Experimental values of Ions

The magnetic moment calculated using the experimental values in the following table. In most of the cases, the agreement is good.

Ion	Configuration	n	$\mu = \sqrt{n(n+2)}\ \mu_B$	$\mu_{(observed)}$
Sc^{3+} ,Ti^{4+} ,V^{5+}	d^0	0	$\mu = \sqrt{0(0+2)} = 0\ \mu_B$	diamagnetic
Ti^{3+}, V^{4+}	d^1	1	$\mu = \sqrt{1(1+2)} = \sqrt{3} = 1.73\ \mu_B$	1.75
Ti^{2+}, V^{3+}	d^2	2	$\mu = \sqrt{2(2+2)} = \sqrt{8} = 2.83\ \mu_B$	2.76
Cr^{3+}, Mn^{4+}, V^{2+}	d^3	3	$\mu = \sqrt{3(3+2)} = \sqrt{15} = 3.87\ \mu_B$	3.86
Cr^{2+}, Mn^{3+}	d^4	4	$\mu = \sqrt{4(4+2)} = \sqrt{24} = 4.89\ \mu_B$	4.80
Mn^{2+}, Fe^{3+}	d^5	5	$\mu = \sqrt{5(5+2)} = \sqrt{35} = 5.91\ \mu_B$	5.96
Co^{3+}, Fe^{2+}	d^6	4	$\mu = \sqrt{4(4+2)} = \sqrt{24} = 4.89\ \mu_B$	5.3-5.5
Co^{2+}	d^7	3	$\mu = \sqrt{3(3+2)} = \sqrt{15} = 3.87\ \mu_B$	4.4-5.2
Ni^{2+}	d^8	2	$\mu = \sqrt{2(2+2)} = \sqrt{8} = 2.83\ \mu_B$	2.9-3.4
Cu^{2+}	d^9	1	$\mu = \sqrt{1(1+2)} = \sqrt{3} = 1.732\ \mu_B$	1.8-2.2
Cu^{+} , Zn^{2+}	d^{10}	0	$\mu = \sqrt{0(0+2)} = 0\ \mu_B$	diamagnetic