Rubrics:

**Finding “R”**

**Survey**

**Lab 2.3 Finding R**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Lab Part** | **6 pts** | **4 pts** | **2 pts** | **0 pts** |
| Prelab |  | All components – descriptive title, purpose, procedure and safety are present and thorough | One or more components is missing or components are not complete or logical | Prelab is missing or several components are missing. |
| Data and Observations |  | Data is present and organized for all lab parts. Titles and units are present for tables. They are neat and contain all relevant information. | Some data is missing OR data is messy. Titles and units may be missing from data tables. | Large amounts of data are missing or data is EXTREMELY unorganized. |
| Calculations |  | Calculations are organized, correct, and work is shown. Sample calculations are present for all repeated work. | One or more calculations may be missing. Some work is not shown or calculations are difficult to follow. | Calculations are missing or are very incomplete. Units and work may not be shown. |
| Questions | Questions are answered thoroughly in complete sentences. Answers to questions are all or almost all correct. | Some questions are answered incorrectly, but answers are thorough and in complete sentences. | Some questions are incomplete or many questions are not correct. | The questions have major problems in format or correctness. Or, questions were not completed |
| Conclusion | Purpose is addressed. Data supports statements and ideas are explained coherently. | Purpose was addressed and data present but not explained completely or not supportive | Purpose was addressed incompletely, and no data to back it up. | Conclusion was not completed or several essential components were missing. |

Total: /24

**Regular**

**Honors**

**Lab 4.5 Finding R – the universal gas constant Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Lab Part** | **6 pts** | **4 pts** | **2 pts** | **0 pts** |
| Prelab |  | All components – title, purpose, procedure and safety are present and thorough | One or more components is missing or components are not complete or logical | Prelab is missing or several components are missing. |
| Data and Observations |  | Data is present and organized for all lab parts. | Some data is missing OR data is messy. | Large amounts of data are missing or data is EXTREMELY unorganized. |
| Calculations |  | Calculations are organized, correct, and work is shown. Sample calculations are present for all repeated work. | One or more calculations may be missing. Some work is not shown or calculations are difficult to follow. | Calculations are missing or are very incomplete. Units and work may not be shown. |
| Questions | Questions are answered thoroughly in complete sentences. Answers to questions are all or almost all correct. | Some questions are answered incorrectly, but answers are thorough and in complete sentences. | Some questions are incomplete or many questions are not correct. | The questions have major problems in format or correctness. Or, questions were not completed |

Total \_\_\_\_\_\_\_\_/20

**AP**

**Lab 5.2: Molar Mass of Butane Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Lab Part** | **6 pts** | **4 pts** | **2 pts** | **0 pts** |
| Prelab |  | All components – title, purpose, procedure and safety are present and thorough | One or more components is missing or components are not complete or logical | Prelab is missing or several components are missing. |
| Data and Observations |  | Data is present and organized for all lab parts. Titles and units are present for tables. They are neat and contain all relevant information. | Some data is missing OR data is messy. Titles and units may be missing from data tables. | Large amounts of data are missing or data is EXTREMELY unorganized. |
| Calculations | Calculations are organized, correct, and work is shown. Sample calculations are present for all repeated work for all parts of the lab. | Calculations are organized, correct, and work is shown. Sample calculations are present for all repeated work, but may be missing parts for one section. | One or more calculations may be missing. Some work is not shown or calculations are difficult to follow. | Calculations are missing or are very incomplete. Units and work may not be shown. |
| Error Analysis Questions |  | Possible and actual sources of error are given, and the impact on results are explained. | Possible or actual sources of error are given, but their impact on results and direction are not explained. | Error analysis is not complete or several essential components are missing. |
| Questions | Questions are answered thoroughly in complete sentences. Answers to questions are all or almost all correct. | Some questions are answered incorrectly, but answers are thorough and in complete sentences. | Some questions are incomplete or many questions are not correct. | The questions have major problems in format or correctness. Or, questions were not completed |

