

11 Answer Key (continued)

- 23. 73.6 percent
- 24. 49.0 percent
- 25. 78.3 percent
- 26. 85.5 percent
- 27. 81.6 percent

11-3 Apply, page 21

1. DATA TABLE

- | | | | |
|----|--------|--------|------|
| 1: | 2.05, | 1.31, | 100% |
| 2: | 1.31, | 0.624, | 78% |
| 3: | 0.624, | 0.460, | 90% |
- 2. The $\text{Cu}(\text{OH})_2$ was filtered from the solution. Some of the solid may have been lost in this process.
 - 3. 0.653 g CuO

11-3 Review and Reinforcement, pages 22-23

- 1. stoichiometric
- 2. true
- 3. mass-mass
- 4. true
- 5. actual yield
- 6. true
- 7. First determine the number of moles of each reactant. Then determine which reactant would produce the least amount of product. This is the limiting reactant.
- 8. Percent yield is the percent of the expected yield that was actually obtained. Divide the actual yield by the expected yield and multiply by 100 to calculate percent yield.
- 9. Mg
- 10. 40.6 L H_2 ; water is the limiting reactant.
- 11. 20. g methyl alcohol; hydrogen is the limiting reactant.
- 12. 36.4 g PbCl_2 ; NaCl is the limiting reactant.
- 13. 2.3 g; 83% yield
- 14. 18.4 L; 87.5% yield