Answer Keys for Unit 9 Stoichiometry Worksheets

WKST 1a: Counting Atoms and Ions in Formulas

1) 3 calcium ions, 2 phosphate ions, 2 phosphorus atoms, 8 oxygen atoms
2) 2 ammonium ions, 1 sulfate ion, 2 nitrogen atoms, 8 hydrogen atoms, 1 sulfur atom, 4 oxygen atoms
3) 1 ammonium ion, 1 acetate ion, 1 nitrogen atom, 7 hydrogen atoms, 2 carbon atoms, 2 oxygen atoms

WKST 1b: Math Operations Review

Part I. Addition

a) 23.41 g; b) 215.01 g; c) 22 g; d) 4.26×10^{5} g; e) 6.67×10^{-3} kg

Part II. Subtraction

a) 9.311 mL; b) 87.65 K; c) 0.000 066 kg; d) 4.6×10^{6} mL; e) -3.83×10^{-3} L

Part III. Multiplication

a) 22 400 mm^3; b) 38 m^2; c) 2×10^{14} cm^2; d) 2.3×10^{15} m^2; e) 0.5 m^2

Part IV. Division

a) 200 m; b) 23.1 m; c) 2×10^{3} m^2; d) 0.200 m or 2.00×10^{-1} m; e) 50 m^2

Part V. Mixed Operations

a) 3.0 mL; b) 3.3 cm; c) 3.2 L; d) 30 m^2; e) 0.195 mole

WKST 1c: Writing Chemical Formulas and Formula Masses

Na_2S: 78.07 g	$Ba(OH)_2$: 171.3 g	$Sn(OH)_2$: 152.7 g
Li_2O: 29.88 g	NH_4F: 37.04 g	$Sn(OH)_4$: 186.7 g
$MgBr_2$: 184.1 g	$(NH_4)_2S$: 68.15 g	Hg_3P_2: 663.7 g
H_2S: 34.09 g	$(NH_4)_2SO_4$: 132.15 g	MnI_2: 308.7 g
KI: 166.00 g	$(NH_4)_3PO_4$: 149.10 g	Co_2O_3: 165.9 g
Ca_3P_2: 182.1 g	NH_4CN: 44.06 g	$Fe_2(SO_4)_3$: 399.9 g
$Mg(OH)_2$: 58.32 g	$(NH_4)_2O$: 52.08 g	SrS: 119.69 g
KCN: 65.12 g	NH_4OH: 35.05 g	Hg_2O: 417.2 g
NaOH: 40.01 g	$BaCO_3$: 197.3 g	$Pb_3(PO_4)_4$: 1 001.5 g
$Zn(C_2H_3O_2)_2$: 183.47 g	$Al_2(CO_3)_3$: 234.0 g	$Pb(C_2H_3O_2)_2$: 325.3 g
$CaCr_2O_7$: 256.1 g	KI: 166.0 g	$Fe_2(Cr_2O_7)_3$: 759.7 g
Na_2CrO_4: 162.00 g	$Pb(C_2H_3O_2)_2$: 325.3 g	
$Al(C_2H_3O_2)_3$: 204.11 g	PbO_2: 239.2 g	