Answers to Tuck Solution Test

1. 1
2. 4
3. 2
4. 4
5. 3
6. 3
7. 4
8. 2
9. 3
10. 2
11. 2
12. 1
13. 3
14. 4
15. 1
16. Sat: holding max solute at that temp; un: more can dissolve at that temp; Super: more is dissolved than should be at that temp
17. Add 357 g of KBr to a 1L graduated cylinder and add enough distilled water to reach a 1 L volume
18. 2 M
19. 2.3 M
20. Al(OH)3 remained because it is insoluble in water

Table G Questions

1. a.52 b. 52 c. 80 d. 11 e. 63
2. a. super b. un c. un d. un e. super
3. a.X b. 43 c. 37 d. X e. 69
4. a. 16 b. 32 c.X d.X e. 46 f. 460
5. a. 72 b. 67 c. 28 d. 74 e. 24
6. NaCl
7. SO2, NH3, HCl
8. Solubility increases for solids
9. Solubility decreases for gases

Quantitative Concentration of Solutions

1. 0.15 M
2. 0.10 M
3. 2.8 M
4. 1.1 mol
5. 0.141 mol
6. 0.50 mol = 55.6 g
7. 0.63 M

Parts per Million

1. 3000 ppm
2. 100,000 ppm
3. 80,000 ppm
4. 350,000,000 ppm
5. 120,000 ppm

Molarity

1. 0.44 M
2. 0.4 M
3. 1,1 M
4. 95.45 g
5. 0.833 L

Dilutions

1. 20.0 mL
2. Add enough water to bring the volume of 50 mL or 1.0M solution to 250 mL
3. 112 L

Percent Solution

1. 34%
2. 12 mL
3. 10.1 g
4. 3.6%

Molality

1. 0.76 m
2. 0.44 m
3. 0.048 mol = 12.18 g

Mole Fraction: 16. 0.238 and 0.762 17. 0.236 and 0.764

Dilutions and Percent Solutions

1. 20 mL
2. 47.5 mL
3. Add enough water to 50 mL of the 1.0 M NaCl to make 250 mL of solution
4. 34%
5. 5%
6. 12 mL
7. 75 g

Key Version A

1. 2
2. 2
3. 3
4. 3
5. 3
6. 3
7. 1
8. 1
9. 2
10. 1
11. 1
12. 2
13. 3
14. 4
15. 3
16. 3
17. 3
18. 2
19. 2
20. 3
21. 3
22. 4
23. 1
24. 4
25. 3