reactions

EXAMPLE: p 334

PRACTICE PROBLEM: p 334 # 17

Writing Equations for Double Replacement Reactions

EXAMPLE: p 335

PRACTICE PROBLEM: p 335 # 18

Writing Equations for Combustion Reactions

EXAMPLE: p 337

PRACTICE PROBLEM: p 337 # 21

Writing and Balancing Net Ionic Equations

EXAMPLE: p 343

PRACTICE PROBLEM: p 343 # 28

Writing and Using Mole Ratios-mass-mass calculations

EXAMPLE: p 361

PRACTICE PROBLEM: p 361 # 13

Converting Between Units of Pressure

EXAMPLE: p 387

PRACTICE PROBLEMS: p 387 #1

Using the Combined Gas Law

EXAMPLE: p 424

PRACTICE PROBLEM: p 424 # 13

Calculating Solubility of a Gas with Henry's Law

EXAMPLE: p 477

PRACTICE PROBLEM: p 477 #1

Calculating the Molarity of a Solution

EXAMPLE: p 481

PRACTICE PROBLEM: p 481 # 9

Calculating the Specific Heat of a Metal

EXAMPLE: p 510

PRACTICE PROBLEM: p 510 # 10

Applying LeChatelier's Principle

EXAMPLE: p 555

PRACTICE PROBLEM: p 555 # 6

Finding the Equilibrium Constant

EXAMPLE: p 558

PRACTICE PROBLEMS: p 558 #9, 10

Calculating pH from Hydrogen Ion Concentration

EXAMPLE: p599

PRACTICE PROBLEMS: p 599 # 11, 12

Identifying Oxidized and Reduced Reactants

EXAMPLE: p 634

PRACTICE PROBLEM: p 634 # 1

Completing and Balancing Equations for Nuclear Reactions

EXAMPLE: p 807

PRACTICE PROBLEMS: p 808 # 12

Using Half Lives in Calculations

EXAMPLE: p 806

PRACTICE PROBLEMS: p 806 # 7

THERE ARE 35 topics listed in the above review. If you read the example and solve the practice problems you should be adequately prepared for the Semester Exam. There will be one question for each of the topics listed above.

You will be provided with all equations and formulas which are necessary to solve the problems and a Periodic Table, Activity Series, and Solubility Chart.

This Semester Exam is worth 20% of your semester grade.

Your Aeries grade for the semester will be multiplied by 80%(0.80).

Your percentage score on your Semester Final will be multiplied by 20%(0.20).

Those two values will be added together and that will be your semester grade.

EXAMPLE:

Final Average on Aeries: 87.5%

Score on Final: 21 out of 35 = 60.0 %

$$87.5 \times 0.80 = 70.0$$

$$60.0 \times 0.20 = 12.0$$

$$70.0 + 12.0 = 82.0 = B = \text{SEMESTER GRADE}$$