

### Answers to Selected Worksheet Questions

#### BOYLE'S LAW AND CHARLES' LAW WORKSHEET

- |             |            |
|-------------|------------|
| 1. 2.60 L   | 5. 67.7 mL |
| 2. 33.1 mL  | 6. 29.0 mL |
| 3. .603 atm | 7. -30.0°C |
| 4. 3040 L   |            |

#### IDEAL GAS LAW WORKSHEET

- |   |   |
|---|---|
| 1. .769 moles   | 7. 446 K or 173°C   |
| 2. .769 moles – type of gas does not matter if problem does not have g, mass, density or molar mass | 8. See Gas Review Notes   |
| 3. 1.34 g   | 9. See Gas Review Notes   |
| 4. .976 g   | 10. a. 2 mole and 44.8 L  |
| 5. 1.19 L   | 11. moles to grams, and then $PV=nRT$   |
| 6. see each part  | 12. $n = PV/(RT)$   |
| a. 2.51 mol   | 13. $P = nRT/V$   |
| b. 100. g   | 14. mole fractions are .2, .4, .4. Partial Pressures are 18 kPa, 36 kPa, and 36 kPa |

#### Gases Review Worksheet (Selected Answers Only)

Show all work on a separate sheet stapled behind this one.

- |             |               |
|-------------|---------------|
| 1. 1.42 g/L | 3. 31.2 L/mol |
| 2. 1.03 g/L | 4. 2.23 mol   |

#### Gases Pre-Exam Worksheet

Show all work, even on multiple choice questions.

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|---|
| 1. (B) 16 g of oxygen                                       |
| 2. (C) the molar mass is 89.6 g·mol <sup>-1</sup>           |
| 3. (e) 1 L of CO <sub>2</sub> at STP.                       |
| 4. (B) SO <sub>2</sub>                                      |
| 5. 444 mm Hg  |
| 6. (A) 950 mL x $\frac{720 \text{ mmHg}}{760 \text{ mmHg}}$ |
| 7. 1.69 g   |
| 8. (A) 1.25 atm   |