Total: \_\_/24

**DR**

**Survey**

**Lab 5.1 Double Replacement Reactions Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Lab Part** | **6 pts** | **4 pts** | **2 pts** | **0 pts** |
| Prelab |  | All components – descriptive title, purpose, procedure and safety are present and thorough | One or more components is missing or components are not complete or logical | Prelab is missing or several components are missing. |
| Data and Observations | Data is present and organized for all lab parts. Titles and units are present for tables. They are neat and contain all relevant information.  Formulas are all correctly written. | Data is present and organized for all lab parts. Titles and units are present for tables. They are neat and contain all relevant information.  Some formulas may be incorrect. | Some data is missing OR data is messy. Titles and units may be missing from data tables. Many formulas may be incorrect. | Large amounts of data are missing or data is EXTREMELY unorganized. |
| Calculations | 10 equations are written and balanced correctly. | All 10 equations are present. No more than 3 errors. | The 10 equations have been attempted, but some may be missing or there are multiple mistakes. | The 10 equations are either missing or mostly incorrect. |
| Questions | Questions are answered thoroughly in complete sentences. Answers to questions are all or almost all correct. | Some questions are answered incorrectly, but answers are thorough and in complete sentences. | Some questions are incomplete or many questions are not correct. | The questions have major problems in format or correctness. Or, questions were not completed |
| Terms |  | Terms are complete and correct. Compare and contrast format is used. | Terms are either not complete, or are just defined, not compared and contrasted. | Terms are either missing, incorrect, or VERY incomplete. |
| Conclusion | Purpose is addressed. Data supports statements and ideas are explained coherently. | Purpose was addressed and data present but not explained completely or not supportive | Purpose was addressed incompletely, and no data to back it up. | Conclusion was not completed or several essential components were missing. |

Total: /32

**Regular**

**Honors**

**Double Replacement Reactions Name:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Lab Part** | **6 pts** | **4 pts** | **2 pts** | **0 pts** |
| Prelab |  | All components – descriptive title, purpose, procedure and safety are present and thorough | One or more components is missing or components are not complete or logical | Prelab is missing or several components are missing. |
| Data and Observations | Data is present and organized for all lab parts. Titles and units are present for tables. They are neat and contain all relevant information.  Formulas are all correctly written. | Data is present and organized for all lab parts. Titles and units are present for tables. They are neat and contain all relevant information.  Some formulas may be incorrect. | Some data is missing OR data is messy. Titles and units may be missing from data tables. Many formulas may be incorrect. | Large amounts of data are missing or data is EXTREMELY unorganized. |
| Calculations | 30 equations are written and balanced correctly. | All 30 equations are present. No more than 3 errors. | The 30 equations have been attempted, but some may be missing or there are multiple mistakes. | The 30 equations are either missing or mostly incorrect. |
| Questions | Questions are answered thoroughly in complete sentences. Answers to questions are all or almost all correct. | Some questions are answered incorrectly, but answers are thorough and in complete sentences. | Some questions are incomplete or many questions are not correct. | The questions have major problems in format or correctness. Or, questions were not completed |

Total: /22

**AP**

**Lab 10.3: Qualitative Analysis Set Letter \_\_\_\_\_\_\_\_\_\_\_\_\_ Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |
| --- | --- |
| **Unknown Number** | **Substance** |
| **1** |  |
| **2** |  |
| **3** |  |
| **4** |  |
| **5** |  |
| **6** |  |
| **7** |  |
| **8** |  |
| **9** |  |
| **10** |  |
| **11** |  |
| **12** |  |

**Total \_\_\_\_\_\_/24**

**Shapes**

**Survey**

**Bonding and Shapes Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |
| --- | --- |
| **Correct Lewis Structures (16 structures)** | **\_\_\_\_\_\_\_/16** |
| **Correct information about shape** | **\_\_\_\_\_\_\_/16** |

**Total \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/32**

**Regular**

**Honors**

**Bonding and Shapes Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |
| --- | --- |
| **Correct Lewis Structures (16 structures)** | **\_\_\_\_\_\_\_/16** |
| **Correct information about shape** | **\_\_\_\_\_\_\_/16** |

**Total \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/32**

**AP**

**Lab 3.1: Bonding and VSEPR Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |
| --- | --- |
| **Correct Lewis Structures (16 structures)** | **\_\_\_\_\_\_\_/16** |
| **Correct information about shape, hybrid orbitals, etc.** | **\_\_\_\_\_\_\_/16** |

**Total \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/32**

**Titration**

**Survey**

**Lab 5.2: Acid Base Titration Name: \_\_\_\_\_\_\_\_**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Lab Part** | **6 pts** | **4 pts** | **2 pts** | **0 pts** |
| Prelab  Part I |  | All components – descriptive title, purpose, procedure and safety are present and thorough | One or more components is missing or components are not complete or logical | Prelab is missing or several components are missing. |
| Prelab  Part II |  | All components – descriptive title, purpose, procedure and safety are present and thorough | One or more components is missing or components are not complete or logical | Prelab is missing or several components are missing. |
| Data and Observations  Part I |  | Data is present and organized for all lab parts. Titles and units are present for tables. They are neat and contain all relevant information. | Some data is missing OR data is messy. Titles and units may be missing from data tables. | Large amounts of data are missing or data is EXTREMELY unorganized. |
| Data and Observations  Part II |  | Data is present and organized for all lab parts. Titles and units are present for tables. They are neat and contain all relevant information. | Some data is missing OR data is messy. Titles and units may be missing from data tables. | Large amounts of data are missing or data is EXTREMELY unorganized. |
| Calculations  Part I |  | Calculations are organized, correct, and work is shown. Sample calculations are present for all repeated work. | One or more calculations may be missing. Some work is not shown or calculations are difficult to follow. | Calculations are missing or are very incomplete. Units and work may not be shown. |
| Calculations  Part II |  | Calculations are organized, correct, and work is shown. Sample calculations are present for all repeated work. | One or more calculations may be missing. Some work is not shown or calculations are difficult to follow. | Calculations are missing or are very incomplete. Units and work may not be shown. |
| Questions | Questions are answered thoroughly in complete sentences. Answers to questions are all or almost all correct. | Some questions are answered incorrectly, but answers are thorough and in complete sentences. | Some questions are incomplete or many questions are not correct. | The questions have major problems in format or correctness. Or, questions were not completed |
| Terms |  | Terms are defined in student’s own words and are accurate | Definitions are not complete or are not in student’s words | Terms are not complete |
| Conclusion | Purpose is addressed. Data supports statements and ideas are explained coherently. | Purpose was addressed and data present but not explained completely or not supportive | Purpose was addressed incompletely, and no data to back it up. | Conclusion was not completed or several essential components were missing. |

