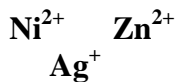


Nomenclature of Some Special Cations for Prep Chem

Cations that do not require Roman numerals:

Previously you had learned that elements in Groups IA and IIA, and aluminum form cations of a fixed charge. You are now going to add onto this list, a few more ions in the transition metals that also do not require a fixed charge because they generally form only ions with charges as shown below:



nickel ion, zinc ion, silver ion

These do NOT require Roman numerals.

	IA												VIIA				VIII A			
1	H 1.0079																H 1	He 2 4.0026		
	IIA												VIA				VIIA			
2	Li 3 6.941	Be 4 9.0122											B 5 10.811	C 6 12.011	N 7 14.007	O 8 15.999	F 9 18.998	Ne 10 20.180		
3	Na 11 22.990	Mg 12 24.305	III B					VIII B					II B		Al 13 26.982	Si 14 28.086	P 15 30.974	S 16 32.066	Cl 17 35.453	Ar 18 39.948
4	K 19 39.098	Ca 20 40.078	Sc 21 44.956	Ti 22 47.867	V 23 50.942	Cr 24 51.996	Mn 25 54.938	Fe 26 55.845	Co 27 58.933	Ni 28 58.693	Cu 29 63.546	Zn 30 65.39	Ga 31 69.723	Ge 32 72.61	As 33 74.922	Se 34 78.96	Br 35 79.904	Kr 36 83.80		
5	Rb 37 85.468	Sr 38 87.62	Y 39 88.906	Zr 40 91.224	Nb 41 92.906	Mo 42 95.94	Tc 43 (98)	Ru 44 101.07	Rh 45 102.91	Pd 46 106.42	Ag 47 107.87	Cd 48 112.41	In 49 114.82	Sn 50 118.71	Sb 51 121.76	Te 52 127.60	I 53 126.90	Xe 54 131.29		
6	Cs 55 132.91	Ba 56 137.33	La 57 138.91	Hf 72 178.49	Ta 73 180.95	W 74 183.84	Re 75 186.21	Os 76 190.23	Ir 77 192.22	Pt 78 195.08	Au 79 196.97	Hg 80 200.59	Tl 81 204.38	Pb 82 207.2	Bi 83 208.98	Po 84 (209)	At 85 (210)	Rn 86 (222)		

Drill for Special Cations

Note that you are still supposed to remember all the ions you have learned previously. If necessary review your polyatomic ions, including ones with -ide, -ate, -ite endings, and the oxohalo anions.

Name	Formula
silver ion	
zinc ion	
nickel ion	

Write your answers down before checking the ones given at the bottom of the page.

Name	Formula	Formula	Name
silver carbonate		Zn ₃ (PO ₄) ₂	
zinc hydroxide		AgNO ₃	
nickel acetate		FeSO ₄	
silver hydride		NiCO ₃	
nickel chlorate		CoCO ₃	
zinc iodide		CaSO ₄	
zinc perchlorate		Cu(OH) ₂	

Write your answers down before checking the ones given at the bottom of the page.

Answers to Drill:

Ag⁺
Zn²⁺
Ni²⁺

Ag₂CO₃
Zn(OH)₂
Ni(C₂H₃O₂)₂
AgH
Ni(ClO₃)₂
ZnI₂
Zn(ClO₄)₂

zinc phosphate
silver nitrate
iron(II) sulfate
nickel carbonate
cobalt(II) carbonate
calcium sulfate
copper(II) hydroxide