Total: /40

**Regular**

**Honors**

**Lab 11.2 Titration Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Lab Part** | **6 pts** | **4 pts** | **2 pts** | **0 pts** |
| Prelab  Part I and II |  | All components – title, purpose, procedure and safety are present and thorough | One or more components is missing or components are not complete or logical | Prelab is missing or several components are missing. |
| Data and Observations |  | Data is present and organized for all lab parts. | Some data is missing OR data is messy. | Large amounts of data are missing or data is EXTREMELY unorganized. |
| Calculations  For Part I and II |  | Calculations are organized, correct, and work is shown. Sample calculations are present for all repeated work. | One or more calculations may be missing. Some work is not shown or calculations are difficult to follow. | Calculations are missing or are very incomplete. Units and work may not be shown. |
| Questions | Questions are answered thoroughly in complete sentences. Answers to questions are all or almost all correct. | Some questions are answered incorrectly, but answers are thorough and in complete sentences. | Some questions are incomplete or many questions are not correct. | The questions have major problems in format or correctness. Or, questions were not completed |
| Base molarity |  | Molarity is correct (+/- 0.01M) | Molarity of base is incorrect (.01-.02 off) | Molarity of base is incorrect or unknown letter not provided (more than 0.02) |
| Acid identity |  | Acid is correct (MM +/- 10 g/mol) | Identity of acid is incorrect (10-20 g/mol off) | Identity of acid is incorrect or unknown letter not provided (more than 20 g/mol) |

Total \_\_\_\_\_\_\_\_/26

**AP**

**Lab 9.3/9.4 Acid Base Titrations: 3rd Quarter Full Lab Report Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Lab Part** | **6 pts** | **4 pts** | **2 pts** | **0 pts** |
| Prelab |  | All components – title, purpose, procedure and safety are present and thorough | One or more components is missing or components are not complete or logical | Prelab is missing or several components are missing. |
| Data and Observations |  | Data is present and organized for all lab parts. | Some data is missing OR data is messy. | Large amounts of data are missing or data is EXTREMELY unorganized. |
| Abstract | Background information, general lab summary, and lab results are well explained in a concise, clear fashion. | Background information, lab summary, and results are present but not concise or clear. | One or more major aspects of the abstract is missing. | Abstract is not complete or there are major issues with the explanation of the lab and lab results. |
| Calculations  And Graphs | Calculations are organized, correct, and work is shown. Sample calculations are present for all repeated work for all parts of the lab. | Calculations are organized, correct, and work is shown. Sample calculations are present for all repeated work, but may be missing parts for one section. | One or more calculations may be missing. Some work is not shown or calculations are difficult to follow. | Calculations are missing or are very incomplete. Units and work may not be shown. |
| Results |  | Overall results are organized and explained. | Not all results are explained or are unorganized. | Results are missing, or there are major organization issues and missing information. |
| Error Analysis |  | Possible and actual sources of error are given, and the impact on results are explained. | Possible or actual sources of error are given, but their impact on results and direction are not explained. | Error analysis is not complete or several essential components are missing. |
| Questions | Questions are answered thoroughly in complete sentences. Answers to questions are all or almost all correct. | Some questions are answered incorrectly, but answers are thorough and in complete sentences. | Some questions are incomplete or many questions are not correct. | The questions have major problems in format or correctness. Or, questions were not completed |
| Discussion | Applications and further implications of results are discussed with reference to data. Any additional research is brought up. | Applications and further implications are mentioned, but not fully explained or connections are weak. Data is present to support ideas. | One or more components are missing from discussion. Data may not be present and connections are very weak. | More than one component is missing. No data is present, or discussion is not complete. |

Total: \_\_/40